

Environment, Transportation & Public Safety Meeting

Date: Wednesday, November 29, 2023

Time: 4:30 o'clock p.m.

Location: Council Chambers, 1st Floor, Windsor City Hall

All members will have the option of participating in person in Council Chambers or electronically and will be counted towards quorum in accordance with Procedure By-law 98-2011 as amended, which allows for electronic meetings. The minutes will reflect this accordingly. Any delegations have the option to participate in person or electronically.

MEMBERS:

Ward 2 – Councillor Fabio Costante (Chairperson)

Ward 3 – Councillor Renaldo Agostino

Ward 4 – Councillor Mark McKenzie

Ward 8 – Councillor Gary Kaschak

Ward 9 – Councillor Kieran McKenzie

ORDER OF BUSINESS

Item # Item Description

1. CALL TO ORDER

READING OF LAND ACKNOWLEDGEMENT

We [I] would like to begin by acknowledging that the land on which we gather is the traditional territory of the Three Fires Confederacy of First Nations, which includes the Ojibwa, the Odawa, and the Potawatomi. The City of Windsor honours all First Nations, Inuit and Métis peoples and their valuable past and present contributions to this land.

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

3. ADOPTION OF THE MINUTES OF THE ETPS STANDING COMMITTEE

3.1 Adoption of the Environment, Transportation & Public Safety Standing Committee minutes (Transit matter items only) of its meeting held October 25, 2023 **(SCM 284/2023)**

3.2 Adoption of the Environment, Transportation & Public Safety Standing Committee minutes (Excluding Transit matter items) of its meeting held October 25, 2023 **(SCM 284/2023)**

4. REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS

5. COMMUNICATIONS

6. PRESENTATIONS AND DELEGATIONS

7. COMMITTEE MATTERS

7.1. Minutes of the Windsor Licensing Commission of its meeting held October 5, 2023 **(SCM 280/2023)**

7.2. Minutes of the Vision Zero Stakeholder Group of its meeting held March 22, 2023 **(SCM 129/2023)**

7.3. Essex Windsor Solid Waste Authority (EWSWA) Board Meeting Minutes from September 13, 2023 **(SCM 311/2023)**

8. ADMINISTRATIVE ITEMS

- 8.1. Feasibility of Crosswalk at Sunrise Assisted Living to Coventry/Reaume Park – Ward 6 **(S 120/2023)**
- 8.2. CQ 13-2023 - Front Yard Parking Best Practice 2.2.2 **(S 150/2023)**
- 8.3. CQ 17-2023 – Intelligent Transportation Systems Solutions**(S 142/2023)**
- 8.4. Vision Zero Action Plan Final Report - City-wide **(S 33/2023)**
- and** Follow-up - CQ7-2020 40 km/h Residential Speed Limits - City-wide **(SCM 109/2021) & (S 13/2021)**
- and** Response to CQ27-2021 - All-Way Stop Warrant - City Wide **(SCM 212/2023) & (S 70/2023)**
- 8.5. Truck Route Study Update Report **(S 144/2023)**
- 8.6. Class Environmental Assessment for the Wyandotte Street East Extension and Jarvis Avenue - Ward 7 **(S 149/2023)**
- 8.7. Selection Criteria for Candidate Roads under the Local Residential Road Repair Program - City Wide **(S 147/2023)**
- 8.8. Howard Avenue / South Cameron Intersection Project, Abandonment of Gravel Road Drain - Ward 9 **(S 154/2023)**
- 8.9. Response to CQ 24-2023 Regarding Minimum Standards, Vendor Warranties, and Construction Policies for Road Repair, Sewer Infrastructure, and Road Rehab Projects - City Wide **(S 155/2023)**

9. TRANSIT BOARD ITEMS

- 9.1. Transit Windsor 2024 Operating Budget - City Wide **(S 145/2023)**
- 9.2. Transit Windsor 2024 Operating Budget with Service Enhancements - City Wide **(S 156/2023)**

10. ADOPTION OF TRANSIT BOARD MINUTES

11. QUESTION PERIOD

12. ADJOURNMENT

Item No. 3.1



Committee Matters: SCM 284/2023

Subject: Adoption of the Environment, Transportation & Public Safety Standing Committee meeting minutes held October 25, 2023

Environment, Transportation & Public Safety Standing Committee Meeting

Date: Wednesday, October 25, 2023

Time: 4:30 o'clock p.m.

Members Present:

Councillors

Ward 3 - Councillor Renaldo Agostino

Ward 4 - Councillor Mark McKenzie

Ward 8 - Councillor Gary Kaschak

Ward 9 - Councillor Kieran McKenzie (Vice Chairperson)

Councillor Regrets

Ward 2 - Councillor Fabio Costante (Chairperson)

Clerk's Note: Councillor Mark McKenzie participated via video conference (Zoom), in accordance with Procedure By-law 98-2011 as amended, which allows for electronic participation.

ALSO PARTICIPATING ARE THE FOLLOWING FROM ADMINISTRATION:

Chris Nepszy, Commissioner, Infrastructure Services

Shelby Askin Hager, Commissioner, Legal & Legislative Services

Steve Vlachodimos, City Clerk

Shawna Boakes, Executive Director of Operations / Deputy City Engineer

Stacey McGuire, Executive Director Engineering / Deputy City Engineer

Kirk Whittal, Executive Director Housing & Children Services

Dan Seguin, Deputy Treasurer – Financial Accounting & Corporate Controls

Adam Pillon, Manager of Right-of-Way

Anne Marie, Manager Environmental Services

Jason Scott, Manager Transit Planning

Craig Robertson, Deputy Licence Commissioner

Kelly Goz, Manager Homelessness & Housing Support

Jennifer Tanner, Manager Homelessness & Housing Support

Mark Spizzirri, Manager Performance Measurement & Business Case Development

Doran Anzolin, Executive Initiatives Coordinator

Clare Amicarelli, Transportation Planning Coordinator

Kathleen Quenneville, Active Transportation Coordinator

Anna Ciacelli, Deputy City Clerk / Supervisor of Council Services

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ALSO PARTICIPATING VIA VIDEO CONFERENCE ARE THE FOLLOWING FROM ADMINISTRATION:

Sandra Gebauer, Council Assistant

1. CALL TO ORDER

The Vice Chairperson calls the meeting of the Environment, Transportation & Public Safety Standing Committee to order at 4:30 o'clock p.m.

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

None disclosed.

3. ADOPTION OF THE MINUTES OF THE ETPS STANDING COMMITTEE

3.1. Minutes of the September 27, 2023 Environment, Transportation & Public Safety Standing Committee

Moved by: Councillor Renaldo Agostino

Seconded by: Councillor Gary Kaschak

THAT the minutes of the Environment, Transportation & Public Safety Standing Committee meeting held September 27, 2023 **BE ADOPTED** as presented.

Report Number: SCM 259/2023

4. REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS

None presented.

5. COMMUNICATIONS

None presented.

6. PRESENTATIONS AND DELEGATIONS

8.5. Active Transportation Master Plan 2022 Update - City Wide

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Caroline Taylor, ward 2 resident

Caroline Taylor, ward 2 resident appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Active Transportation Master Plan 2022 Update – City Wide” and indicates that there is a safety concern for using bike lanes, the infrastructure does not exist to support the active transportation lifestyle and limits the connectivity of the city.

Lori Newton, Executive Director, Bike Windsor-Essex & the Bike Kitchen

Lori Newton, Executive Director, Bike Windsor-Essex & the Bike Kitchen appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Active Transportation Master Plan 2022 Update – City Wide” and indicates that gaps exist for active transportation, commuter cycling needs to be made a priority; and concludes by suggesting that there needs to be separated bike lanes so that residents feel comfortable and safe using them in order to make active transportation a reality.

Councillor Gary Kaschak inquires about the technology of the new bike-detection traffic signals and the possibility of more. Shawna Boakes, Executive Director, Operations appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Active Transportation Master Plan 2022 Update – City Wide” and indicates that the accuracy of the new technology is about 90-100% compliant; and is located mainly on Tecumseh Road now and in some other locations as well.

Councillor Gary Kaschak inquires whether there is a report available regarding vision zero and active transportation. Ms. Boakes indicates that the vision zero report will be coming forward to the November meeting.

Councillor Gary Kaschak inquires about the success of the e-scooter and e-bike program in the city and whether people are responding well to them. Ms. Boakes indicates that there have been very few complaints this year, just a few about the parking of the equipment, for the most part positive feedback.

Councillor Renaldo Agostino inquires whether there is a timeline in regards to the University Avenue infrastructure project. Stacey McGuire, Executive Director, Engineering Operations appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Active Transportation Master Plan 2022 Update – City Wide” and indicates that the design work is starting now and once the construction estimates come back, the current budget will be reviewed to determine how much of the project can be completed in the current budget, and administration will continue to review in future budgets moving forward.

Councillor Kieran McKenzie inquires where we are in relation to the timeline that is contemplated in the Active Transportation Master Plan. Ms. Boakes indicates that next year there will be a full metrics evaluation for the ATMP as it is such a large endeavour. Ms. Boakes indicates that there

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are a number of projects in progress between design and construction that will be installed next year along with a number of connection points within existing bike lanes.

Councillor Kieran McKenzie inquires about the issue of bike parking and a policy review that was being undertaken last term. Ms. Boakes indicates that it is anticipated to come forward between November and January.

Moved by: Councillor Gary Kaschak

Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 963**

THAT the report of the Active Transportation Coordinator dated April 26, 2023 entitled "Active Transportation Master Plan 2022 Update" **BE RECEIVED** for information.

Carried.

Report Number: S 52/2023

Clerk's File: MB/5331

8.4. Follow-up to C172/2023 – Essex Terminal Railway Whistling Cessation – Ward 4

John West, ward 4 resident

John West, ward 4 resident, appears before the Environment, Transportation & Public Safety Standing Committee and expresses concern with the recommendation in the administrative report entitled "Follow-up to CR172/2023 – Essex Terminal Railway Whistling Cessation –Ward 4" and indicates that the noise level of the train whistle is affecting his quality of life; and concludes by indicating that the unwillingness of Essex Terminal Railway CEO to release the independent noise decibel assessment is also concerning.

Michael Fox, ward 4 resident

Michael Fox, ward 4 resident appears before the Environment, Transportation & Public Safety Standing Committee and expresses concern with the recommendation in the administrative report entitled "Follow-up to CR172/2023 – Essex Terminal Railway Whistling Cessation –Ward 4" related to the noise level of the train whistle, especially after midnight, which is affecting his sleep quality and overall quality of life.

Tony De Thomasis, President & CEO, Essex Terminal Railway

Tony De Thomasis, President & CEO, Essex Terminal Railway appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Follow-up to CR172/2023 – Essex Terminal Railway Whistling Cessation –Ward 4" and is available for questions.

Jack Weston, Superintendent, Essex Terminal Railway

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Jack Weston, Superintendent, Essex Terminal Railway appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Follow-up to CR172/2023 – Essex Terminal Railway Whistling Cessation –Ward 4” and is available for questions.

Councillor Mark Mckenzie inquires about the sensitivity and confidentiality of the decibel levels. Mr. De Thomasis indicates that any safety device noise study or decibel level readings of safety equipment on locomotives is proprietary to the company and that it is confidential information. He adds that the ETR is federally regulated by Transport Canada, the horns and whistles are tested and certified to be operating safely and within the minimum requirements. Mr. De Thomasis adds that they are responsible for ensuring that the safety devices are in compliance with Transport Canada. The horns and whistles are regularly tested and are in compliance. They can continue to test on a yearly basis and can work with the City of Windsor to ensure that they are in compliance and meeting the minimum decibel levels, which is 96 decibels, and provide documentation of compliance.

Councillor Mark Mckenzie inquires if they are able to disclose what company was hired to do the testing. Mr. De Thomasis indicates that it is a company out of the Chatham area that performs routine maintenance on all of their locomotives. Mr. De Thomasis adds that all of their decibel level readings were within 1-2% of the minimum standard which is 96 decibels.

Councillor Mark Mckenzie inquires as to why there is an increase in the train whistle noise at these particular crossings. Mr. De Thomasis indicates that there has been an increase in volume of activity and frequency due to an increase in business activity, manufacturing and processing. He adds that essential goods that support these local businesses come through this central location, business operations begin and end at Lincoln Road and operating hours are ideally finished by midnight, but on occasion, and on an infrequent basis there may be operating hours beyond midnight in order to accommodate a customer.

Councillor Mark Mckenzie inquires as to what time business starts in the morning. Mr. De Thomasis indicates between 6am and 7 am.

Councillor Mark Mckenzie inquires as to what would have to be done in order to reduce the whistle noise. Mr. De Thomasis indicates that it is a nuisance issue in terms of the noise and the only thing that could be done is to put mechanical gates at each of the affected crossings and the road authority would need to apply for a discontinuation of whistling. Mr. De Thomasis indicates that this would not be feasible for ETR because it is millions of dollars of investments and adds that they are investigating funding for the improvements of these crossings and if there are funds available through infrastructure Ontario, Transport Canada, they are willing to work with the City of Windsor to make these improvements.

Councillor Gary Kaschak inquires whether there is a contact number at ETR that residents can call if they have a complaint. Mr. De Thomasis indicates that they have the main office number where

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they record and log any complaints, which are then directed to the superintendent or other various departments appropriately.

Councillor Gary Kaschak inquires in the last 6 months has ETR seen an increased number of complaints. Mr. De Thomasis indicates that there has been an increase in volume of complaints over the past 12-18 months.

Councillor Renaldo Agostino inquires whether ETR have spoken to any sound engineers on the issue of noise pollution and how this could help the residents in their homes. Mr. De Thomasis indicates that it is a common problem across Ontario, they have not consulted a sound engineer, but it is a good idea and they are open to the conversation and to working with the City of Windsor. Mr. De Thomasis adds that they do recommend certain measures for new construction in and around a certain radius around the railway including double pane windows, brick construction, sound barriers, and vibration proof foundations.

Councillor Kieran McKenzie requests that ETR confirm if the accredited agency inspecting the equipment has accurate reporting processes and that the ETR is in compliance with the regulations. Mr. De Thomasis responds indicating that the third party certified inspector provide ETR with the certification of minimum standard compliance.

Councillor Mark McKenzie inquires about conversations with MPs and the Ministry of Transportation. Ms. Boakes indicates that she believes that there were already answers to questions that were asked by the previous Administration and that administration has been in constant communication with grant providers and monitoring when the grants will come out and what they might look like.

Councillor Mark McKenzie inquires whether the City has been looking into implementing more safety measures, what the cost is and whether it is feasible to do so. Ms. Boakes indicates that there has been a secondary preliminary layout completed and they have communicated with other municipalities who have done similar installations as well as other City of Windsor installations and based on those installations, estimated cost would be between \$2 and \$3 million dollars. Ms. Boakes adds that there are several crossings in this corridor that would need to be addressed in order to apply for the whistle cessation.

Councillor Mark McKenzie inquires about the fencing along the Lens Greenway and who funded that project. Administration will look into it and provide further details at an upcoming meeting of City Council.

Councillor Gary Kaschak inquires whether there are any noise exemption by-laws in place for railways. Administration indicates that they are not able to regulate the noise around railways, and there is no by-law.

Moved by: Councillor Mark McKenzie

Seconded by: Councillor Renaldo Agostino

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Decision Number: **ETPS 962**

THAT report of the Policy Analyst, Transportation Planning, dated October 6, 2023, entitled, "Follow-up to CR172/2023 - Essex Terminal Railway Whistling Cessation – Ward 4," **BE RECEIVED** for information; and further,

THAT Administration **BE REQUESTED** to continue discussions with Essex Terminal Railway in order to attempt to get the sound decibel levels report released; and,

THAT Administration **BE REQUESTED** to obtain an update from Member of Parliament Kusmierczyk related to his discussions with Federal Transportation Minister in regards to the status of the Rail Safety Grant Fund Program.

Carried.

Report Number: S 129/2023

Clerk's File: MTR2023

8.7. Response to Council Decision ETPS 942 – Options for Addressing Panhandling - City Wide

Deputy Chief Crowley, Windsor Police Services

Deputy Chief Crowley, Windsor Police Services appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and is available for questions.

Joyce Zuk, Executive Director, Family Services Windsor-Essex

Joyce Zuk, Executive Director, Family Services Windsor-Essex appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and is available for questions.

Gemma Smyth, Ward 3 resident

Gemma Smyth, Ward 3 resident, appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and reviews the language of the proposed panhandling by-law and the report. Ms. Smyth indicates that the proposed panhandling by-law is a duplicate of the Safe Streets Act, there is an increased cost associated with enforcing this by-law, there are several parallels and overlap between departments and concludes by suggest enacting the proposed by-law would be a waste of City resources.

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Nate Hope, downtown resident and Vice-Chair of Windsor Downtown Neighbourhood Alliance

Nate Hope, downtown resident and Vice-Chair of Windsor Downtown Neighbourhood Alliance appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" to advocate for the safety and security of all residents in the downtown, including the panhandlers. Mr. Hope indicates that these panhandlers in the downtown are in need of help and support from the municipal government to find a way to reduce poverty and increase housing availability.

Shelley Gilbert, Interim Executive Director, Legal Assistance of Windsor

Shelley Gilbert, Interim Executive Director, Legal Assistance of Windsor appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and provides information regarding the challenges that unhoused individuals experience, strategies to reduce poverty, address mental health and addictions, and to request that the proposed panhandling by-law not proceed.

Travis Reitsma, Ward 3 resident

Travis Reitsma, Ward 3 resident appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and provides information regarding the challenges that unhoused individuals experience, strategies to reduce poverty and to request that the proposed panhandling by-law not go forward.

Councillor Gary Kaschak inquires what could be done about panhandling from a proactive standpoint. Deputy Chief Crowley indicates that public safety is the number one concern and aggressive panhandling is the concern. When panhandlers stand in right of ways, or approaching cars at a light it becomes a dangerous situation. Windsor Police acts using proactive measures to work with Family Services trying to connect people with services in a better way. Deputy Chief Crowley adds that Nurse Police teams and Mobile Rapid Response teams along with social workers are deployed to bridge the gap.

Councillor Gary Kaschak inquires whether any community safety services will become involved in patrolling the streets to help the police out, including walking the beat. Deputy Chief Crowley indicates that he does see the return of foot patrol, and they are a part of regular deployment, officers on bicycles are some of the busiest officers. The presence on foot or on bike gives a greater sense of security. He adds that they are working with community partners in order to be able to increase the service of these officers.

Councillor Renaldo Agostino inquires whether the Highway Traffic & Safety Act allow people to be in medians. Deputy Chief Crowley indicates that it doesn't address medians and is not something

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that can really be used as an enforcement tool. Deputy Chief Crowley adds that they do rely on the Safe Streets Act, but are trying to connect people with available services.

Councillor Kieran McKenzie inquires as to the opportunity that Windsor Police has to address activity in the roadways as it pertains to the Safe Streets Act. Deputy Chief Crowley responds that panhandling is not illegal, but anyone standing in the streets is a danger to traffic, keeping people off of the roadways so that they can remain safe. Deputy Chief Crowley indicates that there hasn't been a need for the Safe Streets Act to be implemented really until 2018 when the problem with addiction and panhandling came to light in Windsor.

Councillor Kieran McKenzie inquires about the initiatives and partnerships with Windsor Police and community partners. Deputy Chief Crowley responds that working with Family Services in order to help get people off the streets, using the nurse police team to bring medical services to the streets, freeing up emergency room services and bringing social workers to the streets helps begin to address the issues on the streets.

Councillor Kieran McKenzie inquires whether Family Services can address some of the gaps that exist in the community outreach programs. Ms. Zuk indicates that Family Services is pleased to be a recipient of funding from the City in order to be able to offer the outreach work. Ms. Zuk adds that panhandling is the result of poverty and lack of available housing, and they work to identify the challenges of these individuals, what they can do to help them get connected to services available in the municipality. Ms. Zuk indicates that ODSP and Ontario Works rates are much too low to sustain housing and basic necessities. Ms. Zuk suggests that funding for roads and infrastructure could be reallocated to help the people in our city that are struggling.

Councillor Gary Kaschak inquires whether by-law officers are doing any outreach currently. Craig Robertson, Deputy Licence Commissioner appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and indicates that when by-law officers are in the field and they come across encampments, panhandling, hoarding issues, they are not specifically trained to deal with this directly, but they rely on the partnerships with colleagues in social services and police in order to engage services.

Councillor Renaldo Agostino inquires about how many people the City has been able to help with our initiatives. Kirk Whittall, Executive Director Housing and Children's Services appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Response to Council Decision ETPS 942 - Options for Addressing Panhandling - City Wide" and indicates that from a success perspective, we are making progress towards engaging this population, we need continuous improvement in the areas of securing funding from upper levels of government, more affordable housing, increased medical services and continuing our partnerships with community outreach groups to improve the services.

Moved by: Councillor Renaldo Agostino

Seconded by: Councillor Gary Kaschak

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Decision Number: **ETPS 965 ETPS 942**

THAT the committee report of the Environment, Transportation & Public Safety Standing Committee dated March 9, 2023 entitled "Panhandling Statistics re Council Question CQ 11-2022 - City Wide" indicating:

1. THAT the attached additional information relating to panhandling regulation and statistics BE RECEIVED; and,
2. THAT by-law ***, being a by-law to regulate panhandling, BE CONSIDERED, and, if advisable, BE PASSED; and,
3. THAT administration BE DIRECTED to provide more information related to other options to issuing fines, including but not limited to outreach, to address the aggressive panhandling behaviour, for Councils consideration.

BE NOTED AND FILED; and,

THAT the report of the Manager of Homelessness and Housing Support and the Deputy Licence Commissioner, dated July 24, 2023 entitled "Response to Council Decision ETPS 942 – Options for Addressing Panhandling - City Wide" submitted in response to direction provided through Council Decision ETPS 942 **BE RECEIVED** for information; and,

THAT City Council and Administration **ADVOCATE** to the provincial and federal levels of government for increased investments in programs and benefits for Canadians that will reduce poverty and increase affordability; and,

THAT City Council continue to **SUPPORT** programs and services that advance the goals of the 10-year Housing and Homelessness Master Plan, and the creation and expansion of affordable and supportive housing; and,

THAT Administration **BE DIRECTED** to send correspondence on behalf of Windsor City Council Requesting both the Windsor Police Services Board and Windsor Police Administration, that the Windsor Police Service take a more pro-active approach to addressing unsafe behaviours in the public roadways that impact or potentially impact traffic flows in a manner that is consistent with existing laws that fall within The enforcement scope of the Windsor Police Service; and,

THAT Administration **REPORT BACK** with infrastructure related strategies to discourage unsafe behaviours in the public roadway.

Carried.

Report Number: C 119/2023, SCM 111/2023, & S 31/2023

Clerk's File: ACL2023 & ACOQ2023

7. COMMITTEE MATTERS

None presented.

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8. ADMINISTRATIVE ITEMS

8.1. Response to CQ 18-2023 – Reversing Recycling and Garbage Collection Days – City Wide

Councillor Gary Kaschak requests that administration explain the potential of eliminating Monday pickups and moving to a Tuesday through Friday operation. Anne Marie Albidone, Manager Environmental Services, appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report “Response to CQ 18-2023 – Reversing Recycling and Garbage Collection Days – City Wide” and indicates that currently trash pickups are completed on a 4 day schedule on a Monday to Thursday schedule and recycle is on a Tuesday through Friday schedule. Statutory holidays are on a Monday which offsets the collection schedule to the following day. Ms. Albidone adds that they are proposing with the new collection contract, to have all collections done Monday to Thursday. Ms. Albidone indicates that the residents would put out all garbage, recycling and organic waste on the same day which would minimize disruption and there would be no movement for the statutory holiday with minimal exceptions.

Councillor Gary Kaschak inquires about the Province potentially switching to a standard recycling pickup in terms of items collected. Ms. Albidone indicates that is correct and there will be a standardized collection across the province in terms of what items are going to be collected and that additional items will be placed in the blue and red box.

Councillor Gary Kaschak inquires about changing collection days. Ms. Albidone indicates that collection schedules work from west to east. The City could change to an east to west pick up, however the change would be made to the entire city and compliance to the new schedule could become an issue. Ms. Albidone indicates that administration’s preference would be to keep working from west to east while moving to a 4 day schedule.

Moved by: Councillor Gary Kaschak

Seconded by: Councillor Renaldo Agostino

Decision Number: **ETPS 966**

THAT the report of the Commissioner of Infrastructure Services dated October 5th, 2023, entitled “Response to CQ 18-2023 – Reversing Recycling and Garbage Collection Days” **BE RECEIVED** for information.

Carried.

Report Number: S 125/2023

Clerk’s File: SW2023

8.2. Response to CR57/2022 – Data Collected and Potential Strategies to Target Rodent Issues – City Wide

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Councillor Renaldo Agostino inquires whether it is usually a neighbourhood issue that is causing the rodent problem. Ms. Albidone indicates that there are rats across the city and encourages residents to contact 311 to initiate an inspection.

Councillor Renaldo Agostino inquires whether there is any knowledge of residents openly feeding and watering rats. Ms. Albidone indicates that residents are feeding the wildlife in general. If they are feeding birds, squirrels, etc. they are also feeding the rats. Administration asks residents to be mindful of not leaving food and water out at all hours and to limit it to a certain time and then remove it.

Moved by: Councillor Gary Kaschak
Seconded by: Councillor Renaldo Agostino

Decision Number: **ETPS 960**

THAT the report of the Commissioner of Infrastructure Services dated October 6, 2023, entitled "Response to CR57/2022 – Data Collected and Potential Strategies to Target Rodent Issues" **BE RECEIVED** for information.

Carried.

Report Number: S 127/2023
Clerk's File: AB2023

8.3. Response to CQ 19-2022 – Review of the use of Artificial Turf on the Public Right-of-way - City Wide

Councillor Kieran McKenzie requests clarification related to the City using artificial turf sparingly on boulevards and public right of ways. Stacey McGuire, responds that is correct, the turf is used only in areas where cutting grass is a safety concern or in areas where growing grass would not take. Councillor Mark McKenzie inquires who is in charge of maintaining this turf and how often is it maintained. Ms. McGuire indicates that residents are encouraged to call 311 if there is a concern in a specific area that needs to be addressed.

Moved by: Councillor Gary Kaschak
Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 961**

1. THAT the report of the Technologist III dated October 5, 2023 entitled, "Response to CQ 19-2022 – Review of the use of Artificial Turf on the Public Right-of-way - City Wide" **BE RECEIVED** for information.

Carried.

Report Number: S 126/2023
Clerk's File: SW2023

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8.6. Church Street (Tecumseh Road West to Cul-de-Sac) Traffic Calming – Ward 3

Councillor Mark McKenzie inquires about snow removal on the roads with speed humps. Ms. Boakes indicates that snow plows will continue to clean the roads they always have. The speed humps are being installed in residential neighbourhoods and the snow plows run on the main arterial roads regularly and the plows run on residential neighbourhood streets only when there has been a snowfall of 4 inches or more. Ms. Boakes adds that the speed humps are designed and installed to be able to take the impact from the snow plows, and drivers are equipped with the GIS record of the location of the speed humps in the neighbourhoods.

Moved by: Councillor Renaldo Agostino

Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 964**

THAT Administration **BE DIRECTED** to install speed humps on Church Street between Tecumseh Road West and Cul-de-Sac; and,

THAT Council **SUPPORT** the immediate use of \$41,700 in 2026 Pay-As-You-Go funding previously approved as part of the 2023 10-year capital budget from the Traffic Calming Initiatives project, OPS-021-07, and **DIRECT** the City Treasurer to pre-commit those funds as part of the 2024 capital budget; and,

THAT a budget issue with regards to annual maintenance of \$3,090 **BE PRESENTED** as part of the 2025 operating budget development process and be considered a priority item based upon approval for the installations.

Carried.

Report Number: S 128/2023

Clerk's File: ST/13863

9. TRANSIT BOARD ITEMS

9.1. Transit Windsor Pension Plan - Investment Plan and 2022 Actuarial Valuation and Audited Financial Statements - City Wide

Moved by: Councillor Gary Kaschak

Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 959**

THAT the Environment, Transportation & Public Safety Standing Committee sitting as the Transit Windsor Board of Directors:

- I. **APPROVE** the Audited Financial Statements and Actuarial Valuation of the Contributory Pension Plan for Employees of Transit Windsor as at December 31, 2022; and further,

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- II. **ACKNOWLEDGE** the forwarding of the Audited Financial Statements and Actuarial Valuation as at December 31, 2022 to the Office of the Superintendent of Financial Institutions and to the Canada Revenue Agency by the Deputy Treasurer – Financial Accounting and Corporate Controls, as the Plan Administrator and as per legislation; and further,
- III. **DIRECT** Administration to proceed with the termination of the Contributory Pension Plan for Employees of Transit Windsor investment management agreement with OMERS which includes but not limited to the liquidation of plan investments with OMERS, development and implementation of a temporary investment strategy with regards to the liquidated plan funds, and subject to direction of the Transit Windsor Pension Review Committee the purchase annuities to satisfy pension plan member obligations and finally wrap-up the Contributory Pension Plan for Employees of Transit Windsor.

Carried.

Report Number: C 153/2023
Clerk's File: AFB/14256 & MT2023

10. ADOPTION OF TRANSIT BOARD MINUTES

None Presented.

11. QUESTION PERIOD

Councillor Kieran McKenzie inquires about transit levels of service changes as a result of further implementation of the Public Transit Master Plan and requests clarification regarding comments regarding the enhancement of levels of service in parts of the city and reduction in others. Jason Scott, Manager Transit Planning appears before the Environment, Transportation and Public Safety Standing Committee and indicates that route 418X has been already implemented and nothing has been reduced in terms of service. Mr. Scott adds that the west end Crosstown 2 and 1C are staying the same and ending at Tecumseh Mall, with 3 new local routes replacing the east end of Windsor and The Dominion 5 is being split up. Mr. Scott indicates that Transit is greatly increasing their service coverage area by implementing the route changes. The service is becoming more efficient, specifically the 418X as an express service from the East end to the University that reduces the ride time by half.

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12. ADJOURNMENT

There being no further business, the Environment, Transportation & Public Safety Standing Committee is adjourned at 6:38 o'clock p.m. The next meeting of the Environment, Transportation & Public Safety Standing Committee will be held November 29, 2023.

Carried.

Ward 9 – Councillor Kieran McKenzie
(Vice Chairperson)

Deputy City Clerk / Supervisor of Council
Services

Item No. 7.1



Committee Matters: SCM 280/2023

Subject: Minutes of the Windsor Licensing Commission of its meeting held

October 5, 2023

Windsor Licensing Commission

Meeting held October 5, 2023

A meeting of the Windsor Licensing Commission is held this day commencing at 9:00 o'clock a.m. in Room 204, 350 City Hall Square West, there being present the following members:

Councillor Ed Sleiman, Chair
Councillor Angelo Marignani
Harbinder Gill

Regrets received from:

Councillor Renaldo Agostino
Jayme Lesperance

Delegations in Attendance:

Manal Al Hasan c/o The Estate of the late Youssef Farhat, Amin Abdo Ahmed Al-Goby and Mohammed Farhat regarding ***Item 6(a)***
Abdelaziz Hassan regarding ***Item 7(a)***

Also present are the following resource personnel:

Steve Vlachodimos, City Clerk and Licence Commissioner
Craig Robertson, Deputy Licence Commissioner
Sandy Hansen, Senior Licence Issuer
Karen Kadour, Committee Coordinator

1. Call to Order

The Chair calls the meeting to order at 9:07 o'clock a.m. and the Windsor Licensing Commission considers the Agenda being Schedule A attached hereto, matters which are dealt with as follows:

2. Disclosure of Interest

None disclosed.

3. Adoption of the Minutes

Moved by Councillor Angelo Marignani, seconded by Harbinder Gill,
That the minutes of the Windsor Licensing Commission of its meeting held June 1, 2023 **BE ADOPTED** as presented.
Carried.

4. Request for Deferrals, Referrals or Withdrawals

None.

5. Communications

None.

6. Licence Transfers

6(a) Transfer of Taxicab Plate #123

Mrs. Manal Al Hasan c/o The Estate of the late Youssef Farhat, Amin Abdo Ahmed Al-Goby and Mohammed Farhat appear before the Windsor Licensing Commission regarding the transfer of Taxicab Plate #123.

Craig Robertson, Deputy Licence Commissioner advises on February 22, 2023, the Licensing Division received an e-mail notification of the death of plate holder Youssef Farhat. Mr. Farhat had been the plate holder of taxicab plate #123 since 2012. Administration is recommending that Taxicab Plate #123 be transferred to Amin Abdo Al-Goly.

Moved by Councillor Angelo Marignani, seconded by Harbinder Gill,
WLC 11/2023 That the transfer of Taxicab Plate #123 from The Estate of the late Youssef Farhat to Amin Abdo Ahmed Al-Goly **BE APPROVED** with the following conditions:

- i. Amin Abdo Ahmed Al-Goly be given thirty (30) days from the date of the approval to submit a vehicle for inspection that complies with Schedule 5 to By-law 150-2018 including a valid safety standards certificate.
- ii. Amin Abdo Ahmed Al-Goly be given thirty (30) days from the date of the approval to submit a Taxicab Plate Holder application and pay the associated fee.
- iii. Amin Abdo Ahmed Al-Goly be given thirty (30) days from the date of the approval to provide verification that full compensation has been made to Mrs. Manal Al Hasan on behalf of The Estate of the late Youssef Farhat in consideration of the transfer of Taxicab plate #123.

- iv. Amin Abdo Ahmed Al-Goly shall not lease Taxicab plate #123 for a one-year period as stated in Schedule 5, Section 21.3 of Licensing By-law 150-2018.

Carried.

7. Applications/Hearings

Livery Vehicle, Class D – Van

Abdelaziz Hassen, Easy Lyft Inc. appears before the Windsor Licensing Commission. He advises that the Class D Livery Vehicle licence will allow him to transfer seniors and people in wheelchairs to their destinations.

Craig Robertson, Deputy Licence Commissioner states that a new application for a Class “D” Livery Vehicle licence was submitted on July 14, 2023 by Abdelaziz Hassen of Eazy Lyft Inc.. He adds that there are currently 3 Class “D” Livery Vehicles licensed in the City of Windsor.

In response to a question asked by Harbinder Gill regarding how many people can be accommodated in the van, Abdelaziz Hassen responds that the van can accommodate one wheelchair and three passengers.

Moved by Councillor Angelo Marignani, seconded by Harbinder Gill,
WLC 12/2023 That the livery vehicle plate holder application, submitted by Abdelaziz Hassen on behalf of Easy Lyft Inc., 457 Windermere Road, Windsor, Ontario N8[^] 3C9, to operate one (1) Class “D” – Livery Vehicle, namely a 2016 Dodge Caravan **BE APPROVED** with the following conditions:

- Abdelaziz Hassen be given sixty (60) days from the date of this decision to submit proof of an ownership of a vehicle and valid certificate of insurance that is satisfactory to Sections 4.2 and 9.1 of Schedule 3 to By-law 150-2018.
- The vehicle must submit to and pass an inspection by the By-law Enforcement Unit.

Carried.

8. Reports and Administrative Matters

None.

(a) Expired Application(s) for Business Licence

Moved by Councillor Angelo Marignani, seconded by Harbinder Gill,
That the report of the Deputy Licence Commissioner dated August 24, 2023
entitled “Expired Application(s) for Business Licence” **BE RECEIVED**, and further, that
the reason for expiration of the business licence be included in the report of the Deputy
Licence Commissioner.

Carried.

9. In Camera

No In Camera session is held.

10. Date of Next Meeting

The next meeting will be held at the call of the Chair.

11. Adjournment

There being no further business, the meeting is adjourned at 9:25 o'clock a.m.

Item No. 7.2



Committee Matters: SCM 129/2023

Subject: Minutes of the Vision Zero Stakeholder Group of its meeting held March 22, 2023

Vision Zero Stakeholder Group
Meeting held March 22, 2023

A meeting of the Vision Zero Stakeholder Group is held this day commencing at 2:00 o'clock p.m. via Zoom video conference, there being present the following members:

Councillor Gary Kaschak, Chair
Ken Acton
Diane Bradford
Julie Di Domenico
Nathanael Hope
Abdul Naboulsi
Jim Sommerdyk

Regrets received from:

Wes Hicks
Kevin Morse

Also present are the following resource personnel:

Jeff Hagan, Transportation Planning, Senior Engineer
Shawna Boakes, Executive Director Operations, Deputy City Engineer
Kathleen Quenneville, Active Transportation Coordinator
Karen Kadour, Committee Coordinator

1. Call to Order

The Chair calls the meeting to order at 2:07 o'clock p.m. and the Committee considers the Agenda being Schedule A attached hereto, matters which are dealt with as follows:

2. Declaration of Conflict

None disclosed.

3. Adoption of the Minutes

Moved by Nathanael Hope, seconded by Ken Acton,
That the minutes of the Vision Zero Stakeholder Group of its meeting held June 29, 2022 **BE ADOPTED** as presented.
Carried.

4. Business Items

4.1 Vision Zero Action Plan – Interim Goals & Implementation Plan

Jeff Hagan provides an overview of the Vision Action Plan – Interim Goals and Implementation Plan as follows:

The identified strategic priorities are grouped into four themes:

1. Driver behaviors
2. Road user types
3. Locations and infrastructure
4. Process improvements

The goals were divided into three categories – *Activity Goals*, (What action is the City taking?), *Impact Goals*, (What is the direct result of the City's action?) and the *Outcome* (How do the results of the City's action affect road safety?).

The overall goal for all Vision Zero programs is zero fatalities and major injuries due to road crashes, ideally within an identified timeline.

The recommended overall goal of the Vision Zero Action Plan is zero fatal and major injury collisions **within 15 years** of adopting the Vision Zero Action Plan.

Interim Goals – Road Safety Outcomes

- 5 years after Vision Zero Action Plan adoption: 33% reduction from 2015-2019 baseline levels
- 10 years after Vision Zero Action Plan adoption: 67% reduction from 2015-2019 baseline levels
- 15 years after Vision Zero Action Plan adoption: 100% reduction from 2015-2019 baseline levels.

Conclusion – The overall goal of the Vision Zero Action Plan has been identified as zero road crash fatalities or major injuries within 15 years of the adoption of the Plan. To support this plan, the following items have been provided:

- Interim goals, both overall and by strategic priority.
- An implementation plan addressing each recommended initiative, and
- Recommendations for ongoing monitoring, reporting and periodic review of the Action Plan.
- Some of the ***Recommended Initiatives*** outlined in the Vision Zero Action Plan – Implementation Plan are as follows:
 - Develop and Implement a Complete Streets Policy
 - Continue to implement the Transit Windsor Master Plan
 - Increase winter roadway maintenance
 - Conduct road safety Audits of identified high injury corridors
 - Establish a Fatal Collision Response Team
 - Implement speed limit reductions – Neighbourhoods
 - Implement speed limit reductions – Major Streets
 - Carry out education campaigns
 - Review Official Plan and Zoning By-laws for Vision Zero opportunities

- Implement a Parking Ticket Forgiveness Program to target Impaired Driving
- Support the development of a Safe Ride Home Service
- Install Pedestrian Countdown Signals
- Implement a Road Diet Program
- Develop a comprehensive GIS-based Collision Information System

Diane Bradford suggests that the recommendation for the establishment of a Fatal Collision Response Team be prioritized and refers to the City of Ottawa who have had groundbreaking results and tangible outcomes with their Fatal Collision Review Committee.

Ken Acton asks if there will be an opportunity to review the Plan midterm throughout the 5, 10 and 15 year timelines in terms of density growth patterns, and land use transportation patterns as these will change drastically over a 5 year timeline and it would be prudent to do a review every 2.5 years to 3 years.

Jeff Hagan responds there is a flexibility to bring forward additional updates if the need arises.

The Chair concurs with a midterm review over the timelines.

Abdul Naboulsi asks if the traffic calming initiatives that were done in parts of the city are based on surveys that are part of Vision Zero.

Jeff Hagan responds that the surveys are separate from Vision Zero.

In response to a question asked by Jim Sommerdyk regarding what are the next steps, Jeff Hagan responds that once the Committee has provided feedback, the Action Plan will be updated, finalized and will proceed to the Environment, Transportation and Public Safety Standing Committee and then on to City Council for adoption of the Plan.

Diane Bradford refers to the traffic calming measures put in place and asks that any future measures be partnered with the Vision Zero concepts.

The Chair asks Administration if there are any current vision zero projects in North America and asks to share best practices.

Jeff Hagan responds that there are a wide range of municipalities that have a Vision Zero plan underway and they have been monitoring their best practices,

Diane Bradford suggests by “painting a picture” of what Vision Zero is for the community, it would provide tangible understandings when this initiative is launched for the public. She refers to New York City and indicates that a very busy intersection was restructured to add numerous traffic calming measures which included delaying the car traffic lights 30 seconds after the pedestrian walk sign which resulted in decreased fatalities. She adds that the City of Toronto adopted this as well.

The Chair advises that in 2019, he proposed the reduction of all residential speed limits in Windsor to 40 km/h which was defeated by the Council of the day. The caveat was the formation of a Vision Zero Committee to review various aspects to see if reducing residential speeds would be part of the plan.

Ken Acton states in terms of public education and consultation, he indicates that he sits on the Windsor Region of Society Architects as an Executive and on the Michigan State Board for Congress for the New Urbanism. He offers to facilitate that connection (if there is interest from the City of Windsor) and to provide links to studies to help create safer streets.

Jeff Hagan responds that they will start with an update to the Official Plan and once approved by the Ministry, a Zoning Bylaw update will be undertaken.

Abdul Naboulsi expresses concern that public input was not solicited for most of the items in Vision Zero. He asks is there anything that we can do with respect to Vision Zero where public input is not required, i.e. high traffic zones, new subdivision builds. He advises in a recent work assignment in California, new homes were being built, and rumble strips shaped like cobblestones were being placed at the ends of intersections for four-way stops. He adds motorists would stop due to the sound of the rumble strips under the car.

Diane Bradford asks as it relates to the Fatal Response Team if the Coroner's Office could be added to the membership list.

Shawna Boakes advises in response to the remarks made by Abdul Naboulsi regarding implementation, she indicates that the more the standards can be developed and updated, the easier it will be to implement those standards.

Diane Bradford adds that if there are any education plans to target schooling or road safety initiatives in the community, to bring in the Windsor Essex County Health Unit.

The Chair invites the Vision Zero Committee to attend the Environment, Transportation & Public Safety Standing Committee meeting to be available to answer questions.

Julie Di Domenico indicates she is willing to share any communication or education to the school community.

Nathanael Hope expresses concern with the lack of public consultation with the neighbourhoods.

J. Hagan responds for a local road speed hump, two rounds of notices (traffic calming survey) are sent to the properties. The first round goes out to every household and the second round goes out halfway through the process where they have not received a reply. Also, signs are posted in the survey area along with social media posts.

Ken Acton suggests that the AODA be factored into the Plan to assist those who are vision impaired, or mobility impaired and if there is an opportunity when those consultations take place, to reach out to organizations such as the CNIB and special user groups.

Shawna Boakes adds Administration is working with the Windsor Accessibility Advisory Committee with respect to finalizing the standards for the accessible pedestrian signals.

Diane Bradford reports that the OPP had a 130% increase in fatalities related to speed over the past year and last fiscal year. Our region is also struggling with huge rates of serious speeding. It is important to adapt these initiatives and their priorities according to what kind of injuries and related incidents that we are seeing on our roads. As the traffic patterns and injury and fatalities are changing, she requests that these be incorporated into the Plan.

The Chair asks for 2022 collision data (which currently is not available) as there is an epidemic with speeding.

Jeff Hagan thanks the Committee members for their feedback and work involved in this process.

Moved by Ken Acton, seconded by Julie Di Domenico,
That the Vision Zero Action Plan – Interim Goals and Implementation Plan **BE APPROVED.**
Carried.

5. Adjournment

There being no further business, the meeting is adjourned at 3:05 o'clock p.m.

CHAIR

COMMITTEE COORDINATOR

Item No. 7.3



Committee Matters: SCM 311/2023

**Subject: Essex Windsor Solid Waste Authority (EWSWA) Board Meeting Minutes
from September 13, 2023**



Essex-Windsor Solid Waste Authority Regular Board Meeting MINUTES

Meeting Date: Wednesday, September 13, 2023

Time: 3:00 PM

Location: Essex County Civic Centre
Council Chambers, 2nd Floor
360 Fairview Avenue West
Essex, Ontario N8M 1Y6

Attendance

Board Members:

Gary McNamara - Chair	County of Essex
Hilda MacDonald	County of Essex
Rob Shepley	County of Essex
Michael Akpata	County of Essex
Kirk Walstedt	County of Essex
Gary Kaschak – Vice Chair	City of Windsor
Jim Morrison	City of Windsor
Kieran McKenzie	City of Windsor
Mark McKenzie	City of Windsor

EWSWA Staff:

Michelle Bishop	General Manager
Steffan Brisebois	Manager of Finance & Administration
Cathy Copot-Nepszy	Manager of Waste Diversion
Tom Marentette	Manager of Waste Disposal
Teresa Policella	Executive Assistant

City of Windsor Staff:

Anne Marie Albidone	Manager of Environmental Services
Tony Ardovini	Deputy Treasurer Financial Planning
Shawna Boakes	Executive Director of Operations
Mark Spizzirri	Manager of Performance Management and Business Case Development

County of Essex Staff:

Mary Birch	Director of Council & Community Services/Clerk
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Absent:

Drew Dilkens	City of Windsor (Ex-Officio)
Sandra Zwiers	County CAO

1. Call to Order

Chair McNamara called the meeting to order at 3:00 PM.

2. Declaration of Pecuniary Interest

The Chair called for any declarations of pecuniary interest and none were noted. He further expressed that should a conflict of a pecuniary nature or other arise at any time during the course of the meeting that it would be noted at that time.

3. Approval of the Minutes

Moved by Michael Akpata

Seconded by Kieran McKenzie

THAT the minutes from the Essex-Windsor Solid Waste Authority Regular Meeting, dated August 9, 2023, be approved and adopted.

**55-2023
Carried**

4. Business Arising from the Minutes

There were no items raised for discussion.

5. Waste Diversion

A. EWSWA Material Recovery Facilities (MRFs) Lease Update

The Manager of Waste Diversion provided an update on the status of the Materials Recovery Facilities (MRFs) Lease Request for Proposals (RFP).

In March 2023, the Authority Board approved Administration's recommendation to issue an RFP to lease one or both MRFs as this could support the region's transition to Extended Producer Responsibility (EPR) as well as generate revenue for the Authority.

The RFP closed on May 5, 2023. Although there were six plan takers, only one submission was received. The submission was evaluated by a committee established by the Authority which determined that the Proponent met all the requirements of the RFP. The award of the RFP was not issued to the Proponent as it was contingent upon them securing a Post-collection services contract with a Producer Responsibility Organization (PRO) that aligned with the Authority's transition date.

Unfortunately, the successful Proponent was not awarded a Post-collection services contract with a PRO. On June 27, 2023, the Authority received notification that GFL Environmental Inc. was awarded the receiving facility

contract to receive Blue Box materials post transition from the Essex-Windsor catchment area.

A meeting was held on July 7, 2023, with CM and Authority and City of Windsor (City) Administration. CM indicated that they still had not contracted for the processing of Blue Box materials and were in the process of reviewing submissions. The Authority questioned why the collection and processing services were not linked as there may have been financial, logistical and environmental efficiencies in doing so. The Authority advised CM that it needed a decision if CM required the MRFs beyond August 2024. CM indicated that they would advise the Authority by the end of the month if they were interested in the use of our facility.

At the beginning of August, the Authority reached out to CM's VP, National Supply Chain Operations, Sherry Acaro, as no further updates had been provided by them since the July 7th meeting. Ms. Acaro explained that CM was reviewing submissions. She did note that they would be going to the CM Board in September on how they will proceed. The Authority should know more details by October.

The Manager of Waste Diversion further explained that it was important that a response be received by CM promptly because of the new organics program. The EXP report that was received by the Board at the July meeting recommended that a receiving site for organics be located in Windsor at the site. This decision from CM would impact the decision on how to proceed.

There are no financial implications at this time.

The Manager of Waste Diversion asked if there were any questions.

Mr. Kieran McKenzie questioned the CM decision making process and stated that the October date sounds a little loose.

The General Manager stated that the Authority needs a decision in short order to determine the best use of the facility and we have a successful Proponent. It is also important for the rollout of the organics program. Per the EXP report, Source Separated Organics (SSO) will be delivered somewhere in the vicinity of Windsor and procurement documents need to be issued. All of this will come together quickly but the Authority must stay on top of CM for a decision.

Mr. Kaschak asked if any information was provided at the recent Association of Municipalities of Ontario (AMO) conference.

The General Manager stated that she attended the Circular Economy workshop. Presentations were given by two municipalities that have already transitioned. One opted in with CM and the other opted out. They both had a good experience with transition stating that it was fairly seamless. Both of these municipalities stayed with the same collector. As for the County, there will be a

new collector because the City will no longer be the collector. As it relates to the MRFs, of these two municipalities that have transitioned, one leased out their MRF and the other did not have one. She noted that this is a good opportunity for the Authority to watch as other municipalities transition before us.

Moved by Kieran McKenzie
Seconded by Gary Kaschak

THAT the Board receive the report as information.

**56-2023
Carried**

6. Waste Disposal

A. Hydro Service Upgrades at the Regional Landfill

The Manager of Waste Disposal stated that the purpose of the report is to recommend the award for Hydro Service Upgrades at the Regional Landfill (RL) to Sterling Motors Technology Inc. at the submitted price of \$139,900 plus HST. As presented at the previous Board meeting, the RL does not have the appropriate electrical services to support the new Reverse Osmosis (RO) system. At this same meeting, the Board approved a one-time contribution from the Rate Stabilization Reserve to fund the hydro service upgrades.

Initial estimates for the completion of the upgrades were approximately \$90,000. After discussions with Hydro One and the electrical contractors, it was identified that modifications to the scope of work were required to accommodate the power demand, the requirements of Hydro One and the Electrical Safety Authority. Due to these modifications, the cost of the work exceeded \$100,000 which requires approval by the Board per the Authority's Procurement Policy (EW-008).

A Request for Quote (RFQ) was issued for the upgrades and two bid submissions were received. Both Proponents passed the Compliance Stage and proceeded to the Pricing Stage. The resulting bids are outlined on page 11 of the agenda package. Sterling Motor Technology Inc. was the successful Proponent.

The cost of the Hydro Service Upgrades will be funded by a one-time contribution from the Rate Stabilization Reserve.

The Manager of Waste Disposal asked if there were any questions.

Mr. Morrison commented that there was a vast difference in the quotes submitted.

Mrs. MacDonald noted that the increase is not a surprise as costs have gone up.

Mr. Kieran McKenzie asked if there had been any thought on how the methane gas that the RL generates could be captured.

The Manager of Waste Disposal stated that the Authority is in the process of issuing an Expression of Interest to companies that handle gas management

Mr. Kieran McKenzie noted that it will be interesting to see the results when it comes forward.

No further questions were asked.

Moved by Jim Morrison

Seconded by Hilda MacDonald

1. **THAT** the Board award the Request for Quote to Sterling Motor Technology Inc. for the Hydro Service Upgrades at the Regional Landfill in the amount of \$139,900 plus HST
2. **THAT** the Board approve the increase in the one-time contribution from the Rate Stabilization Reserve to fund the Hydro Service Upgrades at the Regional Landfill from \$90,000 to \$139,900 plus HST.

**57-2023
Carried**

B. Design, Engineering and Construction of a New Scale House Building – Result and Award

The Manager of Waste Disposal stated that the purpose of the report is to recommend the award of the RFP for the Design, Engineering and Construction of a new scale house building at Transfer Station #2, located in the Town of Kingsville to Greenlight General Contracting Inc. who has been identified as the Preferred Proponent and submitted a total bid price of \$224,000, excluding taxes. He explained that the new scale house will replace the original 18-year-old pre-fabricated scale house building which no longer suits this very busy site.

The Authority issued an RFP on May 16, 2023, and three (3) submissions were received. The evaluations of the submissions consisted of a four-stage process. All proposals achieved the minimum Technical Score and proceeded to the Financial Stage. Greenlight General Contracting Inc. achieved the highest overall score and was identified as the Preferred Proponent.

The cost of the new scale house was included in the 2023 capital budget. The budget of \$130,000 for this project was based on an estimate received at the time the budget was formed. After completing the competitive procurement

process, the cost of this project exceeded the 2023 budget. The project will be financed through the Equipment Replacement Reserve.

The Manager of Waste Disposal asked if there were any questions. No questions were asked.

Moved by Gary Kaschak

Seconded by Michael Akpata

THAT the Board award the Request for Proposal (RFP) to Greenlight General Contracting Inc. for the Design, Engineering and Construction of a new scale house building at Transfer Station #2 in the amount of \$224,000 plus HST.

**58-2023
Carried**

7. Finance & Administration

A. January to June 2023 – Six Month Operations Financial Review

The Manager of Finance and Administration stated that the purpose of the report is to present the six-month financial review of the operating costs and revenue comparing estimated results to the 2023 Operational Plan and Budget figures. The tables on pages 16 and 17 of the agenda package summarized the estimated operating revenues and expenditures for the period of January 1 to June 30, 2023 and compares them to the budget figures.

The estimated January to June 2023 revenue is approximately \$442,800 more than the budget. This favourable revenue variance is primarily attributed to the following:

- An increase in waste tonnages from Institutional/Industrial/Commercial (ICI) customers;
- An increase in the amount of contaminated soil received at the RL;
- An increase in non-landfilled ICI material which primarily consists of daily cover material such as auto shredder fluff and organic material;
- An increase in revenues from the sale of recyclable goods. This increase is attributable to the commodity prices remaining higher on average than budget in the first six months of 2023. The actual commodity prices versus the 2023 budgeted prices are illustrated in the tables on pages 19 and 20 of the agenda package.

There has been an unfavourable variance in revenues related to Municipal refuse for the first six months of 2023. This unfavourable variance is expected to decrease due to the recent influx of refuse material which resulted from the recent flooding event in the Essex-Windsor region.

The Manager of Finance stated that expenditures for the six months of 2023 are approximately \$280,000 less than budget. This favourable variance is primarily attributed to the decrease in the amount of leachate hauled from the Regional Landfill to the Lou Romano Water Reclamation Plant (LRWRP). This favourable variance is expected to decrease in the last six months of 2023 due to the costs of launching the RO treatment plant and the expected increase of leachate loads hauled and treated.

He also noted that the following impacted the expenditure variance:

- An increase in costs associated with operating the County Blue Box recycling collection which is operated by the City;
- An increase in the Host Compensation due to the higher than budgeted tonnes of landfilled material received at the RL. The overall landfilled tonnes were 5,391 tonnes higher than budgeted.

In regards to the Operating Summary, the approved 2023 budget included a deficit of (\$3,757,380) of which (\$1,570,200) was expected to be incurred in the first six months of 2023 and the remaining from July to December 2023. The first six-month financial review indicates an estimated deficit of (\$847,200) for the January to June 2023 period which results in an estimated favourable variance of \$723,000.

The full 2023 fiscal year will form part of the 2024 Operating Plan and Budget document that will be presented at the November 2023 Board meeting.

The Manager of Finance asked if there were any questions. No questions were asked.

Moved by Rob Shepley

Seconded by Gary Kaschak

THAT the Board receive the report as information.

**59-2023
Carried**

B. Update – County of Essex Council Motion Re: Regional Waste Collection

The General Manager provided an update related to the Motions passed by the last term of Essex County Council with regard to exploring regional waste collection services within the seven (7) County municipalities.

On April 19, 2023, Essex County Council reconfirmed its commitment to a regional approach to waste management. At this meeting, they also directed County of Essex Administration to report back with further feedback from the local municipalities and the necessary By-Law to upload the collection of waste to the County.

The Authority General Manager, Authority and County Solicitor, David Sundin and County CAO/Director of Finance/Treasurer, Sandra Zwiers, have attended all seven (7) County municipalities to provide a presentation regarding the resolutions passed at County Council. They also attended County Council meetings on July 19, 2023, and August 16, 2023, to present reports that included the recommendations in the EXP document that was presented to the Authority Board on July 12, 2023. At the August 16, 2023 meeting, County Council passed the By-law to upload the collection and delivery of waste from the local municipalities to the County.

The General Manager noted that although County Council has passed the By-Law, each local municipality will have to vote at each of their respective Council meetings. A triple majority from the local municipalities will be required. This means that it will be up to at least four (4) of the Councils of the local municipalities, comprising of at least 50% of the available electors within the County, to pass the County's By-law. The General Manager noted that as of last night, the Town of Kingsville voted against the motion, whereas, the Municipality of Leamington and the Town of Tecumseh voted in favour of the motion. Any final resolution will be brought forward to the Board.

The General Manager asked if there were any questions.

Mr. Morrison asked what would happen if some of the municipalities did not approve.

The General Manager stated that if this does not move forward, the Authority still has the motion to proceed with an organics program that was approved by County Council and garbage collection would remain at the municipal level. The Authority will issue an RFP in the fall of 2023 for the collection of the organics program. Seacliff Energy has been awarded the RFP to process organics. If the By-Law does pass, the Authority will work with the Municipal Working Group on how to proceed with both organics and garbage collection.

Mr. Kieran McKenzie asked if the General Manager could share some of the arguments of the municipalities opting out or expressing concerns.

The General Manager stated that each municipality has their reasons for opting in or opting out. All the municipalities have listened to the presentation given by the Authority and County of Essex staff explaining the advantages of regionalization. Some municipalities have entered into new contracts at higher costs. Regionalizing would provide economies of scale. Per the EXP document, there is an opportunity to get economies of scale and allows contractors to optimize routes. Also, as noted in the EXP document, there is an opportunity to standardize services. The EXP document recommends rolling out a program that is consistent throughout the entire community, the environmental impacts of the landfill, utilizing the organics program and Blue Box program and achieving waste diversion. A concern with the municipalities is the unknown cost. She noted that we do not know what the cost will be for a regional

program until an RFP is issued. This applies to the organics program as well. Another concern is that municipalities want to maintain their level of service. The General Manager stated that from an Authority and County perspective, we want to be open and transparent about what the minimum service levels will be. As presented at County Council, the minimum service levels will be weekly organics collection, Every Other Week (EOW) garbage collection, weekly yard waste collection from April through November and monthly bulk items collection.

Mr. Kieran McKenzie asked if the Authority has other tools to encourage a broader perspective for diversion assuming that there isn't a complete regional buy-in.

The General Manager stated that the EXP document was very clear about having standardized promotion and education (P&E) and outreach. It will be difficult to reach all residents and educate them about how the programs are utilized if there are municipalities with different levels of service. For example, P&E in schools with students who live in different boundaries. She noted that when you have varying service levels, residents become confused and will not participate in the programs. This also causes cross contamination. The Authority will continue with P&E. The best practice is to move to EOW garbage collection and weekly organics collection. It will be challenge if there are different service levels but the Authority will develop P&E as appropriate.

Mr. Kieran McKenzie noted that he appreciates the outreach and reports and the work done by Authority administration.

The Chair asked if there were any further questions. There were no further questions.

Moved by Kieran McKenzie
Seconded by Kirk Walstedt
THAT the Board receive the report as information.

**60-2023
Carried**

8. Other Items

No other items were raised for discussion.

9. By-Laws

A. By-Law 9-2023

Moved by Hilda MacDonald
Seconded by Rob Shepley

THAT By-Law 9-2023, being a By-law to Authorize the execution of an agreement between the Essex-Windsor Solid Waste Authority and Sterling Motor Technology Inc. for the Hydro Service Upgrades at the Regional Landfill.

**61-2023
Carried**

B. By-Law 10-2023

Moved by Hilda MacDonald
Seconded by Rob Shepley

THAT By-Law 10-2023, being a By-law to Authorize the execution of an agreement between the Essex-Windsor Solid Waste Authority and Greenlight General Contracting Inc. for the Design, Engineering and Construction of a New Scale House Building at Transfer Station #2, located in the Town of Kingsville.

**62-2023
Carried**

C. By-Law 11-2023

Moved by Hilda MacDonald
Seconded by Rob Shepley

THAT By-Law 11-2023, being a By-law to Confirm the Proceedings of the Board of the Essex-Windsor Solid Waste Authority be given three readings and be adopted this 13th day of September, 2023.

**63-2023
Carried**

10. Next Meeting Dates

Thursday, October 5, 2023
Tuesday, November 7, 2023 – 2024 Budget Deliberation
Tuesday, December 5, 2023

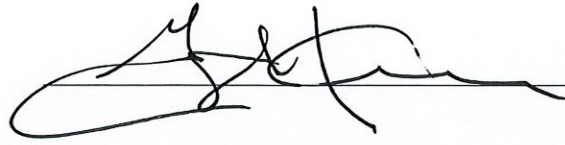
11. Adjournment

Moved by Mark McKenzie
Seconded by Jim Morrison

THAT the Board stand adjourned at 3:48PM.

**64-2023
Carried**

All of which is respectfully submitted.



Gary McNamara
Chair



Michelle Bishop
General Manager

Subject: Feasibility of Crosswalk at Sunrise Assisted Living to Coventry/Reaume Park – Response to CQ 9-2023, Ward 6

Reference:

Date to Council: November 29, 2023
Authors: Adam Mourad
Engineer II
amourad@citywindsor.ca
(519) 255-6257 ext. 6614

Clare Amicarelli
Transportation Planning Coordinator
camicarelli@citywindsor.ca
(519) 255-6100 ext. 6463
Public Works - Operations
Report Date: September 13, 2023
Clerk's File #: SW2023

To: Mayor and Members of City Council

Recommendation:

That Council **RECEIVE** this report in response to CQ 9-2023 regarding the feasibility of a crosswalk at Sunrise Assisted Living to Coventry/Reaume Park.

Executive Summary:

N/A

Background:

At its February 9, 2023 meeting of Council, Councillor Gignac asked the following question:

CQ 9-2023

“Asks that Administration report back on feasibility of a crosswalk at Sunrise Assisted Living to Coventry/Reaume Park”.

Discussion:

Pedestrian Crossovers (PXOs) are designated areas that ensure safe pedestrian crossings, requiring vehicles to yield to pedestrians. Identified by specific signs and pavement markings, PXOs are suitable for roads with low to moderate traffic (less than 35,000 annual average daily traffic) and speeds of 60 kilometers per hour or less. To enhance safety, PXOs should not be installed within 200 meters of other signal-

protected pedestrian crossings or in areas with more than four lanes of two-way traffic or three lanes of one-way traffic. Parking and other sight obstructions must be prohibited within at least 30 meters of the PXO.

Regulation 615 of the Highway Traffic Act (HTA) covers most aspects of PXO traffic control devices and their placement.

The location in front of Sunrise Assisted Living to Coventry/Reaume Park meets warrant criteria for installing a Pedestrian Crossover (PXO) with installation of a PXO at this location identified in the Riverside Drive Vista Improvement Class Environmental Assessment (EA).

The cost to install the PXO at Sunrise Assisted Living to Coventry/Reaume Park is estimated to be \$40,000. In addition to the installation of the PXO, there are annual maintenance costs associated with PXO's. They include:

- battery checks
- cleaning of solar panels
- functionality checks of pushbuttons and flashing LED boards
- reviews of approach visibility in case of physical changes (i.e. tree growth)
- replacement of defective parts
- checking of marking visibility
- reflectivity testing of signage
- replacement of defective or damaged signage
- responding to 311 calls

Construction of this PXO has been planned for Phase 3A of the Riverside Vista works (from Ford Blvd to Strabane Ave); however, based on available funding, Phase 3A of the project is not scheduled for construction until approximately 2030.

Funding for the installation of PXO's can also be provided through the Pedestrian Crossover Project (project ID 7191010). A total of 128 requests for PXO's have been submitted to date. Among the requests that have undergone review, 54 of them meet the warrant criteria. Out of those 54, 29 are both warranted and ranked based on priority, while 25 are warranted but not yet ranked in terms of priority.

The request for the PXO from Sunrise Assisted Living to Coventry/Reaume Park is currently ranked 11th out of the 54 total requests for PXO's – noted above. The current ranking may change as new requests come in and are added into the priority list. Based on its rank, current funding available in the Pedestrian Crossover Project ID 7191010, and the 2023 approved Capital-funding plan (Project OPS-001-19), as further discussed in the Financial matters, it is not anticipated that this PXO could be constructed in the 10-year timeframe the is covered by the current Capital budget.

Risk Analysis:

The request for a PXO from Sunrise Assisted Living to Coventry/Reaume Park currently holds the 11th position among the 54 total requests for PXOs (with 25 locations yet to be ranked). Installing a PXO at this location in advance of others that are ranked higher using PXO funding could be viewed as setting a precedent for bypassing an unbiased ranking system.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

The Pedestrian Crossover capital project, ID 7191010 has a current balance of \$283,000. Additional funding has been allocated within the 2023 approved 10-year capital funding plan in 2028. The value of the projects currently ranked higher in priority are in the range of \$450,000 and therefore with current funding in the project, the PXO at Sunrise Assisted Living to Coventry/Reaume Park would not be able to be built within the current 10-year budget cycle.

Given that the Riverside Vista EA already identifies a PXO in the preferred solution design at this location, Council has the option to consider pre-committing funding from the Riverside Vista project (ECP-016-07) to install the PXO earlier than currently scheduled (2030). This project does have \$500,000 in 2028 Canada Community-Building Funds that could be pre-committed for this purpose. Pre-committing a portion of these funds would provide for work to commence in 2024.

Administration acknowledges that installation of the PXO in the existing cross section would result in a certain amount of sunk costs related to infrastructure that will need to be replaced once Phase 3A of the Riverside Vista project moves ahead. These costs will include the replacement of the concrete pads, tactile plates, pole bases and pavement markings. Efforts would be made to salvage the poles, signs and flasher equipment so that it may be re-installed at the ultimate location identified in the final roadway design. Costs related to the re-installation of the PXO would need to be funded as part of the Phase 3A work.

Alternatively, ward funds are available and may be used for the benefit of capital assets owned by the City. As such, ward funds are an optional source of funding for this project.

Annual maintenance costs are estimated to be approximately \$2,000. Should this PXO be installed, a funding request for the required annual maintenance budget would be submitted for consideration as the current operating budget for Public Works does not include funding for maintenance of new PXO's.

Consultations:

Cindy Becker, Financial Planning Administrator – Operations

Kathy Buis, Financial Planning Administrator – Engineering

Rob Slater, Executive Initiatives Coordinator

Mike Dennis, Manager, Strategic Capital Budget Development and Control

Natasha Gabbana, Senior Manager of Asset Planning

Conclusion:

The area in front of Sunrise Assisted Living leading to Coventry/Reaume Park meets the criteria for the installation of a Pedestrian Crossover (PXO). The installation of a PXO is included in the finalized Environmental Assessment of the Riverside Vista project. However, Phase 3A of the project is not planned for construction until approximately 2030 based on current funding. Should Council wish to proceed with the installation of the PXO earlier than planned as part of the Riverside Vista project, Administration has presented various funding options for Council’s consideration.

Planning Act Matters:

N/A

Approvals:

Name	Title
Mark Spizzirri	Manager of Performance Measurement & Business Case Development
Natasha Gabbana	Senior Manager of Asset Planning
Stacey McGuire	Executive Director, Engineering/Deputy City Engineer
Shawna Boakes	Executive Director of Operations
Shawna Boakes for	Commissioner, Infrastructure Services
Janice Guthrie	Commissioner, Corporate Services, Chief Financial Officer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:



Subject: CQ 13-2023 - Front Yard Parking Best Practice 2.2.2

Reference:

Date to Council: November 29, 2023

Author: Amy Kurek

Technologist II

(519) 255-6257 Ext. 6216

akurek@citywindsor.ca

Right-of-Way – Engineering

Report Date: November 9, 2023

Clerk's File #: ST2023

To: Mayor and Members of City Council

Recommendation:

THAT the response to CQ 13-2023 **BE RECEIVED** for information.

Background:

On May 29, 2023, Councillor Mark McKenzie asked the following Council Question:

CQ 13-2023, "Asks Administration re-examine the Driveway Requirement Policy regarding BP2.2.2 which deals with not allowing front parking, as well as the Official Plan to allow front driveways with report back to Council."

This report is in response to CQ 13-2023.

Discussion:

By-law 9023

City of Windsor Bylaw 9023 regulates vehicular parking within the limits of the City of Windsor on municipal streets, municipal parking lots and private property. Front yard parking is governed through Part V – Private Property, item 42 (3);

Notwithstanding Section 42(1) no personal shall park, stand or stop a motor vehicle on a front yard in a residential district except on a driveway or as authorized by statute, regulation, by law or otherwise by the Corporation. (ADDED B/L 182-2016 DEC 12/16)

Further policy support for restrictions on front yard parking is included later in this report.

Comparison to other Municipalities:

Administration investigated policies in place in municipalities of similar size to Windsor and the responses received to date are provided below:

City of London: Currently does not permit front yard parking. If a property owner would like to seek permission for front yard parking, they are required to apply for a minor variance.

City of Hamilton: Currently does not have any restrictions in place for front yard parking.

City of Oshawa: Currently does not permit front yard parking.

City of Richmond Hill: Currently does not permit front yard parking.

City of Kitchener: Does not have a specific restriction for front yard parking however ensures that the addition of a driveway does not result in the loss of on street parking.

Impacts of Front Yard Parking on the Neighbourhood:

1. On street parking:

The majority of properties where front yard parking would be permitted are in areas where lot sizes would only allow for the addition of one (1) parking space to the front yard to avoid exceeding the maximum hard surface coverage of 50% of the required front yard. With the addition of the one (1) space to the front yard, up to three (3) spaces may be eliminated from the road depending on where the driveway can be located and the distance between the new driveway and the driveways of adjacent properties. This results in a sole benefit to the property owner and a loss to the neighbourhood.

2. Urban Tree Canopy:

A substantial amount of the 70,000 city trees exist in locations where individuals might request driveways. As such, limiting the number of driveways, especially in those areas where trees are mature, will provide a benefit for the Urban Canopy Cover.

The Urban Tree Canopy Assessment Report 2020 indicates that the City needs to continue to plant, at a minimum, 2200 trees per year. This planting requires substantial planting spaces, part of which is attained by planting on City rights-of-way. One of the objectives of the City is to improve our Canopy Cover which is currently at 19%. This requires optimising the use of available potential planting areas (PPAs). Any act that will further fragment and/or reduce our PPAs should be avoided.

3. City's Capital and Maintenance projects:

The cost to replace a driveway approach can be as much as seven (7) times the cost of reinstating seed or sod. This could have a measurable financial impact on budgeting for City Capital and maintenance projects such as road and sewer rehabilitation and local improvement projects in areas where front yard parking is not currently permitted.

4. Public safety:

Multiple driveways in close proximity result in added safety concerns for pedestrians and bicycles, especially where vehicles are parked between the front face of the building and the road/sidewalk; more conflict points related to backing out of driveways results in a higher risk.

A vehicle parked between the road and the front face of a home, especially where the homes are close to the road such as in the downtown core, may cause sight line issues for pedestrians or other motorized vehicles using the right-of-way. As a result, accidents, near misses and security concerns may increase; making the use of streets for active transportation less appealing.

Maintaining the current practice of not allowing front yard parking when there is suitable paved alley access available for the property owner supports two key crime prevention through environmental design (CPTED) principles:

- Sustained, random, positive activity generation within the less observable and less travelled (compared to a roadway access) alley space by lawful users
- Enhanced natural surveillance of the alley because there are more property users regularly using the alley space, thus adding more regular periods of “eyes-on-the-alley”

Vehicles parked in a home’s front yard when a designated driveway is in place, versus the rear yard space off a paved alley, are more openly visible at all times, due to the frequency of the travelled (and thus observed) roadway environment. As a result, criminal activity such as vandalism and vehicle theft, as well as theft from vehicle is reduced. This benefit would not apply to allowing vehicles to park on grass/landscaped areas of a property’s front yard however, as that could result in cluttering the area, blocking sight lines, etc.

On-street parking provides a natural traffic calming impact. By reducing the number of cars parked on the road, there is a possibility that speeds will increase, as the perceived width of the road increases in the gaps.

5. Neighbourhood Characteristics

The introduction of front yard parking is counterintuitive to the neighbourhood design, which favours front porches, open sight lines, traditional front door approaches and access through the alleys. Additionally, the benefit of front yard parking is limited to individual property owners and not to the community and City as a whole.

Impact on Additional Dwelling Units (ADUs)

Section 5.99.80 of Zoning By-law 8600 permits Additional Dwelling Units (ADUs) throughout the City where a *single unit dwelling*, *semi-detached dwelling*, or *townhome dwelling* is permitted. The City is seeing an increase in construction of ADU's with a resulting increase in requests for front yard parking.

Currently, there are various areas within the City (Appendix C – Secondary Residential Units: Exempt Areas) that are exempt from requiring a parking space when adding an ADU. Some of these areas also have paved alleys available for access to parking at the rear.

If the restriction of front yard parking is removed from properties having paved alleys access, they would now qualify for parking off the front and rear yard, which would substantially increase hard surface and decrease greenspace. It should be noted, that the 50% minimum greenspace requirement for residentially zoned properties only applies to front yards. There is currently no obligation for greenspace within rear yards.

Encouraging parking in the rear yard from the alley (where available) for ADUs limits the impact to the boulevard/landscape area and helps reduce the conflict between vehicular and pedestrian movement.

Stormwater Financing Project

Council received the most recent update on the Stormwater Financing Project on June 12, 2023, which estimates that the new stormwater finance program would be underway by January 1, 2025. This program confirms the amount of hard surface located within individual private properties and charges a fee based on that percentage. There will be no fees associated with privately owned objects within the city right-of-way, such as the driveways, landscaping, or lead walkways.

A vast majority of front yard parking spaces are located within the municipal rights-of-way, as these properties do not have sufficient side yard widths or a garage to park within, which minimizes the amount of driveway (hard surface) on private property. For this reason, many of these driveways would not be accounted for in the program and the respective properties would not be responsible for paying for that impermeable surface causing added stormwater runoff to the municipal sewer. Conversely, properties with side yard parking, would be assessed at a higher stormwater financing fee, as their driveways must extend eighteen feet (18'-0") past the home's front wall as per the current standards and would increase their impermeable percentage on private property.

The City of Windsor Official Plan

The following sections of the Official Plan speak to front yard parking restrictions:

Chapter 8, Volume 1 - Urban Design, Section 8.11.2.22: Council will limit the construction of parking spaces in the required front yards of dwellings, in order to protect the aesthetic character of older residential neighbourhoods, ensure the

availability of on-street public parking, ensure unhampered pedestrian movement within the public right-of-way and prevent harm to boulevard trees.

Chapter 7, Volume 1 - Infrastructure: identifies protecting roadways from driveway proliferation as an objective of a safe, sustainable, effective and efficient transportation system;

Section 7.2; A safe, sustainable, effective and efficient transportation system is one which meets the needs of all users in a manner consistent with a healthy environment and vibrant economy. In order to achieve this balance, Council will manage Windsor's transportation system to enhance physical mobility and ensure that the economic, social and environmental needs of the community are met.

Section 7.2.1.12; To restrict driveway access based on road classification and minimize the number of driveway access points.

Chapter 2, Volume II: also identifies not permitting parking in the Prado Place and Sandwich Heritage Conservation Districts and within the vicinity of Traditional Commercial Streets;

Sections 1.22.17 & 1.26.18; No front yard parking as defined in the City's zoning by-law shall be permitted.

Section 1.39: Prohibits parking areas abutting the street including encroaching within the public right-of-way.

On-Street Accessible Parking Spaces-Residential Policy

Section 4.3.2 Eligibility Requirements – Applicants for on-street accessible parking permits must meet the following criteria:

4.3.2.1 No off-street parking is provided for the property including:

4.3.2.1.1 A front yard, side yard, or rear yard parking area, including parking accessible by a paved alley.

Zoning Bylaw 8600

Zoning Bylaw 8600 also restricts front yard parking in the following designations:

- Heritage Conservation Districts (Sandwich Town and Prado Place) and Areas (Walkerville)
- Sandwich Town, Target Area 3
- Within the Vicinity of Traditional Commercial Streets

The intent of the traditional commercial street-off-street parking provisions was also to discourage demolition of buildings for front yard parking areas and to preserve a building edge along the streets.

Urban Design Guidelines associated with Community Improvements Plans (CIPs) such as Sandwich, Ford City, Main Streets, and the recently adopted City of Windsor Intensification Guidelines for Mixed-Use, Corridors, Centres, nodes, and Mature Neighbourhoods encourage parking at the rear or side yard of dwellings. Front yard parking is restricted or discouraged given the impact to the neighbourhood.

Engineering Best Practices 2.2.1 & 2.2.2

Further to the above mentioned Bylaws, sections of the City's Official Plan, and Design Guidelines, Administration adopted and follows the Engineering Best Practices to ensure consistency in applying policies for work in the City right-of-way. Additionally, Best Practices BP2.2.1 (Appendix A) & BP2.2.2 (Appendix B) provide standards, such as size and material specifications for front yard parking; which govern the issuance of permits. Per section 4.6 of BP2.2.2, front yard parking is permitted where no other parking is or may be made available on site (for example from a paved alley).

Risk Analysis:

Waiving of the requirements of Engineering Best Practice BP2.2.2 to allow the construction of front yard parking access where other parking options exist will require the By-Laws and City Official Plan sections noted in the Discussion Section to be amended accordingly.

Additionally, allowing front yard driveways in these limited areas would also negatively impact:

- neighbourhood character/appearance, by interrupting the continuity established by the boulevard;
- the safety of residents/pedestrians by creating increased conflict with vehicles and restricting pedestrian movement along municipal sidewalks;
- the City's Tree Canopy initiative by reducing greenspace, the opportunity to plant trees and by encouraging the removal of existing trees;
- the availability of on-street parking spaces;
- the costs related to the City's capital and maintenance projects;
- increased risk of claims;
- the City's Climate Change Adaptation Plan; and,
- the Windsor Environment Master Plan.

Climate Change Risks:

Climate Change Mitigation Risks:

N/A

Climate Change Adaptation Risks:

The addition of front yard parking would increase the amount of impermeable surfaces, in some cases pushing the impermeable area to close to 50%, as mentioned above. This would increase storm water run off volumes that could increase the risk of flooding depending on the number of front yard parking spaces permitted in a neighbourhood.

In addition, a reduction in front yard green space will directly affect the viability of tree plantings. Urban trees provide many climate change adaptation benefits including storm water retention, reduction of the urban heat island and biodiversity enhancements.

Financial Matters:

N/A

Consultations:

Planning – Neil Robertson

Operations (Right of Way & Field Services) – Andrew Lewis, Marc Ladouceur

Operations (Transportation Planning) – Shawna Boakes

Heritage Planner – Kristina Tang

Forestry – Yemi Adeyeye

Operations (Maintenance) – Roberta Harrison

Manager of Right-of-Way – Adam Pillon

Windsor Police Service – Barry Horrobin

Manager Design Engineering – Fahd Mikhael

Planner III Special Projects – Kevin Alexander

Supervisor of Sustainability and Climate Change – Karina Richters

Manager Purchasing – Alex Vucinic

Conclusion:

The above report provided information regarding the CQ 13-2023 for information.

It is Administration's belief that the existing restriction of Front Yard Parking in areas with paved alleys available for access and areas with preservation initiatives should be maintained.

Planning Act Matters:

N/A

Approvals:

Name	Title
Adam Pillon	Manager of Right-of-Way
Fahd Mikhael	Acting Executive Director of Engineering / Deputy City Engineer
Shawna Boakes	Executive Director of Operations/Deputy City Engineer
Mark Nazarewich	For City Solicitor
Joe Mancina	Chief Administrative Officer

Notifications: N/A

Name	Address	Email
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Appendices:

- 1 Appendix A - Engineering Best Practice BP2.2.1
- 2 Appendix B - Engineering Best Practice BP2.2.2
- 3 Appendix C - Secondary Residential Units: Exempt Areas

1. SUBJECT DRIVEWAY REQUIREMENT POLICIES – RESIDENTIAL**2. DEFINITIONS**

Driveway – Paved area that provides access from a roadway to private property.

Frontage – Exterior lot line abutting a public right-of-way, not including an alley.

Single Car Garage– A garage having a front exterior door width of less than 5m (16ft). For this best practice, a one and a half garage is considered a single car garage.

Two Car Garage – A garage having a front exterior door width of 5m (16ft) or greater.

Shared Driveway – A single driveway constructed on or near a common property line between two or more properties which provides access to all such properties.

3. DRAWINGS

AS-542-A – Maximum Curb Cut for Residential Driveways with No Garage, Single & Double or More Car Garages

AS-542-B – Maximum Curb Cut for Residential Driveways on Corner Lots

AS-542-D – Maximum Curb Cut for Residential Driveways - Exceptions

4. BEST PRACTICE

One driveway approach will be permitted per lot frontage. A property may be accessed from an open, paved municipal alley.

The following residential driveway permit options are available:

4.1. Proposed Residential Driveway with an Existing or Proposed Single Car Garage or Carport

4.1.1 A driveway to a residence with a single car garage or carport shall not exceed a maximum curb cut or edge of pavement width of 4.5m (15ft) but no greater than 50% of the frontage width (AS-542-A).

4.1.2 A driveway to a residence on a cul-de-sac shall not protrude beyond the projected side yard property lines to said cul-de-sac.

4.2. Proposed Residential Driveway with an Attached Garage or Carport (two car or greater)

4.2.1 A driveway to a residence with a two car garage shall not exceed a maximum curb cut or edge of pavement width of 7.0m (23ft) but no greater than 50% of the frontage width (AS-542-A).

4.2.2 A driveway to a residence with a 3 or more car garage shall not exceed a maximum curb cut or edge of pavement width of 9.0m (30ft) but no greater than 50% of the frontage

4.2.3 A driveway to a residence on a cul-de-sac shall not protrude beyond the projected side yard property lines to a said cul-de-sac.

4.3. Proposed Residential Driveway on Corner Lot, see drawing AS-542-B

4.3.1 New driveways for homes on corner lots shall be constructed on the side of the house furthest from or opposite the intersection (AS-542-B). The new driveway shall be a minimum 11m (36ft) from the face of curb or edge of pavement of the intersecting street and be located on the lowest classified road.

4.3.2 A second driveway approach from a side street may be permitted only at the rear of the house and where a 5.5m (18ft) minimum clearance from property line on to private property is available, subject

to the approval of the City Engineer (AS-542). Driveway curb cut widths shall be determined as follows:

4.3.2.1 No Garage – maximum 4.5m (15ft)

4.3.2.2 One Car Garage – maximum 4.5m (15ft)

4.3.2.3 Two or Greater Car Garage – maximum 7m (23ft)

4.4. Proposed Residential Driveway with an Existing or Proposed Shared Driveway

4.4.1 Proposed New Shared Driveway – Construction of a new shared driveway for adjoining residential properties will not be permitted subject to reciprocal access agreement in form satisfactory to City Engineer/City Solicitor.

4.4.2 Reconstruction of an Existing Shared Driveway – An existing shared driveway serving two or more properties may be reconstructed as per its current dimensions provided a permit is issued for each property individually. The permit shall correspond to each property owner’s portion of the common approach. If the driveway is reconstructed in concrete, a saw-cut is required along the extension of the property line, from back of curb or edge of pavement to property line.

4.4.3 Proposed New Driveway Location for Properties with an Existing Shared Driveway – A property with an existing shared driveway is permitted to construct a new driveway approach, in an alternative location, provided the following is satisfied:

- a) Sufficient proof is provided indicating adjoining properties do not have access rights over the portion of the existing shared driveway fronting the subject property.
- b) The new driveway shall comply with the current requirements of this Best Practice [BP2.2.1].
- c) Their portion of the existing shared driveway must be removed as only one driveway approach is permitted per property frontage.

4.5. Existing Driveways to be Re-Constructed

4.5.1 An existing driveway to be re-constructed requires a permit and shall comply with the current driveway requirement policy BP 2.2.1. An existing curb cut width may be maintained where the existing curb cut is deemed to be proper, at the discretion of the City Engineer. A proper curb cut may include, but is not limited to, one of the following situations:

- there is a permit for the existing driveway;
- the driveway approach or curb cut was constructed by the City of Windsor; or
- the curb cut is existing and there is no evidence, based on the review of the City’s 2010 aerial map records that the curb cut has been altered in any way without the permission of the City.

4.6. Leadwalks Adjacent to Driveways

4.6.1 A maximum 1.2m (4ft) wide concrete leadwalk may be permitted in addition to, and may be constructed adjacent to a driveway, provided a curb cut is not provided for the leadwalk and the total width of the driveway and leadwalk does not exceed 50% of the frontage width.

4.6.2 Addition of concrete leadwalk adjacent to existing driveway to be permitted provided the following is satisfied:

- Leadwalk to be installed integral from the curb/edge of pavement or from back of sidewalk to the front face of the house, porch, or gate to rear yard.
- Existing driveway approach to be cut and full-depth isolation joint to be completed as per S-6 section 6.04.07.
- If an existing flare is present the flare must be removed to allow for the leadwalk.
- Leadwalk is not to be constructed for the intent of parking
- Width of leadwalk to be consistent from back of curb/sidewalk to a porch or side yard.’

4.7. Exceptions, see drawing AS-542-D

- 4.7.1 Subject to the approval of the City Engineer, where unique circumstances require, a variance in these standards may be provided.
- 4.7.2 Where a driveway leads to a front yard parking space Best Practice BP2.2.2 shall apply.
- 4.7.3 Where a two car garage consists of two independent doors a driveway curb cut may be permitted equal to the width of the garage doors (including the door separation) plus 0.3m (1ft) on either side but no greater than 50% of the frontage width. (AS-542-D)
- 4.7.4 Where an alley is not maintained and the applicant does not wish to pave the alley at their own expense, access to the property for the use of parking will not be permitted from the alley.
- 4.7.5 On arterial roads, at the discretion of the City Engineer, flares may be added to an approach to a maximum of 1m per side as per AS-221 and AS-222. Driveway width cannot be widened in the future to match the curb cut size.

5. RELATED BEST PRACTICES

Front Yard Parking – BP2.2.2.

6. RELATED CITY SPECIFICATIONS

S-4 – Selected Granular Base Courses

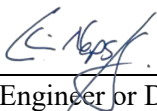
S-6 – Concrete Sidewalk and Driveway Approaches

S-9 – Concrete

S-10 – Hot Mix, Hot Laid Asphaltic Concrete

S-14 – Sodding and Topsoil

S-15 – Seeding Roadway Areas by Hydraulic Seeding and Mulch Cover Method

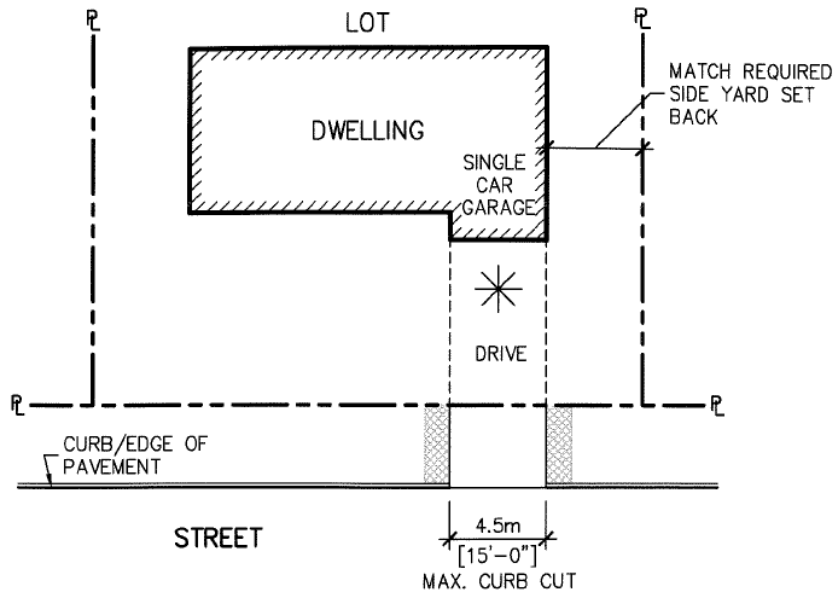


City Engineer or Designate

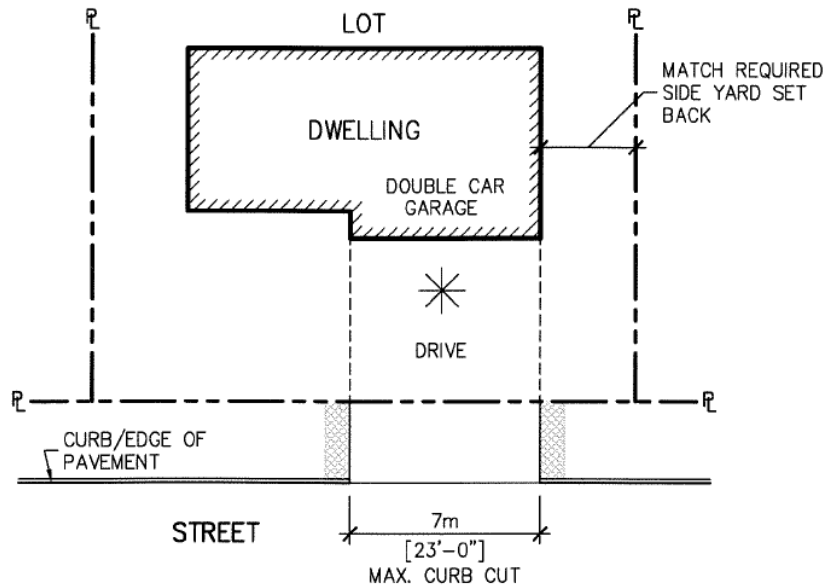
Attachments – AS-542-A; AS-542-B; AS-542-D

September 9/2022

Date



PROPOSED RESIDENTIAL DRIVEWAY WITH SINGLE CAR GARAGE OR CARPORT



PROPOSED RESIDENTIAL DRIVEWAY WITH GARAGE (TWO CARS OR GREATER)

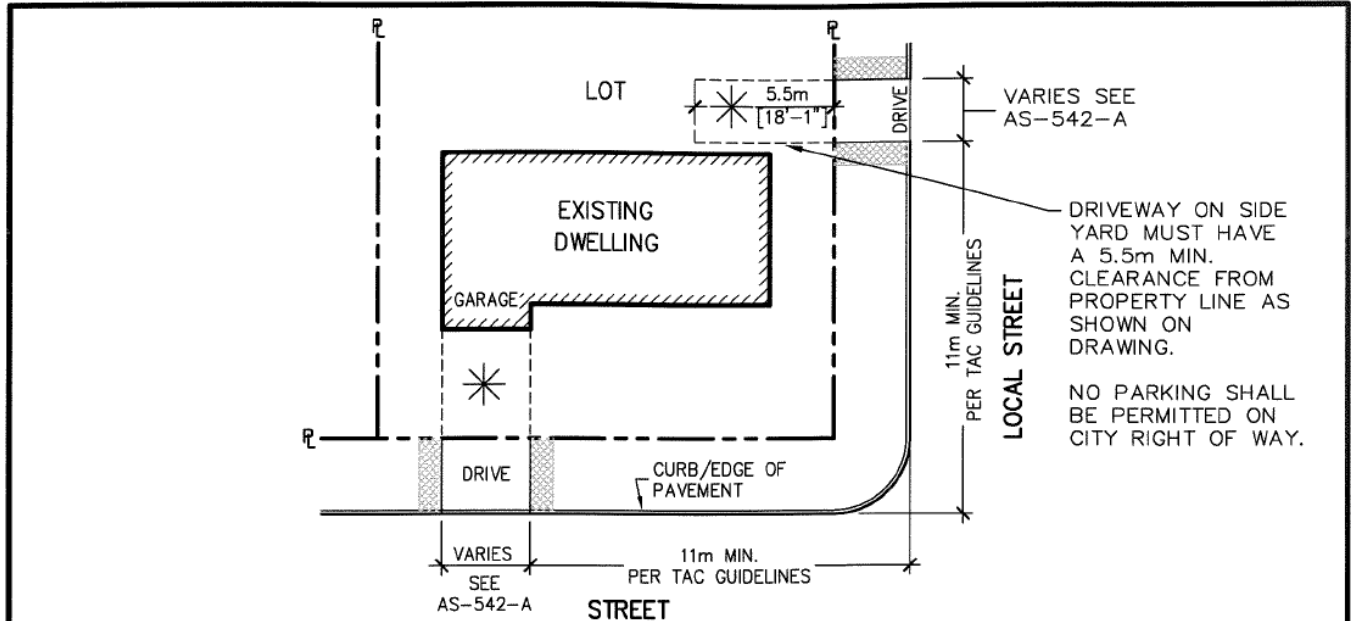
NOTES:

1. NO RADIUS OR RAISED CURBS ON CITY RIGHT OF WAY. STRAIGHT FLARES ONLY.
2. NOTWITHSTANDING THIS DRAWING CURB CUT WIDTH SHALL NOT EXCEED 50% OF FRONTAGE WIDTH.

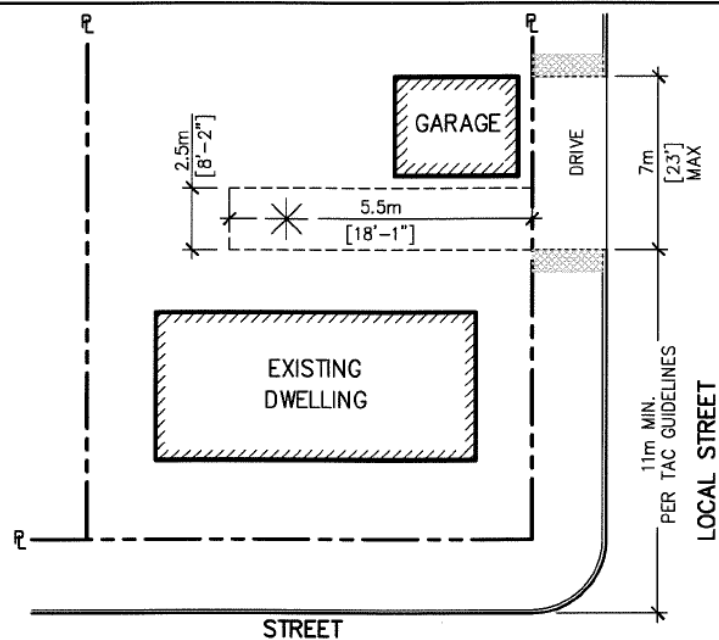
DRIVEWAY PORTION ON PRIVATE PROPERTY IS TO COMPLY WITH AND BE APPROVED BY THE BUILDING DEPARTMENT AT THE CITY OF WINDSOR.

DRIVEWAY MUST HAVE A MINIMUM SEPARATION OF 0.9m (3') OF ANY VERTICAL OBSTRUCTION. ie. HYDRO POLE, FIRE HYDRANT, CABLE BOX, TREE, ETC.

CITY OF WINDSOR	
ENGINEERING DEPARTMENT	
Maximum Curb Cut For Residential Driveways with a Garage	
DR'N BY: AJC, JL	DATE: JANUARY, 2011
REVISION: NOV, 2013	CH'KD BY: P. UBENE
CH'KD BY: SS	PASSED BY:
 CITY ENGINEER	AS-542-A



PROPOSED RESIDENTIAL DRIVEWAY ON CORNER LOT WITH SIDE YARD



PROPOSED RESIDENTIAL DRIVEWAY ON CORNER LOT WITH SIDE YARD GARAGE

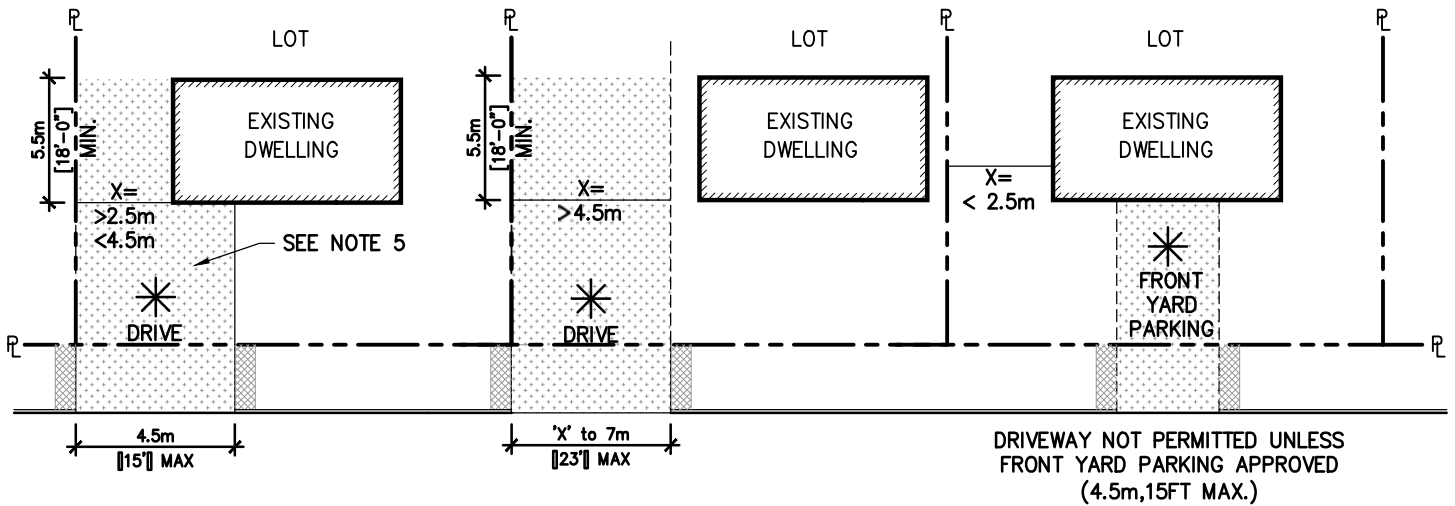
NOTES:

1. NO RADIUS OR RAISED CURBS ON CITY RIGHT OF WAY. STRAIGHT FLARES ONLY.
2. NOTWITHSTANDING THIS DRAWING, CURB CUT WIDTH SHALL NOT EXCEED 50% OF FRONTAGE WIDTH.
3. NEW DRIVEWAYS FOR HOMES ON CORNER LOTS SHALL BE CONSTRUCTED ON THE SIDE OF THE HOUSE OPPOSITE OF THE INTERSECTION.

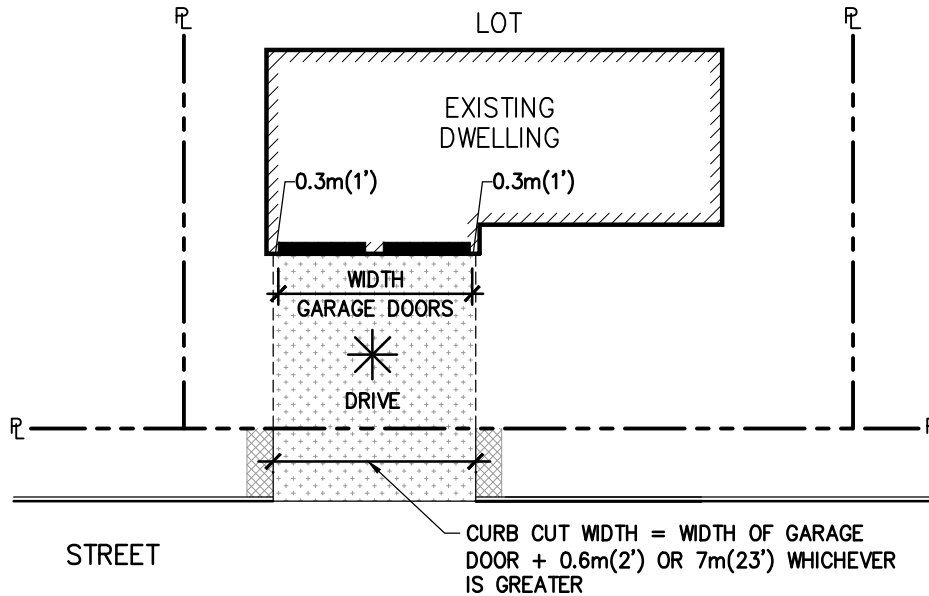
DRIVEWAY PORTION ON PRIVATE PROPERTY IS TO COMPLY WITH AND BE APPROVED BY THE BUILDING DEPARTMENT AT THE CITY OF WINDSOR.

DRIVEWAY MUST HAVE A MINIMUM SEPARATION OF 0.9m (3') OF ANY VERTICAL OBSTRUCTION. ie. HYDRO POLE, FIRE HYDRANT, CABLE BOX, TREE, ETC.

CITY OF WINDSOR	
ENGINEERING DEPARTMENT	
Maximum Curb Cut For Residential Driveways on Corner Lots	
DR'N BY: AJC, JL	DATE: JANUARY, 2011
REVISION: NOV, 2013	CH'KD BY: P. UBENE
CH'KD BY: SS	PASSED BY:
 CITY ENGINEER	AS-542-B



DRIVEWAY TO SIDE YARD / GARAGE IN REAR



SEPARATE GARAGE DOORS

NOTES:

1. NO RADIUS OR RAISED CURBS ON CITY RIGHT OF WAY. STRAIGHT FLARES ONLY.
2. NOTWITHSTANDING THIS DRAWING, CURB CUT WIDTH SHALL NOT EXCEED 50% OF FRONTAGE WIDTH.
3. ONE ACCESS IS PERMITTED PER LOT FRONTAGE. A PROPERTY MAY BE ACCESSED FROM AN OPEN, PAVED MUNICIPAL ALLEY.
4. NEW DRIVEWAYS FOR HOMES ON CORNER LOTS SHALL BE CONSTRUCTED ON THE SIDE OF THE HOUSE OPPOSITE OF THE INTERSECTION.
5. ANY PORTION OF DRIVEWAY THAT DOES NOT EXTEND 18FT INTO SIDE YARD IS TO COMPLY WITH FRONT YARD PARKING REQUIREMENTS.

DRIVEWAY PORTION ON PRIVATE PROPERTY IS TO COMPLY WITH AND BE APPROVED BY THE BUILDING DEPARTMENT AT THE CITY OF WINDSOR.

DRIVEWAY MUST HAVE A MINIMUM SEPARATION OF 0.9m (3') OF ANY VERTICAL OBSTRUCTION. ie. HYDRO POLE, FIRE HYDRANT, CABLE BOX TREE, ETC.

CITY OF WINDSOR	
ENGINEERING DEPARTMENT	
EXCEPTIONS	
DR'N BY: AJC, JL, BC, AC, SS	DATE: JANUARY, 2011
REVISION: AUG, 2022	CH'KD BY: P. UBENE
CH'KD BY: AK	PASSED BY:
 <small>CITY ENGINEER</small>	
AS-542-D	

1. SUBJECT FRONT YARD PARKING**2. DEFINITIONS**

Front yard parking – Paved area that provides a single parking space located in the front yard of an existing dwelling.

3. DRAWINGS

AS-542-C – Front Yard Parking

AS-542-A – Maximum Curb Cut for Residential Driveways with No Garage, Single & Double or More Car Garages

AS-542-B – Maximum Curb Cut for Residential Driveways on Corner Lots

AS-221 – Residential Drive – Asphalt

AS-222 – Residential Drive – Concrete

4. BEST PRACTICE

The following residential driveway options are available:

1. A driveway for a front yard parking space shall not exceed a maximum curb cut or edge of pavement width of 4.5m (15') (in accordance with AS-542-C).
2. A front yard parking space and driveway is required to be hard surfaced within twelve (12) months from the issuance of a driveway permit.
3. A minimum distance of 5.5m (18') in length and 2.5m (8') in width is required to create one parking space. Where insufficient area is available for the parking space to be entirely on private property, this space may extend into the right-of-way, however, shall commence at the front face of dwelling without any obstruction of the sidewalk.
4. Approval by the Building Department and compliance with the zoning by-law are required for front yard parking to be permitted.
5. Front yard parking is permitted where existing side yard widths are less than 2.5m (8').
6. Front yard parking is permitted where no other parking is or may be made available on site. (for example from a paved alley)

5. RELATED BEST PRACTICES

Driveway Requirement Policies – BP2.2.1

Alley Access – BP2.3.2

6. RELATED CITY SPECIFICATIONS

S-4 - Selected Granular Base Courses

S-6 – Concrete Sidewalk and Driveway Approaches

S-9 – Concrete

S-10 – Hot Mix, Hot Laid Asphaltic Concrete

S-14 – Sodding and Topsoil

S-15 – Seeding Roadway Areas by Hydraulic Seeding and Mulch Cover Method

Mario Sonego
City Engineer or Designate

January 2, 2014
Date

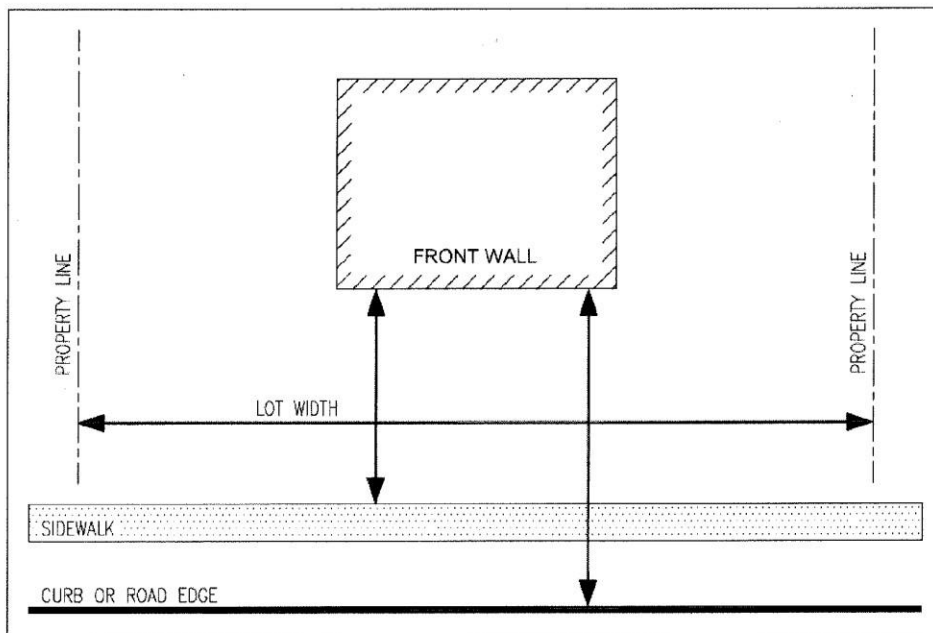
Attachments – By-law 92-2003 information, AS-542-C



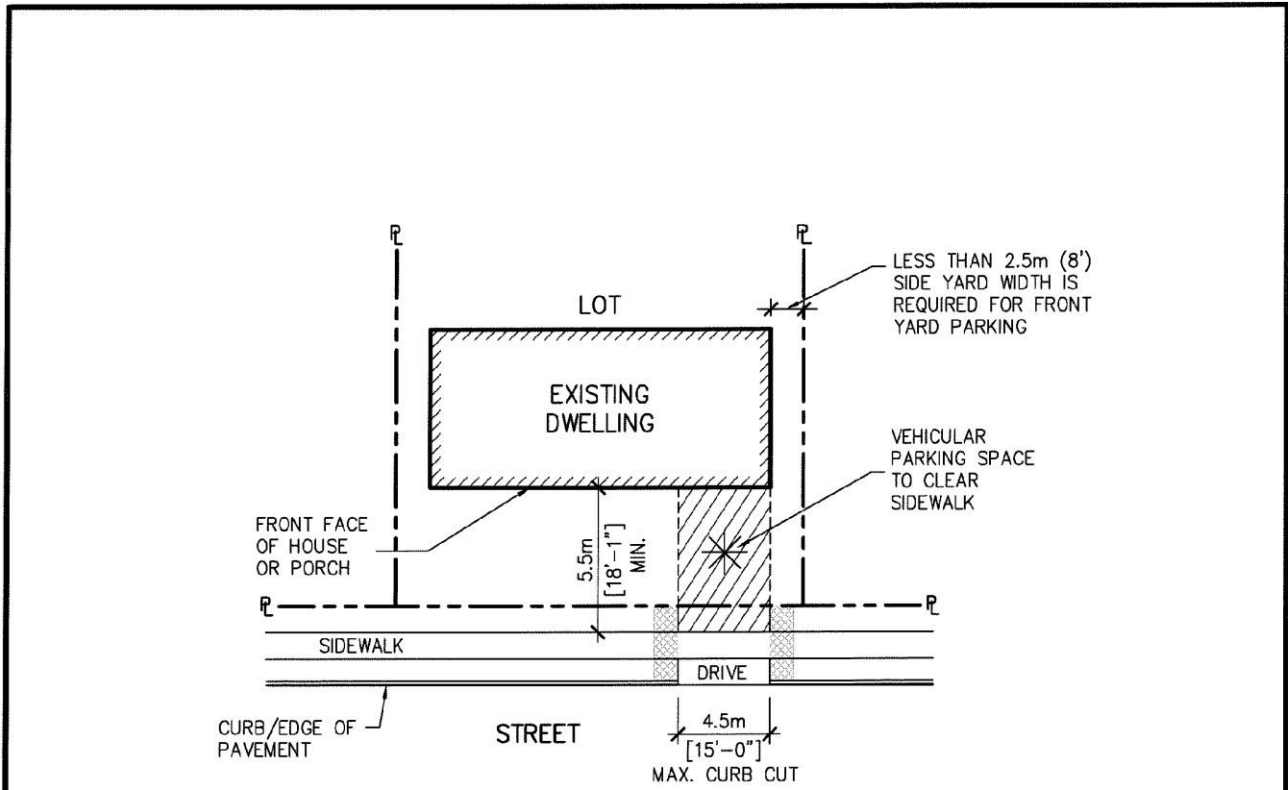
**THE CORPORATION OF THE CITY OF WINDSOR
ENGINEERING – DEVELOPMENT & GEOMATICS
DRIVEWAY APPROACHES – FRONT YARD PAVING**

According to By-law 92-2003, the following conditions will apply to front yard paving where the purpose is other than the standard side yard driveway and garage access:

- The pavement must be one (1) metre from any above ground utilities structure (i.e. fire hydrants, pedestals, light poles, etc)
- Must pave your driveway AND approach within 12 months – extensions to be considered separately
- Interlocking brick must have a 12” (30.5 cm) base of stone
- Full depth black expansion joints apply at the curb/sidewalk
- Corner lot properties cannot be paved at radius of curb on road
- If pavement is within one (1) metre of the base of a tree, you must contact Parks and Forestry at 253-2300 for approval
- Any deviation from the permit requirements must be made with an approved dimensioned site plan and brought to the Building Department (4th Floor). See diagram below for example of site plan information
- Inspection required – 255-6257
 - Must call for base inspection **BEFORE** pouring or paving
 - Please allow one (1) day notice for inspection
 - Call for final inspection when complete – forms removed, saw-cuts complete, backfill levelled.
- All concrete within the right-of-way must have a broomed or non-slip finish
- When cleanout is located in driveway, City recommends a cast iron cleanout cap be used
- Subject to re-inspection fee
- 45 days after final inspection is approved, indemnity deposit refunded by mail



Updated November 25, 2013



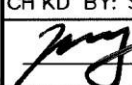
PROPOSED FRONT YARD PARKING FOR RESIDENTIAL DRIVEWAY

NOTES:

1. NO RADIUS OR RAISED CURBS ON CITY RIGHT OF WAY. STRAIGHT FLARES ONLY.
2. NOTWITHSTANDING THIS DRAWING CURB CUT WIDTH SHALL NOT EXCEED 50% OF FRONTAGE WIDTH.


* DRIVEWAY PORTION ON PRIVATE PROPERTY IS TO COMPLY WITH AND BE APPROVED BY THE BUILDING DEPARTMENT AT THE CITY OF WINDSOR.

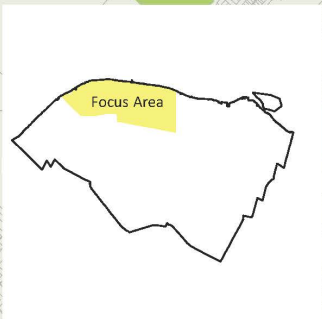
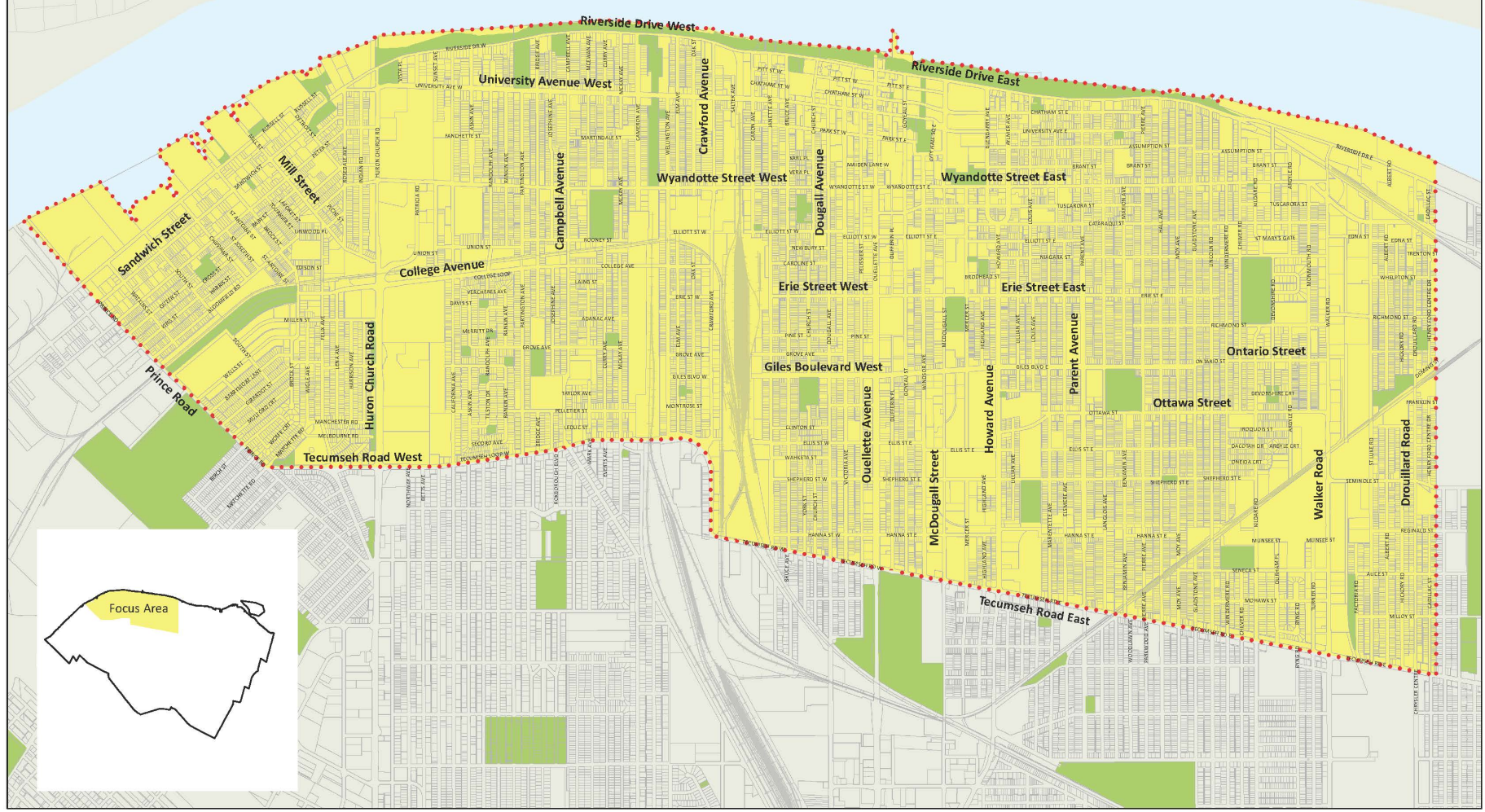
DRIVEWAY MUST HAVE A MINIMUM SEPARATION OF 0.9m (3') OF ANY VERTICAL OBSTRUCTION. ie. HYDRO POLE, FIRE HYDRANT, CABLE BOX, TREE, ETC.

CITY OF WINDSOR	
ENGINEERING DEPARTMENT	
Front Yard Parking For Residential Driveways	
DR'N BY: AJC, JL	DATE: JANUARY, 2011
REVISION: DEC, 2013	CH'KD BY: P. UBENE
CH'KD BY: SS	PASSED BY:
 CITY ENGINEER	
AS-542-C	

Secondary Residential Units: Exempt Areas

Legend

-  Area Where Additional Parking Space is Not Required to Create a Second Residential Unit





Subject: CQ 17-2023 – Intelligent Transportation Systems Solutions – City Wide

Reference:

Date to Council: November 29, 2023
Author: Ian Day
Senior Manager of Traffic and Parking (A)
519-255-6247 x6053
iday@citywindsor.ca

Public Works - Operations
Report Date: November 3, 2023
Clerk's File #: MTR2023

To: Mayor and Members of City Council

Recommendation:

THAT the report in response to CQ 17-2023 – “Intelligent Transportation Systems Solutions” **BE RECEIVED** by Council for information.

Executive Summary:

N/A

Background:

At the City Council meeting of May 29, 2023, Councillor Costante asked the following question CQ 17-2023:

Asks Administration to investigate a method to implement Intelligent Transportation applications to improve transportation and traffic flow throughout the City. Including but not limited to, an advanced warning system for trains for eastbound travel on Tecumseh Road West east of Crawford.

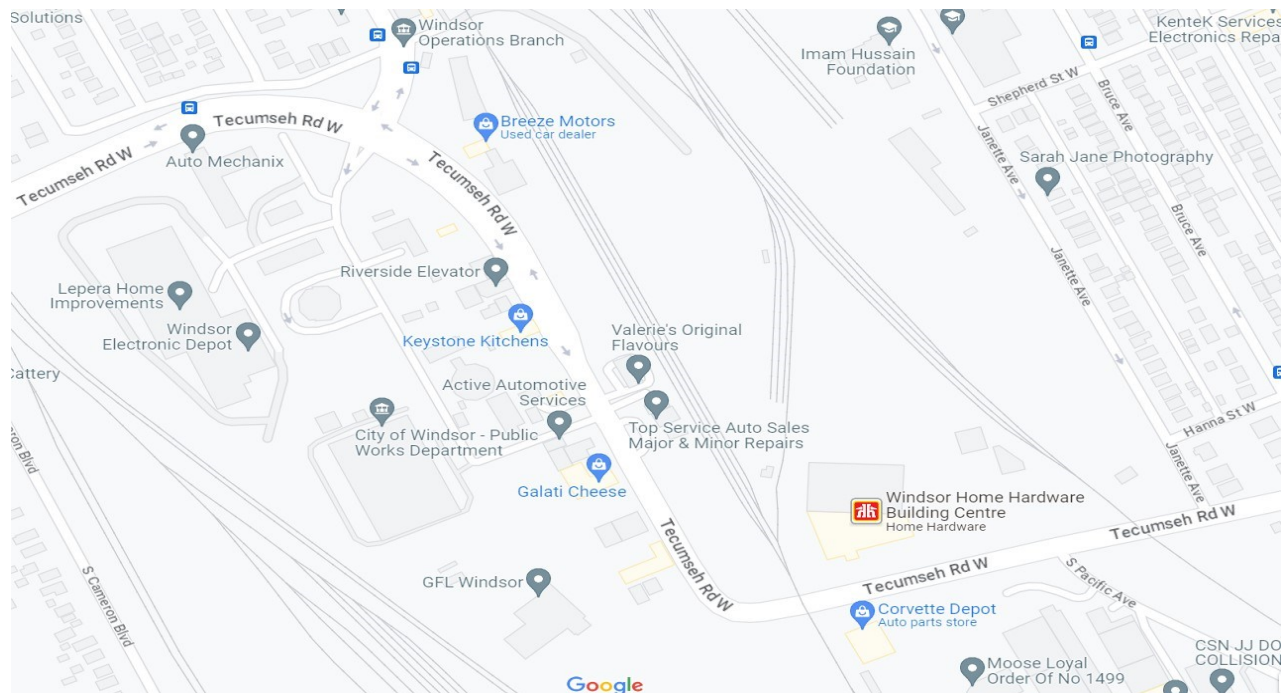
Discussion:

Currently there are 61 level railway crossings throughout the City of Windsor. Two of these crossings, Huron Church at College and Walker at Provincial, are equipped with an interconnect system as per Transport Canada Grade Crossing Regulation 19.1 which states that: “interconnection is to be provided at grade crossings where the railway design speed is 25 km/h (15 mph) or more and where there is less than 30 m between the nearest rail of a grade crossing and the travelled way of an intersection

with traffic signals.” Further to the above, Regulation 19.3 states that the interconnection of traffic signals with a warning system must:

- a. provide sufficient time for vehicles to clear the grade crossing before the arrival of railway equipment at the crossing surface.
- b. prevent movement of road traffic from the intersection towards the grade crossing.

The grade crossings for Tecumseh Road West, east of Crawford (Essex Terminal Railway and Canadian Pacific), are not subject to these regulations due to their distance from signalized intersections. Geometric design of the roadway to eastbound travellers from Crawford Avenue to Janette Avenue prevents drivers from having a clear line of sight to the grade crossings until well after they have cleared the Tecumseh Road and Crawford Avenue intersection.



Activity at either the Essex Terminal Railway crossing or The Canadian Pacific crossing to the east will bring eastbound traffic to a standstill in this section of Tecumseh Road West. Traffic will continue to travel eastbound on Tecumseh Road West until the congestion reaches the intersection at Crawford Avenue as drivers have no visual indication of the delay ahead. Transport Canada regulations for grade crossings states that “Trains can't block a public grade crossing for more than five minutes when a road user needs to pass, unless the train is moving.” The daily shunting operations that occur at these crossing do not violate this regulation.

After a review of the situation and with improved traffic flow as the end goal, Administration proposes the following Intelligent Transportation application:

- Sensors can be placed in both Essex Terminal Railway and Canadian Pacific Railway controller cabinets that would trigger a signal being sent to the City's traffic infrastructure notifying of upcoming railway traffic.
- These signals would be sent to a new traffic cabinet on the north side of Tecumseh Road West which will convert the electric signal to a fibre optic pulse and use existing traffic fibre cable to convey the signal to the existing traffic controller at the Tecumseh Road West and Curry Avenue intersection.
- The traffic controller at the above intersection would use this pulse to activate either a Variable Message Blackout Sign or a static sign with flasher to advise traffic that there is a train ahead, allowing drivers to select an alternative route rather than idling on Tecumseh Road W. while they wait for the train to pass.

Essex Terminal Railway has been contacted about an agreement to access their controller and have agreed in principle to allow the connection to their equipment. Canadian Pacific Railway has yet to respond to communications. Legal agreements may be needed in both instances.

Risk Analysis:

For this application, a signed detour route would not be provided to traffic selecting to detour. There is a risk that trucks may choose to detour north on Crawford to Wyandotte Street West, which would be allowable based on the City's current truck route. The closest return route to Tecumseh Road on the City's truck network would be Ouellette Ave (between 8 am and 6 pm) or Howard Ave. Therefore, increasing truck traffic on Wyandotte Road in the downtown area.

Implementing this solution would reduce risk of illegal movements and safety infractions that drivers are making due to frustration during long waits. Drivers are performing U-turns on Tecumseh Road, 3 point turns, and often conflicting with other traffic. Allowing drivers the opportunity to take another route prior to Crawford Ave would reduce this behaviour.

Climate Change Risks

Climate Change Mitigation:

While the implementation of Intelligent Transportation Solutions may not directly impact the levels of Greenhouse Gas (GHG) emissions, there may be an indirect decrease of GHGs due to the potential reduction of idling vehicles versus the slightly longer travel route of the detour.

Climate Change Adaptation:

N/A

Financial Matters:

The estimated capital investment required for the initial installation of the ITS for the Tecumseh West rail crossings is in the range of \$80,000 to \$90,000 excluding HST based on current 2023 cost estimates for labour, equipment and ENWIN services. Funding for the Tecumseh West rail crossings initial installation could be funded from the Traffic Signal Upgrade and Replacement Project, ID 7209000, using existing approved capital funding. The signal upgrade and replacement program is assessed on an ongoing basis, which results in the realignment of funding based on new information and / or priorities as presented. Realignment of funding can impact prioritization of other projects completed under the program. Administration will include a 10-year capital-funding plan for consideration in the 2025 capital budget development process to provide ongoing annual funding for the implementation of non-safety, non-regulatory ITS works.

In addition to the required capital investment for the project, an annual operating budget of approximately \$800 would be required for the ongoing sign maintenance and winterizing / de-winterizing of the controller cabinets. The operating cost would be added to the annual asset addition maintenance request brought forward by Public Works for the next available budget development year, currently 2025.

Consultations:

Cindy Becker – Financial Planning Administrator – Public Works

Mike Dennis – Manager of Strategic Budget Development and Control

Conclusion:

Administration feels that an ITS solution for an advanced warning system for trains for eastbound travel on Tecumseh Road West east of Crawford is feasible and would provide improved traffic flow for residents.

Should Council choose to proceed, Administration recommends the funding option as proposed in the financial section of the report.

Administration also recommends consideration of an ongoing capital project for the funding and implementation of non-safety, non-regulatory ITS works to improve transportation and traffic flow throughout the City

Planning Act Matters:

N/A

Approvals:

Name	Title
Cindy Becker	Financial Planning Administrator – Public Works - Operations
Shawna Boakes	Executive Director of Operations

Chris Nepszy	Commissioner, Infrastructure Services, City Engineer
Janice Guthrie	Commissioner, Corporate Services, City CFO/ Treasurer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

Subject: Vision Zero Action Plan Final Report - City-wide

Reference:

Date to Council: November 29, 2023
Author: Chris Gerardi
Policy Analyst, Transportation Planning
519-255-6100 ext 6830
cgerardi@citywindsor.ca
Public Works – Operations
Report Date: November 4, 2023
Clerk's File #: ST/13714

To: Mayor and Members of City Council

Recommendation:

1. THAT the Vision Zero Action Plan provided as Appendix A and the Supplemental Action Plan provided as Appendix B to report S 33/2023 "Vision Zero Action Plan Final Report" **BE ADOPTED**; and,
2. THAT City Council **APPROVE** a transfer of funding in the amount of \$40,000 from the Budget Stabilization Reserve, Fund 139, to a new capital project for salary and fringe costs for three Co-Op students for three school terms in 2024; and,
3. THAT City Council **APPROVE** a transfer of funding in the amount of \$15,000 from the Budget Stabilization Reserve, Fund 139, to a new capital project for salary and fringe costs for a Co-Op Student for the first school term of 2025; and,
4. THAT City Council **APPROVE** a transfer of funding in the amount of \$23,404.85 from the Budget Stabilization Reserve, Fund 139, to a new capital project to purchase and set up Traffic Engineering Software (TES) provided by True North Safety Group (TNS Group); and,
5. THAT the CFO/City Treasurer **BE DIRECTED** to include a new capital project in the 2024 10-year capital plan with funding as outlined above in order to action the Vision Zero Action Plan; and,
6. THAT Administration **BE DIRECTED** to bring forward initiatives in the Vision Zero Action Plan forward for funding consideration for future budgets in accordance with the Action Plan's implementation plan; and,
7. THAT Administration **BE DIRECTED** to report back to Council annually with details of progress toward the Vision Zero Action Plan's goals; and,

8. THAT Administration **BE DIRECTED** to carry out reviews of the Vision Zero Action Plan at the intervals specified in the Action Plan; and,
9. THAT report S 13/2021 “Follow-up –CQ 7-2020, 40 km/h Residential Speed Limits-City Wide” **BE RECEIVED** for information; and,
10. THAT Council **APPROVE** the updated All-Way Stop Policy as listed in Appendix B of report S 70/2023.

Executive Summary:

N/A

Background:

The City of Windsor’s Vision Zero Policy was adopted by Council on February 20, 2020 by Council Resolution CR82/2020, including the overall statement of endorsement of Vision Zero:

The Corporation of the City of Windsor endorses the Vision Zero goal of zero traffic deaths or serious injuries on roadways under its jurisdiction and commits to collaborating with all stakeholders in working to realize this goal.

Additionally, the Vision Zero – and the accompanying Vision Zero Procedure and Vision Zero Stakeholder Group Terms of Reference:

- Directed Administration to develop a Vision Zero Action Plan;
- Established a Vision Zero Task Force and a Vision Zero Stakeholder Group (Table 1);
- Outlined the process for development of the Vision Zero Action Plan, including:
 - Points of consultation with the Vision Zero Task Force and Vision Zero Stakeholder Group, and
 - Points in the process where progress reports would be provided to the Environment, Transportation & Public Safety Standing Committee.

Table 1: Task Force and Stakeholder Group Roles

	Vision Zero Task Force	Vision Zero Stakeholder Group
Members	City & emergency services departments responsible for implementing road safety actions	Members of public and stakeholder organizations impacted by road safety issues
Role	<ul style="list-style-type: none"> • Approves Vision Zero Action Plan elements • Leads implementation of the Vision Zero Action Plan 	<ul style="list-style-type: none"> • Provides input and feedback to inform and shape the Vision Zero Action Plan

Progress reports were prepared at key points in the development of the Vision Zero Action Plan, as specified in the Vision Zero Policy. Both reports were received by Council for information. Details on the progress reports are provided in Table 2.

Table 2: Progress Reports

Report Number & Title	Report Focus	Meeting Date	
		Environment, Transportation & Public Safety Standing Committee	City Council
S 92/2021 Vision Zero Action Plan Development - Progress Report #1	Proposed Strategic Priorities	Oct. 27, 2021	Nov. 15, 2021
S 87/2022 Vision Zero Action Plan Development - Progress Report #2 - City-Wide	Proposed Recommended Initiatives	Jul. 27, 2022	Sep. 6, 2022

CQ 7-2020 – 40 km/h Residential Speed Limits

At the March 2, 2020 meeting of Council, Councillor Kaschak asked CQ 7-2020 as follows:

“Asks that if Council decides to move forward with reducing the speed limit to 40 km/h on all city residential streets, that administration advise of the timelines and cost to implement this across the city.”

A subsequent report S 13/2021 was brought forward to Council at the April 19, 2021 meeting, and was referred back to administration for consideration with the Vision Zero Policy.

CQ 27-2021 – All-Way Stop Warrant

At the meeting of City Council on November 15, 2022, Councillor Costante asked CQ27-2021 as follows:

“Asks that Administration report back on opportunities to amend the warrant matrix and incorporate additional factors when determining the installation of 4-way stops in our residential neighbourhoods. This may include certain factors in the warrant threshold be lowered or amended, and may also include other factors such as petitions and school zones to be incorporated in the overall matrix.”

This report was subsequently deferred and requested to be returned to Council with the Vision Zero Action Plan.

Discussion:

The proposed Vision Zero Action Plan is attached as Appendix A. Key elements of the Action Plan include:

- Strategic priorities

- Recommended initiatives
- Interim goals (including an implementation plan)

Each of these elements is summarized below.

Strategic Priorities

Strategic priorities were developed based on the trends and patterns noted in the City's collision history and Vision Zero principles. The proposed strategic priorities are grouped into themes as summarized in Table 3.

Table 3: Themes and Strategic Priorities

Theme	Strategic Priority
1: Driver Behaviours	1A: Vehicle Speeds
	1B: Drug and Alcohol Impairment
	1C: Inattentive Driving
	1D: Failing to Yield at Intersections
2: Road User Types	2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)
	2B: Data Gaps – People
3: Locations and Infrastructure	3A: High Injury Corridors
	3B: Signalized Intersections
4: Process Improvements	4A: Improved Data Sources and Information Sharing
	4B: Design Standards and Best Practices

Recommended Initiatives

Recommended initiatives are grouped into two categories:

- Existing initiatives that are already being carried out; for City activities, the Action Plan recommends that these activities continue.
- New initiatives; the Action Plan recommends that these new City activities be adopted in accordance with the implementation plan.
 - These initiatives are divided further into two sub-groups:
 - Future initiatives already planned;
 - Future Initiatives Recommended, not already planned.

The recommended initiatives are summarized in Table 4 through Table 6 below.

Table 4: Existing Road Safety Initiatives

Existing Initiative	Lead Agency or City Department
<i>Enforcement and Emergency Response</i>	
Traditional Enforcement	Windsor Police Service
High Visibility Enforcement (HVE)	Windsor Police Service
Selective Traffic Enforcement Program (STEP)	Windsor Police Service
Road Watch	Windsor Police Service
Report Impaired Driving (RID) program	MADD Windsor Essex County Windsor Police Service
Emergency response to collisions	Essex Windsor EMS Windsor Fire & Rescue Services Windsor Police Service Windsor Regional Hospital
<i>City Programs and Policies</i>	
Traffic Calming Policy	City – Transportation Planning
Community Safety Zone Policy	City – Transportation Planning
Radar Trailer Program	City – Traffic Operations
School Neighbourhood Policy	City – Transportation Planning
Bikeways Development Project	City – Transportation Planning
Pedestrian Generator Sidewalk Program	City – Operations
Pedestrian Safety Improvement Program	City – Engineering
Intersection Improvements Program	City – Engineering
Audible/ accessible pedestrian signal program	City – Traffic Operations
Pedestrian crossover program	City – Transportation Planning
Winter maintenance program	City – Operations
Pavement marking maintenance program	City – Traffic Operations
Sign maintenance program	City – Traffic Operations
Sight line clearing at intersections	City – Traffic Operations
Before-after analysis of road safety countermeasures	City – Transportation Planning
Red light cameras	City – Traffic Operations
Vehicle operator training	City – Human Resources Transit Windsor
Periodic driver's abstract review	City – Human Resources Transit Windsor
Collision Review Group (for collisions involving City vehicles)	City – Fleet Review Committee
Fleet vehicle standard development	City – Fleet Review Committee
<i>Education Programs</i>	
Children's Road Safety Programs	Safety Village Bike Windsor Essex
PARTY (Prevent Alcohol and Risk-related Trauma in Youth) Program	Windsor Regional Hospital

Table 5: Future Road Safety Initiatives – Already Planned

Number	Planned Initiative	Lead Agency or City Department
1	Develop and Implement a Complete Streets Policy	City – Transportation Planning
2	Construct Roadway Capital Projects (for certain corridors)	City – Engineering City – Transportation Planning
3	Obtain Collision Data through Provincial ARIS System	City – Transportation Planning
4	Continue to Implement the Transit Master Plan	Transit Windsor
5	Review Yellow and All-Red Intervals for Traffic Signals	City – Traffic Operations

Number	Planned Initiative	Lead Agency or City Department
6	Install Retroreflective Backboards for Traffic Signals	City – Traffic Operations
7	Increase Winter Roadway Maintenance	City – Operations
8	Driver Simulation Training for Commercial Motor Vehicle Operators	City – Human Resources
9	Commercial Motor Vehicle Driver Evaluation by Independent Party	City – Human Resources

Table 6: Future Road Safety Initiatives – Recommended

Number	Recommended Initiative <i>(highlighting indicates initiatives identified by members of the Stakeholder Group as high priority)</i>	Lead Agency or City Department
10	Conduct Road Safety Audits of Identified High Injury Corridors	City – Transportation Planning
11	Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects	City – Transportation Planning City – Engineering
12	Establish a Fatal Collision Response Team	To be determined
13	Explore Data-Sharing Arrangements Between Agencies	City – Transportation Planning
14	Carry out a Resident Survey	City – Transportation Planning
15	Implement Target Speed Requirements for New Construction and Major Roadway Projects	City – Transportation Planning
16	Implement Speed Limit Reductions – Neighbourhoods	City – Transportation Planning
17	Implement Speed Limit Reductions – Major Streets	City – Transportation Planning
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones	City – Traffic Operations
19	Reduce Progression Speed for Traffic Signal Coordination	City – Traffic Operations
20	Carry out Education Campaigns	City – Transportation Planning
21	Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions	City – Transportation Planning
22	Include Collision History as a Factor in Prioritizing Capital Projects	City – Engineering City – Operations
23	Review Official Plan and Zoning By-laws for Vision Zero Opportunities	City – Planning City – Transportation Planning
24	Review Design Standards and Development Manual for Vision Zero Opportunities	City – Engineering City – Transportation Planning
25	Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review	City – Transportation Planning
26	Develop Safety Performance Functions	City – Transportation Planning
27	Implement Automated Speed Enforcement	City – Traffic Operations
28	Install Transverse Rumble Strips at Select Locations	City – Transportation Planning
29	Implement a Parking Ticket Forgiveness Program to Target Impaired Driving	City – Transportation Planning
30	Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events	Transit Windsor City – Special Event Resource Team
31	Support the Development of a “Safe Ride Home” Service	To be determined
32	Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections	City – Traffic Operations

Number	Recommended Initiative <i>(highlighting indicates initiatives identified by members of the Stakeholder Group as high priority)</i>	Lead Agency or City Department
33	Provide Ladder Crosswalk Markings at Signalized Intersections	City – Traffic Operations
34	Implement Fully Protected Intersections	City – Transportation Planning City – Engineering
35	Implement Leading Pedestrian Intervals	City – Traffic Operations
36	Install Pedestrian Countdown Signals	City – Traffic Operations
37	Implement Hardened Centrelines at Intersections with High Speed Left Turns	City – Transportation Planning
38	Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects	City – Engineering
39	Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects	City – Engineering
40	Implement a Road Diet Program	City – Engineering City – Transportation Planning
41	Develop a Comprehensive GIS-based Collision Information System	City – Transportation Planning
42	Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases & Leases	City – Fleet Review Committee

Highlighting indicates initiatives that were identified by the Vision Zero Stakeholder Group as especially high priority.

Overall and Interim Goals

All initiatives included in the Vision Zero Action Plan have an associated activity, impact and outcome, as summarized in Figure 1.

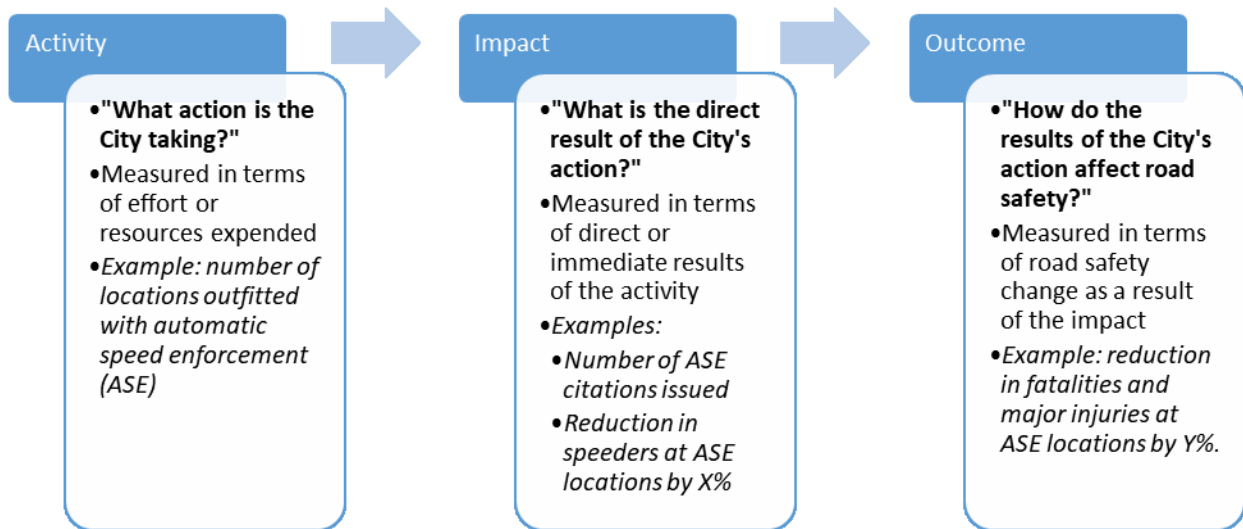


Figure 1: Activity, Impact and Outcome Goals

Identified goals in the Vision Zero Action Plan goals can relate to an activity, impact or outcome. Each has advantages and disadvantages, as noted in Table 7.

Table 7: Activity, Impact and Outcome Goals

Goal Type	Activity Goals	Impact Goals	Outcome Goals
<i>Examples</i>	<ul style="list-style-type: none"> • <i>Number of countermeasures installed</i> • <i>Lane-kilometers of street with reduced speed limit</i> 	<ul style="list-style-type: none"> • <i>Change in operating speed for a treated roadway</i> • <i>Number of red light camera citations issued</i> 	<ul style="list-style-type: none"> • <i>City-wide reduction in severe collisions</i> • <i>Reduction in severe collisions at a treated location</i>
Strengths	<ul style="list-style-type: none"> • City can exert direct control to achieve goal • Future performance can be predicted with high levels of certainty 	<ul style="list-style-type: none"> • Provides timely feedback on the performance of road safety interventions 	<ul style="list-style-type: none"> • Direct measurement of the focus of concern
Weaknesses	<ul style="list-style-type: none"> • Proxy measure for safety; relationship between activity and impact/outcome is subject to uncertainty 	<ul style="list-style-type: none"> • Proxy measure for safety; relationship between impact and outcome is subject to uncertainty 	<ul style="list-style-type: none"> • Significant lag in results (on the order of years) from when action is taken until outcome can be measured
Approach Used for Vision Zero Action Plan	<ul style="list-style-type: none"> • Activity goals are reflected in the Implementation Plan 	<ul style="list-style-type: none"> • Impact goals are identified where indicators are available 	<ul style="list-style-type: none"> • Outcome goals are identified for all strategic priorities

Overall Goal

For all Vision Zero programs, the overall goal is zero fatalities and major injuries due to road crashes, ideally within an identified timeline.

The recommended overall goal of the Vision Zero Action Plan is zero fatal and major injury collisions **within 15 years** of adopting the Vision Zero Action Plan.

Interim Goals – Road Safety Outcomes

For all indicators that are given in terms of fatalities and major injuries, interim goals are as follows:

- 5 years after Vision Zero Action Plan adoption: 33% reduction from 2015-2019 baseline levels
- 10 years after Vision Zero Action Plan adoption: 67% reduction from 2015-2019 baseline levels
- 15 years after Vision Zero Action Plan adoption: 100% reduction from 2015-2019 baseline levels

Interim goals for each strategic priority are provided in Table 8.

Table 8: Interim Goals by Strategic Priority

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
Overall	Fatalities and major injuries (all causes and victim categories)	37.2 per year	24.8 per year	12.4 per year	0 per year
1A: Vehicle Speeds	Fatalities and major injuries involving the following driver actions: <ul style="list-style-type: none"> Exceeding speed limit Speed too fast for conditions Lost control 	11.0 per year	7.3 per year	3.7 per year	0 per year
	Fatalities and major injuries involving either: <ul style="list-style-type: none"> Traffic control type identified as “traffic controller” or Road condition identified as “under construction” 	0.8 per year	0.5 per year	0.3 per year	0 per year
1B: Drug and Alcohol Impairment	Fatalities and major injuries involving the following driver conditions: <ul style="list-style-type: none"> Had been drinking Ability impaired, alcohol Ability impaired, alcohol (over 0.08) Ability impaired, drugs 	4.8 per year	3.2 per year	1.6 per year	0 per year
1C: Inattentive Driving	Fatalities and major injuries involving the driver condition “inattentive”	3.8 per year	2.5 per year	1.3 per year	0 per year
1D: Failing to Yield at Intersections	Fatalities and major injuries at intersections involving the following driver actions: <ul style="list-style-type: none"> Failed to yield right-of-way Disobeyed traffic control Improper turn 	12.2 per year	8.1 per year	4.1 per year	0 per year
2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)	Pedestrian fatalities and major injuries	8.4 per year	5.6 per year	2.8 per year	0 per year
	Cyclist fatalities and major injuries	3.2 per year	2.1 per year	1.1 per year	0 per year
	Motorcyclist fatalities and major injuries	6.0 per year	4.0 per year	2.0 per year	0 per year
3A: High Injury Corridors	Pedestrian fatalities and major injuries – Tecumseh Road East (Jefferson to Forest Glade Drive)	0.8 per year	0.5 per year	0.3 per year	0 per year
	Pedestrian fatalities and major injuries – Wyandotte Street (Ouellette to Chilver)	0.8 per year	0.5 per year	0.3 per year	0 per year

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
	Cyclist fatalities and major injuries – Wyandotte Street (Pelissier to Parent)	0.6 per year	0.4 per year	0.2 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – EC Row Expressway (Howard to Banwell)	1.8 per year	1.2 per year	0.6 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – Wyandotte Street (Pelissier to Gladstone)	1.0 per year	0.7 per year	0.3 per year	0 per year
3B: Signalized Intersections	Fatalities and major injuries at signalized intersections	11.6 per year	7.7 per year	3.9 per year	0 per year
4A: Improved Data Sources and Information Sharing	N/A				
4B: Design Standards and Best Practices	N/A				

Interim Goals – Impacts

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
1A: Vehicle Speeds	% of treated locations with operating speed within 5 km/h of target speed	N/A	80%	Immediate after treatment	This indicator should be summarized by category (e.g. speed limit reduction, radar speed feedback sign, permanent traffic calming, Complete Street installation)
	# of automated speed enforcement citations issued	N/A	Downward trend in citations issued at each treated intersection	1 year after treatment	
1B: Drug and Alcohol Impairment	# of riders per year using “Safe Ride Home” service	0	To be determined	To be determined	Goals to be identified as part of service development
1C: Inattentive Driving	N/A				
1D: Failing to Yield at Intersections / 3B: Signalized Intersections	# of red light camera citations issued	N/A	Downward trend in citations issued at each treated intersection	1 year after treatment	

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)	N/A				
3A: High Injury Corridors	See note	N/A	To be determined	To be determined	As part of each road safety audit, impact goals will be developed based on the audit's conclusions and recommendations
4A: Improved Data Sources and Information Sharing	Mean days from crash date to date crash report is entered into City database	477 days	60 days	Immediate after implementation of ARIS-based collision data system	
	Percentage of crash reports entered into the database within 90 days after the crash	0%	90%	Immediate after implementation of ARIS-based collision data system	
	% of fatal collisions where Fatal Collision Response Team was activated	N/A	100%	Immediate after establishment of the Fatal Collision Response Team	
4B: Design Standards and Best Practices	N/A				
Multiple	Education campaign reach	N/A	To be determined	To be determined	Campaign goals will be developed individually for each educational campaign

Implementation Plan

The Vision Zero Action Plan includes an implementation plan with short term (0-5 years), medium term (5-10 years) and long term (10-15 years) targets. The implementation plan is included in Appendix A.

A number of measures can proceed immediately; these measures are summarized in Table 9 below. In cases where these measures require Council approval, they have been included in the report recommendations.

Table 9: Recommended Initiatives for Immediate Action

Number	Recommended Initiative
1	Develop and Implement a Complete Streets Policy (development portion)
3	Obtain Collision Data through Provincial ARIS System
5	Review Yellow and All-Red Intervals for Traffic Signals
6	Install Retroreflective Backboards for Traffic Signals
12	Establish a Fatal Collision Response Team
13	Explore Data-Sharing Arrangements Between Agencies
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones
19	Reduce Progression Speed for Traffic Signal Coordination
20	Carry out Education Campaigns
28	Install Transverse Rumble Strips at Select Locations
38	Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects
39	Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects
41	Develop a Comprehensive GIS-based Collision Information System

Recommendation #41, Develop a Comprehensive GIS-based Collision Information System, requires the purchase of a subscription of TES Software, setup costs and additional co-op students to assist existing city staff in building the City’s collision database.

This GIS based software, as noted in the financials below, has been identified in the Supplemental Vision Zero Implementation plan as an important first step to roll out and support the implementation of 14 other data driven initiatives.

The City of Windsor uses GIS extensively and has a significant amount of data in GIS form. Currently, the Windsor Collision Database is a standalone database, not connected to other data sources. This initiative would entail translating data from the collision database into a GIS, which would allow more efficient analysis of collision data to identify collision “hot spots” and City-wide trends.

Having a GIS-based collision information system would also allow for comparisons with other mapped data, which would enable analyses that City staff have not been able to do to date, such as identifying correlations between road safety outcome and neighbourhood characteristics (e.g. social determinants of health), which could inform future road safety policies or outreach programs.

TNS Group (formerly TES Information Technology) has provided software development and consulting engineering services to the public and private sectors since the year 2000. The company focuses entirely on the field of traffic engineering and road safety and consists of multiple branches within this field including software development (custom and off-the-shelf), consulting, as well as collision data entry and management.

TES Software is the TNS Group flagship product which is used by more than 70 agencies across North America. TES Software consists of several modules; the City is interested in the following modules:

- Infrastructure/GIS Module,

- Traffic Count & Study Module,
- Collision Module,
- Collision Mapping and Geocoding Module, and
- Safety Module.

TES software has been evaluated as being the only available software on the market that will provide the required functionality. The software is an industry standard throughout the province and country.

Although an implementation plan is provided in the Vision Zero Action Plan, it only categorizes the initiatives into three timeframes, Short (0-5 years), Medium (5-10 years) and Long (10-15 years). The Supplemental implementation plan helps illustrate the relationship between related initiatives. Some initiatives depend on the results of others before it is possible to implement, while others can be implemented independently.

CQ 7-2020 – 40 km/h Residential Speed Limits

Report S 111/2020 and S 13/2021 previously provided Council with three (3) potential options for reduction of speed limits:

1. Sign 40 km/h residential streets individually.
2. Reduce the City-wide default speed limit to 40 km/h
3. Implement speed areas in residential neighbourhoods.

Each option is detailed in the attached report along with pricing from 2020. It should be noted that costs have increased since this report was developed in the range of 40%.

The Vision Zero Action Plan has two (2) initiatives that relate to speed limit reductions;

#16 – Implement Speed Limit Reductions – Neighbourhoods

#17 – Implement Speed Limit Reductions – Major Streets

Initiative #16 aligns with option 3 from report S 111-2020 while initiative #17 does not directly align with any option. However, indirectly it could be considered to be aligned with options 1 or 2.

Major (Arterial) road speed limits in the City are between 50 km/h and 70 km/h depending on the cross section of the roadway. A City-wide reduction of the default speed to 40 km/h would not affect many of the major roads that are already 50 km/h as many of these roads would have very little compliance for a speed limit lower than this. However, lowering some of the higher speed roads to 50 km/h may have more impact.

Neither initiative #16 nor #17 were identified as immediate action items, however they are listed as potentially being implemented within the 0-5 year time frame. As noted in the Supplemental Implementation Plan, Administration recommends the implementation of both of these initiatives be driven by data. With the purchase of the TES software above, speeds throughout the City can be compiled graphically and analysed. The software will identify specific neighbourhoods that could be targeted for speed reductions, it will also allow Administration the opportunity to analyse the areas and

propose other traffic calming tools that can be implemented along with the speed reductions that may assist in increasing compliance. As noted in previous reports, speed reductions typically do not have an impact when implemented alone. Additionally, the software will assist in determining appropriate speed reductions for major roadways.

Assuming the purchase of the software is complete early 2024, there will be time required to upload all the City's existing data. Based on these timelines, initial recommendations for implementation of initiatives #16 and #17 are estimated to be presented as part of the 2025 and/or 2026 budget process.

CQ 27-2021 – All-Way Stop Warrant

While fundamentally, stop control devices are installed with the intention to make roadways safer and hence may be considered an initiative related to the vision zero mandate, they are a regulatory element of the Highway Traffic Act and therefore not an item specifically discussed within a Vision Zero framework. Vision Zero looks at initiatives that can be done outside of and in addition to the regulatory safety devices. Of the items in the Action Plan, the only item that could potentially be tied to the All-Way stop warrant process would be initiative #38 – Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects. Some Municipalities have implemented a policy that would allow for some intersections to be converted into roundabouts or smaller traffic circles where all-way stops are not warranted. This could be considered in the development and adoption of Windsor's Roundabout First Policy of Best Practice. However, this consideration would not change the proposed warrant criteria proposed in report S 70-2023.

Risk Analysis:

Overall, the Vision Zero Action Plan is a mitigation strategy for life safety risk to road users in Windsor.

Construction costs – and the impact of policy and best practice decisions on construction costs – are subject to variability due to market forces. These risks are mitigated by following the Purchasing By-law and standard project management practices.

Risks that the interim and overall goals of the Vision Zero Action Plan may not be met are mitigated by ongoing monitoring, reporting, and periodic updates to the Action Plan.

This GIS based software has been identified in the Supplemental Vision Zero Implementation plan as an important first step to roll out and support the implementation of 14 other initiatives. Any delay in the purchase of TES Cloud Software and hiring co-op student to assist in building the database will delay the future implementation of those data driven 14 initiatives

Initiatives that require additional funding will be brought forward for consideration in future budget items. If additional budget allotments are not approved, the overall goals of the Vision Zero Action Plan may not be met.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

Funding would be required to purchase the TES Cloud Software to translate data from the collision database into a GIS, which would allow more efficient analysis of collision data to identify collision “hot spots” and City-wide trends. TES Cloud Software will also allow for comparisons with other mapped data, informing future road safety policies and outreach programs at a cost of approximately \$23,404.85 inclusive of non-refundable HST for year 1 and \$13,737.63 (inclusive of non-refundable HST) for the second and third years ongoing subscription costs. The year 1 cost includes the monthly subscription fee, a one-time set up and training fee, and a one-time import of historical collision data. The monthly subscription fee would remain the same for the first three years with adjustments after the three years based on the annual inflation rates reported by the Bank of Canada.

Transportation Planning currently does not have an operating budget sufficient to fund the initial year 1 cost of the software set up and subscription, therefore, Administration recommends funding year 1 with funding from the Budget Stabilization Reserve, Fund 139, to be transferred into and tracked in a new capital project. Subsequent year costs will be absorbed in the annual operating budget for Public Works.

In addition to the software requirements for the TES software implementation, Administration would recommend hiring a co-op student for each school term in 2024 and the first school term in 2025 to assist existing city staff in building the City’s collision database. The estimated cost of three (3) students in 2024 is \$40,000, and one (1) student in 2025 is \$15,000. Transportation Planning does not have an approved operating budget allotment for students currently, and as such, Administration recommends funding the cost of four (4) students with a transfer of funding from the Budget Stabilization Reserve, Fund 139, to be transferred into and tracked in a new capital project. Students will not be required ongoing once implementation is complete.

A summary of these costs, and funding sources, is provided in the table below.

Expense	2024	2025	2026	Total
TES Software	23,404.85	13,737.63	13,737.63	50,880.11
Co-op Students	40,000.00	15,000.00	-	55,000.00
Total Expenses	63,404.85	28,737.63	13,737.63	105,880.11
Funding Source	2024	2025	2026	Total
Budget Stabilization Reserve (Fund 139)	63,404.85	15,000.00	-	78,404.85
Operating	-	13,737.63	13,737.63	27,475.25
Total Funding	63,404.85	28,737.63	13,737.63	105,880.11

While 18 of the 42 initiatives are zero-cost initiatives or are expected to result in net cost savings to the Corporation, many of the remaining initiatives have not been allocated any funding in the current Capital or Operating Budgets. Administration will make requests for necessary funding as part of future Capital or Operating Budget submissions; however, these initiatives cannot be completed unless sufficient funding is available and allocated to these works through the annual budgetary process.

Consultations:

Consultations were carried out with the Vision Zero Task Force and the Vision Zero Stakeholder Group at the following points:

- Project initiation
- After development of strategic priorities
- After development of recommended initiatives
- After development of interim goals and implementation plan

Conclusion:

The recommended Vision Zero Action Plan and the Supplemental Action Plan has been brought forward as directed by the Vision Zero Policy. The Vision Zero Action Plan provides recommendations aimed at eliminating fatal and major injury collisions on streets under the jurisdiction of the City of Windsor within 15 years of adoption of the Plan.

Planning Act Matters:

N/A

Approvals:

Name	Title
Cindy Becker	Financial Planning Administrator
Shawna Boakes	Executive Director of Operations and Deputy City Engineer
Shawna Boakes for	Commissioner of Infrastructure Services and City Engineer
Janice Guthrie	Commissioner of Corporate Services and Chief Financial Officer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email
Vision Zero Stakeholder Group		
Diane Bradford and Sean Wraight, Co-Chairs Windsor Essex Road Safety Working Group		Diane.bradford@wrh.on.ca sean.wraight@ontario.ca

Appendices:

- 1 Appendix A - Vision Zero Action Plan
- 2 Appendix B - Supplemental Vision Zero Implementation Plan
- 3 Appendix C - Quotation for Purchase and Configuration of TES Software

Vision Zero Action Plan

APRIL 4, 2023

Transportation Planning Services
Public Works

Office of the Commissioner of Infrastructure



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Executive Summary

The Vision Zero Action Plan follows a Safe System Approach to achieve the goal of zero fatal and major injury collisions on Windsor streets. The Action Plan was developed based on three core components:

- Strategic Priorities
- Recommended Initiatives
- Interim Goals (including Implementation Plan)

Strategic priorities were developed based on a review of trends and patterns in fatal and major injury collisions. The priorities, grouped into four themes, are listed in Table 1.

Table 1: Themes and Strategic Priorities

Theme	Strategic Priority
1: Driver Behaviours	1A: Vehicle Speeds
	1B: Drug and Alcohol Impairment
	1C: Inattentive Driving
	1D: Failing to Yield at Intersections
2: Road User Types	2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)
	2B: Data Gaps – People
3: Locations and Infrastructure	3A: High Injury Corridors
	3B: Signalized Intersections
4: Process Improvements	4A: Improved Data Sources and Information Sharing
	4B: Design Standards and Best Practices

Building on these themes, a set of 42 recommended initiatives was identified. These initiatives and their proposed implementation timelines are summarized in Table 2. Items where new funding is required will be presented as part of future annual budget submissions.

Table 2: Recommended Initiatives and Implementation Plan

Number	Recommended Initiative	Responsibility	Timeframe		
			Short 0-5 years	Medium 5-10 years	Long 10-15 years
1	Develop and Implement a Complete Streets Policy	<i>Development:</i> Transportation Planning	X		
		<i>Implementation:</i> Engineering Operations Planning	X	X	X
2	Construct Roadway Capital Projects (for certain corridors)	Engineering		X	X
3	Obtain Collision Data through Provincial ARIS System	Transportation Planning	X		
4	Continue to Implement the Transit Master Plan	Transit	X	X	X
5	Review Yellow and All-Red Intervals for Traffic Signals	Traffic Operations	X		
6	Install Retroreflective Backboards for Traffic Signals	Traffic Operations	X	X	
7	Increase Winter Roadway Maintenance	Operations	X		
8	Driver Simulation Training for Commercial Motor Vehicle Operators	Human Resources	X		
9	Commercial Motor Vehicle Driver Evaluation by Independent Party	Human Resources	X		
10	Conduct Road Safety Audits of Identified High Injury Corridors	Transportation Planning	X		
11	Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects	Engineering	X	X	
12	Establish a Fatal Collision Response Team	Traffic Operations WPS Engineering Risk Management Coroner's Office	X		
13	Explore Data-Sharing Arrangements Between Agencies	Transportation Planning	X		
14	Carry out a Resident Survey	Transportation Planning	X		
15	Implement Target Speed Requirements for New Construction and Major Roadway Projects	Engineering Operations	X		
16	Implement Speed Limit Reductions – Neighbourhoods	Traffic Operations	X		
17	Implement Speed Limit Reductions – Major Streets	Traffic Operations	X		
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones	Traffic Operations Operations	X		
19	Reduce Progression Speed for Traffic Signal Coordination	Traffic Operations	X		
20	Carry out Education Campaigns	Transportation Planning	X	X	X
21	Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions	Asset Planning Engineering Operations	X		
22	Include Collision History as a Factor in Prioritizing Capital Projects	Asset Planning Engineering	X		
23	Review Official Plan and Zoning By-laws for Vision Zero Opportunities	Planning	X	X	
24	Review Design Standards and Development Manual for Vision Zero Opportunities	Engineering	X	X	

Number	Recommended Initiative	Responsibility	Timeframe		
			Short 0-5 years	Medium 5-10 years	Long 10-15 years
25	Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review	Transportation Planning Planning	X		
26	Develop Safety Performance Functions	Transportation Planning	X		
27	Implement Automated Speed Enforcement	Traffic Operations	X		
28	Install Transverse Rumble Strips at Select Locations	Transportation Planning	X		
29	Implement a Parking Ticket Forgiveness Program to Target Impaired Driving	Parking Enforcement	Pilot		
30	Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events	Transit Windsor Special Event Resource Team	X		
31	Support the Development of a “Safe Ride Home” Service	Transportation Planning	X		
32	Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections	Traffic Operations	Pilot		
33	Provide Ladder Crosswalk Markings at Signalized Intersections	Traffic Operations	Pilot		
34	Implement Fully Protected Intersections	Traffic Operations Operations Engineering		X	
35	Implement Leading Pedestrian Intervals	Traffic Operations	Pilot		
36	Install Pedestrian Countdown Signals	Traffic Operations	Pilot		
37	Implement Hardened Centrelines at Intersections with High Speed Left Turns	Traffic Operations Operations Engineering	X	X	
38	Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects	Engineering Transportation Planning	X		
39	Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects	Engineering Transportation Planning	X		
40	Implement a Road Diet Program	Engineering Transportation Planning	X	X	
41	Develop a Comprehensive GIS-based Collision Information System	Geomatics Asset Planning	X		
42	Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases	Fleet Review Committee	X		

The overall goal of the Vision Zero Action Plan is the elimination of fatal and major injury collisions on streets under the jurisdiction of the City of Windsor within 15 years of adoption of the Vision Zero Action Plan. For each strategic priority, interim goals are identified in Table 3 and impact goals are identified in Table 4.

Table 3: Interim Goals by Strategic Priority

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
Overall	Fatalities and major injuries (all causes and victim categories)	37.2 per year	24.8 per year	12.4 per year	0 per year
1A: Vehicle Speeds	Fatalities and major injuries involving the following driver actions: <ul style="list-style-type: none"> Exceeding speed limit Speed too fast for conditions Lost control 	11.0 per year	7.3 per year	3.7 per year	0 per year
	Fatalities and major injuries involving either: <ul style="list-style-type: none"> Traffic control type identified as “traffic controller” or Road condition identified as “under construction” 	0.8 per year	0.5 per year	0.3 per year	0 per year
1B: Drug and Alcohol Impairment	Fatalities and major injuries involving the following driver conditions: <ul style="list-style-type: none"> Had been drinking Ability impaired, alcohol Ability impaired, alcohol (over 0.08) Ability impaired, drugs 	4.8 per year	3.2 per year	1.6 per year	0 per year
1C: Inattentive Driving	Fatalities and major injuries involving the driver condition “inattentive”	3.8 per year	2.5 per year	1.3 per year	0 per year
1D: Failing to Yield at Intersections	Fatalities and major injuries at intersections involving the following driver actions: <ul style="list-style-type: none"> Failed to yield right-of-way Disobeyed traffic control Improper turn 	12.2 per year	8.1 per year	4.1 per year	0 per year
2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)	Pedestrian fatalities and major injuries	8.4 per year	5.6 per year	2.8 per year	0 per year
	Cyclist fatalities and major injuries	3.2 per year	2.1 per year	1.1 per year	0 per year
	Motorcyclist fatalities and major injuries	6.0 per year	4.0 per year	2.0 per year	0 per year
3A: High Injury Corridors	Pedestrian fatalities and major injuries – Tecumseh Road East (Jefferson to Forest Glade Drive)	0.8 per year	0.5 per year	0.3 per year	0 per year
	Pedestrian fatalities and major injuries – Wyandotte Street (Ouellette to Chilver)	0.8 per year	0.5 per year	0.3 per year	0 per year

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
	Cyclist fatalities and major injuries – Wyandotte Street (Pelissier to Parent)	0.6 per year	0.4 per year	0.2 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – EC Row Expressway (Howard to Banwell)	1.8 per year	1.2 per year	0.6 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – Wyandotte Street (Pelissier to Gladstone)	1.0 per year	0.7 per year	0.3 per year	0 per year
3B: Signalized Intersections	Fatalities and major injuries at signalized intersections	11.6 per year	7.7 per year	3.9 per year	0 per year
4A: Improved Data Sources and Information Sharing	N/A				
4B: Design Standards and Best Practices	N/A				

Table 4: Impact Goals by Strategic Priority

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
1A: Vehicle Speeds	% of treated locations with operating speed within 5 km/h of target speed	N/A	80%	Immediate after treatment	This indicator should be summarized by category (e.g. speed limit reduction, radar speed feedback sign, permanent traffic calming, Complete Street installation)
	# of automated speed enforcement citations issued	0	Downward trend in citations issued at each treated intersection	1 year after treatment	
1B: Drug and Alcohol Impairment	# of riders per year using “Safe Ride Home” service	0	To be determined	To be determined	Goals to be identified as part of service development
1C: Inattentive Driving	N/A				
1D: Failing to Yield at Intersections / 3B: Signalized Intersections	# of red light camera citations issued	0	Downward trend in citations issued at each treated intersection	1 year after treatment	

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)	N/A				
3A: High Injury Corridors	See note	N/A	To be determined	To be determined	As part of each road safety audit, impact goals will be developed based on the audit's conclusions and recommendations
4A: Improved Data Sources and Information Sharing	Mean days from crash date to date crash report is entered into City database	477 days	60 days	Immediate after implementation of ARIS-based collision data system	
	Percentage of crash reports entered into the database within 90 days after the crash	0%	90%	Immediate after implementation of ARIS-based collision data system	
	% of fatal collisions where Fatal Collision Response Team was activated	N/A	100%	Immediate after establishment of the Fatal Collision Response Team	
4B: Design Standards and Best Practices	N/A				
Multiple	Education campaign reach	N/A	To be determined	To be determined	Campaign goals will be developed individually for each educational campaign

Ongoing reporting and review is recommended as follows:

- **Annual reporting:** revise the format of the annual Road Safety Report to include details on each of the identified Vision Zero Action Plan goals and indicators.
- **Ongoing review:** review the Vision Zero Action Plan to identify recommended revisions, if any, that will be needed to better achieve the Action Plan's goals. Recommended intervals for these ongoing reviews, measured in terms of time from adoption of the Vision Zero Action Plan:
 - 2.5 to 3 years
 - 5 years
 - 10 years
 - 15 years

Additional updates to the Vision Zero Action Plan may be proposed to Standing Committee and/or Council by way of Administration report at any time if the need arises.

1. Introduction and Background

What is Vision Zero?

Vision Zero was first launched in Sweden in 1995 and adopted as policy by the Swedish government in 1997. Since then, it has been implemented by many jurisdictions around the world.

In Canada, as of the date of this report, Parachute Canada identifies that 18 cities, 2 regional municipalities, and 2 provinces have implemented Vision Zero programs and an additional 10 cities and 3 regional municipalities have Vision Zero programs under development.

Vision Zero's overall goal is zero fatalities and severe injuries due to road crashes. Key principles of Vision Zero are:

- **Humans are fragile:** the human body has a finite capacity for injury; beyond a certain limit, severe injury or death will occur. Road safety systems – including roadway design, vehicle design, and policies – should respect these limits.
- **Humans are fallible:** road users are human beings, and as such, will not behave perfectly at all times. Roadways should be designed so that foreseeable human mistakes and misbehaviours do not have fatal consequences. Policies should – as much as possible, endeavour to create a *safe system* approach where a single point of failure or misjudgement would not result in a fatality or severe injury.

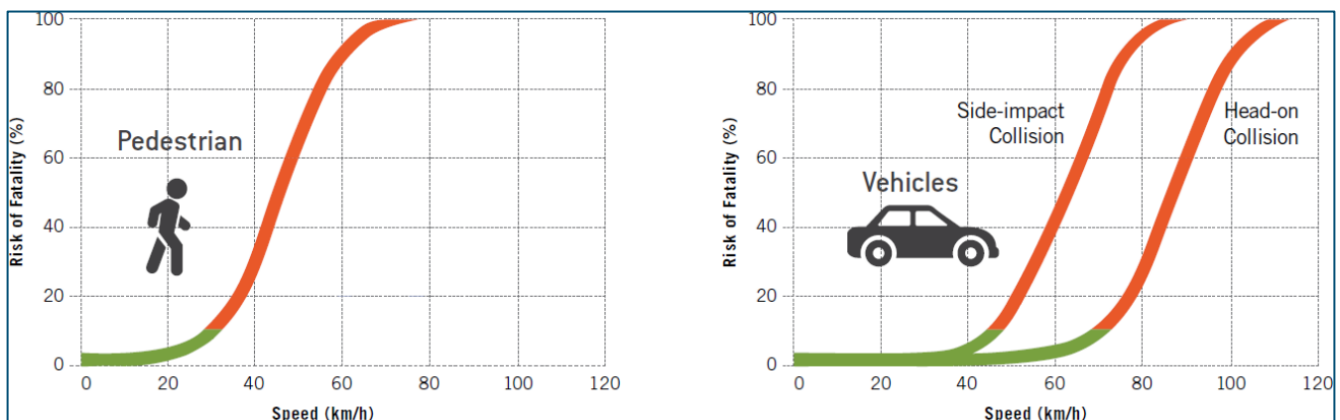


Figure 1: Risk of Fatality as a Function of Impact Speed (source: Waikato District Council)

Table 5: Differences Between a Traditional Road Safety Approach and Vision Zero (source: Vision Zero Network)

Traditional Approach	Vision Zero
Traffic deaths are <u>inevitable</u>	Traffic deaths are <u>preventable</u>
<u>Perfect</u> human behaviour	Integrate <u>human failing</u> in approach
Prevent <u>collisions</u>	Prevent <u>fatalities and severe injuries</u>
<u>Individual</u> responsibility	<u>Systems</u> approach
Saving lives is <u>expensive</u>	Saving lives is <u>not expensive</u>

To support these principles, the Vision Zero approach also includes a number of foundational elements:

- A robust data framework
- Measurable goals
- Clear timeline for implementation
- Accountability
- Transparency

Safe System Approach

The Safe System approach is not synonymous with Vision Zero, but Safe System principles are incorporated into the Vision Zero approach.

Table 6: Traditional Approaches Versus the Safe System Approach (source: Transportation Association of Canada)

Traditional Approach	Safe System Approach
Focuses on crashes	Focuses on injuries
Aims to reduce risk of crashes	Aims to eliminate death and serious injury
Road user has primary responsibility	System designer has primary responsibility
Change individual road user behaviour	Change the environment (safe roads, safe vehicles, safe speeds) to enable road users to tolerate crash forces

Traditional Approach	Safe System Approach
Safety is “optimized” once mobility and accessibility objectives have been achieved	Safety is a fixed parameter with threshold levels that cannot be exceeded – mobility and accessibility are variables in this framework
Roads are made as safe as reasonably practical	Roads are self-explaining and forgiving of mistakes so that road users are protected from crash forces that exceed human biomechanical injury thresholds

Key aspects of the Safe System Approach not already addressed above include (source: Transportation Association of Canada):

- **Safety is proactive.** Proactive tools can be used to identify and mitigate latent risks in the transportation system, rather than waiting for crashes to occur and reacting afterwards.
- **Overlapping measures are crucial.** Reducing risks requires that all parts of the transportation system are strengthened, so that if one part fails the others continue to protect people.

Elements of the Safe System Approach identified by the Transportation Association of Canada’s “Vision Zero and the Safe System Approach: A Primer for Canada” (2023) are as follows:

- **Safe land use planning** – To achieve a truly safe system, road safety policy should be integrated into broader community planning that influences travel patterns and the attractiveness of different modes.
- **Safe speeds** – In the Safe System Approach, speed management is critical for aiding crash avoidance and respecting the human body’s limit for physical trauma. It seeks to:
 - Establish appropriate speed limits
 - Engineer roads for the appropriate speed limit
 - Enforce speed limits
 - Educate road users
- **Safe road users** – Designing and building safe roads to minimize human error is insufficient if road users fail to comply with the rules of the road.
- **Safe vehicles** – Vehicles should be regulated, designed and built to minimize the occurrence and consequences of crashes, with an emphasis on crash survivability.
- **Safe road design** – In the Safe System Approach, roads are designed, operated and maintained to reduce the risk of crashes occurring and the severity of an injury in case of a crash. Road infrastructure can promote safety by:
 - Separating different modes

- Separating traffic streams
- Designing for safe speed limits
- Designing self-explaining roads
- **Post-crash care** – While most injury control strategies focus on primary prevention (i.e. preventing the occurrence of injuries or minimizing their severity), secondary prevention (i.e. providing adequate emergency medical response to enhance treatment) can minimize the harm that follows an injury (e.g. disability or premature death).

These principles and elements have been incorporated into the Vision Zero Action Plan.

Nominal and Substantive Safety

The Vision Zero approach recognizes the distinction between nominal safety and substantive safety.

Traditional approaches to roadway design and policy often rely on nominal safety without explicitly considering substantive safety:

- **Nominal safety** refers to compliance with relevant design codes and standards.
- **Substantive safety** refers to the measurable safety performance – either actual or forecast – in terms of collision frequency, collision rate, or injury rate.

Figure 2 provides a graphical comparison of nominal versus substantive safety.

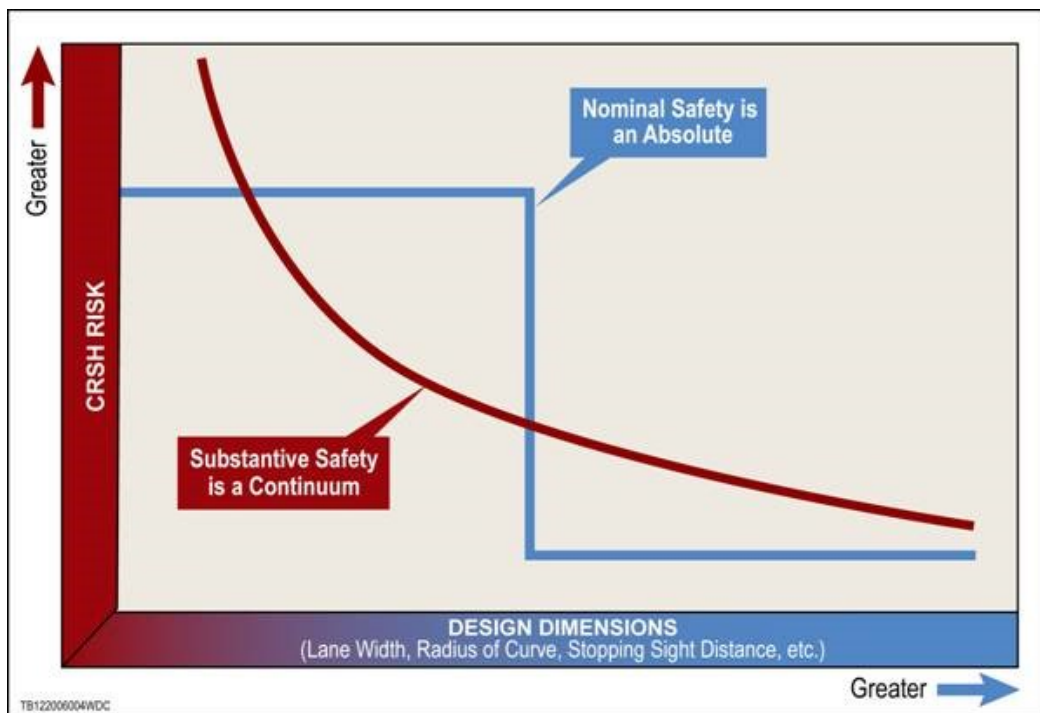


Figure 2: Nominal vs. Substantive Safety (source: US Federal Highway Administration)

In the Vision Zero approach, key goals and metrics are based on substantive safety: the number or rate of severe injuries.

While the use of design standards, codes and guidelines as the basis for roadway infrastructure design is an important part of the approach to minimize crash risk generally, in a Vision Zero context, it is also important to recognize that:

- All else being equal, the risk of crashes or injuries (i.e. the level of substantive safety) can be nearly identical if a design standard is *almost* met versus *barely* met, even though one case is “nominally unsafe” while the other is “nominally safe.”
- It is possible for a piece of infrastructure to be nominally safe (i.e. meets relevant design standards) but also substantively unsafe (i.e. has a high rate of crashes or injuries).
- Adhering to design guidelines can produce low crash or injury risk in most situations; however, when a location experiences a high frequency of severe injuries, consideration should be given that the location may be one of the minority where design standards are not producing the intended level of substantive safety.
 - At these locations, deviations from normal design standards may be justified based on engineering judgment and a careful review of the location, its collision pattern, and other relevant factors.

Injury Terminology

Vision Zero is focused on eliminating severe injuries due to road crashes. Since Vision Zero is a worldwide program, no specific definition of “severe injury” is mandated as part of the Vision Zero approach; individual jurisdictions are able to decide the level of injury to be addressed by their Vision Zero policies and action plans based on available data and local priorities.

The main source of collision data for Windsor is information obtained from MVA reports prepared by police. Descriptions of injury severity in these reports use the province-wide standard for MVA reports:

- **Fatal:** victim died of their injuries within 30 days of the collision
- **Major:** victim was admitted to hospital for treatment of their injuries (and was not classified as fatal)
- **Minor:** victim was treated in a hospital emergency department for their injuries (and was not classified as fatal or major injury)

- **Minimal:** victim received any other injuries not included in the above categories, including first aid on scene, treatment by family doctor or walk-in clinic, complaints of pain, etc.

Windsor’s Vision Zero Action Plan builds on this classification by identifying fatalities and major injuries – as described above – as the severe injuries that are the focus of this plan.

Action Plan Development

Vision Zero Policy

The City of Windsor’s Vision Zero Policy was adopted by Council on February 20, 2020 by Council Resolution CR82/2020, including the overall statement of endorsement of Vision Zero:

The Corporation of the City of Windsor endorses the Vision Zero goal of zero traffic deaths or serious injuries on roadways under its jurisdiction and commits to collaborating with all stakeholders in working to realize this goal.

Additionally, the Vision Zero – and the accompanying Vision Zero Procedure and Vision Zero Stakeholder Group Terms of Reference:

- Directed Administration to develop a Vision Zero Action Plan;
- Established a Vision Zero Task Force and a Vision Zero Stakeholder Group (see Table 7);
- Outlined the process for development of the Vision Zero Action Plan, including:
 - Points of consultation with the Vision Zero Task Force and Vision Zero Stakeholder Group, and
 - Points in the process where progress reports would be provided to the Environment, Transportation & Public Safety Standing Committee.

Table 7: Task Force and Stakeholder Group Roles

	Vision Zero Task Force	Vision Zero Stakeholder Group
Members	City & emergency services departments responsible for implementing road safety actions	Members of public and stakeholder organizations impacted by road safety issues
Role	<ul style="list-style-type: none"> • Approves Vision Zero Action Plan elements • Leads implementation of the Vision Zero Action Plan 	<ul style="list-style-type: none"> • Provides input and feedback to inform and shape the Vision Zero Action Plan

Vision Zero Task Force

The Vision Zero Task Force was made up of representatives of City departments and external agencies that are responsible for road safety-related initiatives and will be taking part in the implementation of Vision Zero Action Plan recommendations. Staff who participated on the Task Force are listed in Table 8.

Table 8: Vision Zero Task Force Members

Member	Department / Agency
Chris Nepszy	City of Windsor – Infrastructure Services
Jeff Hagan Laura Ash Awele Italiano Allaina Lucier Seun Daniel Oluwajana Kathleen Quenneville Rania Toufeili	City of Windsor – Transportation Planning Services
Jason Moore Jill Braido	City of Windsor – Communications
John Revell Sherry Ducedre	City of Windsor – Building
Adam Mourad	City of Windsor – Engineering
Shawna Boakes Dwayne Dawson Phong Nguy	City of Windsor – Public Works Operations
Ian Day	City of Windsor – Traffic Operations
Ryan Lemay Stacey Shepley Larry Trpkovski	Essex Windsor EMS
Kelsey Amlin Jason Scott	Transit Windsor
Insp. Jennifer Crosby Sgt. Morgan Evans Sgt. Craig Judson	Windsor Police Services

Vision Zero Stakeholder Group

The Vision Zero Stakeholder Group was made up of representatives of external agencies, vulnerable road user groups, and other road safety stakeholder groups. The committee membership is given in Table 9.

Table 9: Vision Zero Stakeholder Group Members

Member	Organization
Councillor Chris Holt <i>Stakeholder Group Chair to October 2022</i> Councillor Gary Kaschak <i>Stakeholder Group Chair from March 2023</i>	Windsor City Council
Kenneth Acton	Windsor Bicycling Committee
Todd Awender	Greater Essex County District School Board
Diane Bradford	Windsor Regional Hospital
Julie Di Domenico	Windsor-Essex Catholic District School Board
Nathanael Hope	Downtown Windsor Community Collaborative
Wes Hicks	
Kevin Morse	Windsor Essex County Health Unit
Abdul Naboulsi	
Tom Schnekenburger	University of Windsor
James Summerdyk	
Const. Colin Wemyss	Windsor Police Services

Progress Reports

Progress reports were prepared at key points in the development of the Vision Zero Action Plan, as specified in the Vision Zero Policy.

Table 10: Progress Reports

Report Number & Title	Report Focus	Meeting Date	
		Environment, Transportation & Public Safety Standing Committee	City Council
S 92/2021 Vision Zero Action Plan Development - Progress Report #1	Proposed Strategic Priorities	Oct. 27, 2021	Nov. 15, 2021
S 87/2022 Vision Zero Action Plan Development - Progress Report #2 - City-Wide	Proposed Recommended Initiatives	Jul. 27, 2022	Sep. 6, 2022

2. Strategic Priorities

Strategic priorities were developed based on the trends and patterns noted in Section 2 and Vision Zero principles. The proposed strategic priorities are grouped into themes as summarized in Table 1.

Table 11: Themes and Strategic Priorities

Theme	Strategic Priority
1: Driver Behaviours	1A: Vehicle Speeds
	1B: Drug and Alcohol Impairment
	1C: Inattentive Driving
	1D: Failing to Yield at Intersections
2: Road User Types	2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)
	2B: Data Gaps – People
3: Locations and Infrastructure	3A: High Injury Corridors
	3B: Signalized Intersections
4: Process Improvements	4A: Improved Data Sources and Information Sharing
	4B: Design Standards and Best Practices

Each strategic priority is discussed in further detail below.

Theme 1: Driver Behaviours

Priority 1A: Vehicle Speeds

For 2015-2019, the driver actions “exceeding speed limit,” “speed too fast for conditions,” or “lost control” were identified in 29% of fatal and major injury collisions. Additionally, impact speed plays a major role in collision severity regardless of the driver action(s) that contributed to the collision. For these reasons, vehicle speed is identified as a key strategic priority for the Vision Zero Action Plan.

Priority 1B: Drug and Alcohol Impairment

For 2015-2019, alcohol-related driver conditions (had been drinking, ability impaired – alcohol, ability impaired – alcohol over 0.08) were identified in 12% of fatal and major injury collisions. Alcohol-related driver conditions were the most common non-normal driver condition in fatal

and major injury collisions. They are also markedly over-represented in fatal and major injury collisions: alcohol-related driver conditions were present in only 1.8% of collisions overall. During consultation with the Vision Zero Stakeholder Group, the representatives of both Windsor Regional Hospital and the Windsor Police Service both noted that a significant number of the severe collisions that both organizations respond to involve impairment by drugs (either individual drugs or combinations of drugs) or drugs combined with alcohol. For this reason, this strategic priority was expanded from addressing only alcohol impairment to include also drug impairment.

Priority 1C: Inattentive Driving

For 2015-2019, the driver condition “inattentive” was identified in 10% of fatal and major injury collisions.

Priority 1D: Failing to Yield at Intersections

Motor vehicles failing to properly yield right-of-way at intersections or disobeying traffic controls (especially red light running) was identified as an issue of concern in both the overall review of fatal and major injury trends as well as the systematic collision reviews for all three vulnerable road user groups (pedestrians, motorcyclists, and cyclists).

For 2015-2019, “improper turn,” “failed to yield right-of-way,” and “disobeyed traffic control” were identified in 35% of fatal and major injury collisions.

Theme 2: Road User Types

Priority 2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)

Typically, pedestrians, cyclists and motorcyclists are identified as vulnerable road users. For 2015-2019, these groups are involved in 5% of collisions, but represent 46% of fatalities and major injuries, as shown in Table 2. As a strategic priority, focusing on these vulnerable road users is recommended.

Table 12: Fatalities, Major Injuries and Total Collisions by Road User Category (2015-2019) [Note 1]

Road User Category	Fatalities and Major Injuries		Collisions (All Severities)		Collisions per Fatality or Major Injury <i>On average, how many collisions would we have to prevent to prevent 1 fatality or major injury?</i>
	Number	Percentage	Number	Percentage	Ratio
Pedestrians	38	20%	435	2%	11.4
Motorcyclists [Note 2]	30	16%	202	1%	6.7
Cyclists [Note 3]	17	9%	412	2%	24.2
Hangers-On [Note 4]	1	1%	3	0%	3.0
All Other Categories	100	54%	21,032	95%	210.3
Total	186		22,084		118.7

Notes:

-
1. Values in this table reflect corrections resulting from the detailed review carried out for the 2019 Road Safety Report. As a result, some values vary slightly from the version of this table presented to the Vision Zero Stakeholder Group.
 2. Includes motorcycle passengers and moped riders/passengers
 3. Includes bicycle passengers and e-bike riders/passengers
 4. “Hangers-on”: persons riding on the outside of a vehicle or being pulled by a vehicle.

Priority 2B: Data Gaps – People

To ensure compliance with applicable privacy laws, personally identifying information is redacted from the MVA reports used for the analysis to date. Because of this, there is limited information currently available to help understand key questions related to road safety in Windsor:

- Are there patterns or trends based on where people involved in fatal and major injury collisions work or live (as opposed to where the collision occurred) that should inform the Vision Zero Action Plan?
- How are social determinants of health related to road safety outcomes in Windsor?
- How much of a role do repeat high-risk offenders play in Windsor’s fatal and major injury collisions?
 - Certain other jurisdictions have found that a small number of high-risk drivers are disproportionately involved in high-risk driving behaviour (e.g. impaired driving or driving under suspension) and severe collisions.
- What proportion of the people involved in fatal and major injury collisions had previous interactions with police, social services, or the health care system?
 - Certain other jurisdictions have identified these interactions as opportunities for interventions to address ongoing behaviours that may lead to severe collisions (e.g. impaired driving).

Addressing these data gaps is identified as a priority. However, further dialogue with other agencies and departments, including WPS, Social Services, and Windsor Regional Hospital, will be needed to determine how these data gaps can be addressed while still complying with applicable law.

During consultation with the Vision Zero Stakeholder Group, the potential for data-sharing agreements between agencies responsible for responding to collisions (e.g. emergency services and Windsor Regional Hospital) and agencies responsible for road safety interventions (e.g. the Corporation and Windsor Police Service) was suggested. Administration will consult with these agencies to determine whether any new data-sharing programs can be included as recommended initiatives in the Vision Zero Action Plan. In addition, 2022 budget submission will include recommendations to advance the City’s data analytics capacity and capability.

Theme 3: Locations and Infrastructure

Priority 3A: High Injury Corridors

The following locations were identified as high injury corridors and should be considered higher priority when implementing the Vision Zero Action Plan:

- Pedestrian collisions:
 - Tecumseh Road East (Jefferson to Forest Glade Drive)
 - Wyandotte Street (Ouellette to Chilver)
- Cyclist collisions:
 - Wyandotte Street (Pelissier to Parent)
- Motor vehicle-only collisions:
 - E.C. Row Expressway (Howard to Banwell)
 - Wyandotte Street (Pelissier to Gladstone)

Priority 3B: Signalized Intersections

For 2015-2019, signalized intersections were the location type with the largest proportion of fatal and major injury collisions for all road user groups except motorcyclists:

- Motor vehicles (excluding motorcycles): 38%
- Pedestrians: 33%
- Cyclists: 29%
- Motorcyclists: 28%
 - Note: for motorcyclists, the location type with the largest proportion of fatal and major injury collisions was unsignalized intersections (34%)

For this reason, signalized intersections are recommended to be priority locations for implementing the Vision Zero Action Plan.

Priority 3C: Pedestrians Crossing Mid-block

For 2015-2019, 28% of pedestrian fatalities and major injuries occurred at midblock locations where the pedestrian was crossing the roadway. This represents the largest group of pedestrian collisions apart from signalized intersections (addressed with Priority 3A, above).

Theme 4: Process Improvements

Priority 4A: Improved Data Sources and Information Sharing

Improving and speeding up the exchange of road safety data between departments and agencies is identified as a strategic priority, particularly with regard to two initiatives that have already been discussed or have recently been launched:

- **Fatal collision review team:** initial discussions have occurred about creating a fatal collision review team that would be activated in the event of a fatal collision. This multi-

disciplinary team would review available information quickly after a fatal collision with the aim of identifying improvements that could be made in response.

- **Ford Safety Insights (see note below):** this tool maps out anonymized safety-related data from Ford connected vehicles (e.g. harsh braking events, lane departure warnings, ABS activations) to identify hot spots. This system has the potential to provide rapid feedback on the effectiveness of road safety countermeasures.

Note: after the Vision Zero strategic priorities were identified in Progress Report 1, Ford announced that they would be discontinuing their Safety Insights product. City Administration is currently seeking other products that accomplish similar goals – i.e. providing quick feedback on the effectiveness of safety improvements.

Priority 4B: Design Standards and Best Practices

To ensure that future infrastructure is aligned with Vision Zero goals, reviewing and updating design standards and best practices is recommended as a strategic priority.

One action related to this priority – development of a Complete Streets Policy – was identified and committed to through *Walk Wheel Windsor*, Windsor’s Active Transportation Master Plan. Further to this, it will be important to provide a process that allows the City’s standards to be updated to reflect road safety “lessons learned” on an ongoing basis.

3. Recommended Initiatives

Recommended initiatives build on the strategic priorities and fall into two categories:

1. **Inventory of Existing Road Safety Initiatives:** this component involved cataloguing existing programs – regardless of agency or organization – that address the Vision Zero strategic priorities. This inventory serves as a foundation for new initiatives to build upon, and also provides insight into gaps between current road safety programs and a Vision Zero approach focused on all of the Vision Zero strategic priorities.
2. **New Initiatives:** this component involved identifying additional initiatives that could be undertaken to address the Vision Zero strategic priorities. Except as noted, new initiatives were focused specifically on areas of City responsibility.

Inventory of Existing Road Safety Initiatives

Table 13: Existing Road Safety Initiatives

Existing Initiative	Lead Agency or City Department
<i>Enforcement and Emergency Response</i>	
Traditional Enforcement	Windsor Police Service
High Visibility Enforcement (HVE)	Windsor Police Service
Selective Traffic Enforcement Program (STEP)	Windsor Police Service
Road Watch	Windsor Police Service
Report Impaired Driving (RID) program	MADD Windsor Essex County Windsor Police Service
Emergency response to collisions	Essex Windsor EMS Windsor Fire & Rescue Services Windsor Police Service Windsor Regional Hospital
<i>City Programs and Policies</i>	
Traffic Calming Policy	City – Transportation Planning
Community Safety Zone Policy	City – Transportation Planning
Radar Trailer Program	City – Traffic Operations
School Neighbourhood Policy	City – Transportation Planning
Bikeways Development Project	City – Transportation Planning
Pedestrian Generator Sidewalk Program	City – Operations
Pedestrian Safety Improvement Program	City – Engineering
Intersection Improvements Program	City – Engineering
Audible/ accessible pedestrian signal program	City – Traffic Operations
Pedestrian crossover program	City – Transportation Planning

Existing Initiative	Lead Agency or City Department
Winter maintenance program	City – Operations
Pavement marking maintenance program	City – Traffic Operations
Sign maintenance program	City – Traffic Operations
Sight line clearing at intersections	City – Traffic Operations
Before-after analysis of road safety countermeasures	City – Transportation Planning
Red light cameras	City – Traffic Operations
Vehicle operator training	City – Human Resources Transit Windsor
Periodic driver’s abstract review	City – Human Resources Transit Windsor
Collision Review Group (for collisions involving City vehicles)	City – Fleet Review Committee
Fleet vehicle standard development	City – Fleet Review Committee
<i>Education Programs</i>	
Children’s Road Safety Programs	Safety Village Bike Windsor Essex
PARTY (Prevent Alcohol and Risk-related Trauma in Youth) Program	Windsor Regional Hospital

Table 14 provides a summary of existing initiatives that address the Vision Zero Strategic Priorities. Abbreviations used in the table are as follows:

- EWEMS: Essex Windsor EMS
- WFRS: Windsor Fire and Rescue Services
- WPS: Windsor Police Service
- WRH: Windsor Regional Hospital

Table 14: Summary of Existing Initiatives

Existing Initiative	Lead Agency or City Dept.	Theme 1: Driver Behaviours				Theme 2: Road User Types		Theme 3: Locations and Infrastructure			Theme 4: Process Improvements	
		1A: Vehicle Speeds	1B: Drug and Alcohol Impairment	1C: Inattentive Driving	1D: Failing to Yield at Intersections	2A: Vulnerable Road Users	2B: Data Gaps – People	3A: High Injury Corridors	3B: Signalized Intersections	3C: Pedestrians Crossing Mid-block	4A: Improved Data Sources and Information Sharing	4B: Design Standards and Best Practices
Enforcement and Emergency Response												
Traditional Enforcement	WPS	X	X	X	X	X		X	X			
High Visibility Enforcement (HVE)	WPS	X	X	X	X	X		X	X			
Selective Traffic Enforcement Program (STEP)	WPS	X	X	X	X	X		X	X			
Road Watch	WPS	X	X	X	X	X						
Report Impaired Driving (RID) program	MADD Windsor Essex County WPS		X									
Emergency response to collisions	EWEMS WFRS WRH WPS	<i>Mitigation measure for all collision types</i>										
City Programs and Policies												
Traffic Calming Policy	City – Transportation Planning	X				X				X		

Existing Initiative	Lead Agency or City Dept.	Theme 1: Driver Behaviours				Theme 2: Road User Types		Theme 3: Locations and Infrastructure			Theme 4: Process Improvements	
		1A: Vehicle Speeds	1B: Drug and Alcohol Impairment	1C: Inattentive Driving	1D: Failing to Yield at Intersections	2A: Vulnerable Road Users	2B: Data Gaps – People	3A: High Injury Corridors	3B: Signalized Intersections	3C: Pedestrians Crossing Mid-block	4A: Improved Data Sources and Information Sharing	4B: Design Standards and Best Practices
Community Safety Zone Policy	City – Transportation Planning	X			X	X		X	X			X
Radar Trailer Program	City – Traffic Operations	X										
School Neighbourhood Policy	City – Transportation Planning					X						X
Bikeways Development Project	City – Transportation Planning					X		X	X			
Pedestrian Generator Sidewalk Program	City – Operations					X		X	X	X		
Pedestrian Safety Improvement Program	City – Engineering					X						
Intersection Improvements Program	City – Engineering	X			X	X		X	X			

Existing Initiative	Lead Agency or City Dept.	Theme 1: Driver Behaviours				Theme 2: Road User Types		Theme 3: Locations and Infrastructure			Theme 4: Process Improvements	
		1A: Vehicle Speeds	1B: Drug and Alcohol Impairment	1C: Inattentive Driving	1D: Failing to Yield at Intersections	2A: Vulnerable Road Users	2B: Data Gaps – People	3A: High Injury Corridors	3B: Signalized Intersections	3C: Pedestrians Crossing Mid-block	4A: Improved Data Sources and Information Sharing	4B: Design Standards and Best Practices
Audible/ accessible pedestrian signal program	City – Traffic Operations					X		X	X			
Pedestrian crossover program	City – Transportation Planning					X		X		X		
Winter maintenance program	City – Operations				X							
Pavement marking maintenance program	City – Traffic Operations				X	X			X			
Sign maintenance program	City – Traffic Operations	X			X	X						
Sight line clearing at intersections	City – Traffic Operations				X	X						
Before-after analysis of road safety countermeasures	City – Transportation Planning										X	X
Red light cameras	City – Traffic Operations				X			X	X			

Existing Initiative	Lead Agency or City Dept.	Theme 1: Driver Behaviours				Theme 2: Road User Types		Theme 3: Locations and Infrastructure			Theme 4: Process Improvements	
		1A: Vehicle Speeds	1B: Drug and Alcohol Impairment	1C: Inattentive Driving	1D: Failing to Yield at Intersections	2A: Vulnerable Road Users	2B: Data Gaps – People	3A: High Injury Corridors	3B: Signalized Intersections	3C: Pedestrians Crossing Mid-block	4A: Improved Data Sources and Information Sharing	4B: Design Standards and Best Practices
Vehicle operator training	City – HR Transit Windsor	X		X	X	X						
Periodic driver's abstract review	City – HR Transit Windsor	X	X	X	X	X						
Collision Review Group (for collisions involving City vehicles)	City – Fleet Review Committee	X		X	X	X						
Fleet vehicle standard development	City – Fleet Review Committee											X
Educational Programs												
Children's Road Safety Programs	Safety Village Bike Windsor Essex					X						
PARTY (Prevent Alcohol and Risk-related Trauma in Youth) Program	WRH		X									

Future Road Safety Initiatives

A number of new City road safety initiatives are already planned, as summarized in Table 3. These initiatives have been incorporated into the overall list of recommended initiatives for the Vision Zero Action Plan.

Table 15: Future Road Safety Initiatives – Already Planned

Number	Planned Initiative	Lead Agency or City Department
1	Develop and Implement a Complete Streets Policy	City – Transportation Planning
2	Construct Roadway Capital Projects (for certain corridors)	City – Engineering City – Transportation Planning
3	Obtain Collision Data through Provincial ARIS System	City – Transportation Planning
4	Continue to Implement the Transit Master Plan	Transit Windsor
5	Review Yellow and All-Red Intervals for Traffic Signals	City – Traffic Operations
6	Install Retroreflective Backboards for Traffic Signals	City – Traffic Operations
7	Increase Winter Roadway Maintenance	City – Operations
8	Driver Simulation Training for Commercial Motor Vehicle Operators	City – Human Resources
9	Commercial Motor Vehicle Driver Evaluation by Independent Party	City – Human Resources

A list of potential new Vision Zero initiatives was presented to the Vision Zero Task Force and Vision Zero Stakeholder Group, then revised based on feedback received. The initiatives considered not only the City’s role as a road authority, but also its role as a fleet operator, land development authority, provider of social services, and its other functions and responsibilities.

These varied roles provide a wide range of ways in which the City of Windsor can exert influence to encourage a culture of road safety throughout the region and beyond.

New recommended initiatives are summarized in Table 4; initiatives identified by the Stakeholder Group as especially high priority are highlighted.

Table 16: Future Road Safety Initiatives – Recommended

Number	Recommended Initiative <i>(highlighting indicates initiatives identified by members of the Stakeholder Group as high priority)</i>	Lead Agency or City Department
10	Conduct Road Safety Audits of Identified High Injury Corridors	City – Transportation Planning
11	Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects	City – Transportation Planning City – Engineering
12	Establish a Fatal Collision Response Team	To be determined
13	Explore Data-Sharing Arrangements Between Agencies	City – Transportation Planning
14	Carry out a Resident Survey	City – Transportation Planning
15	Implement Target Speed Requirements for New Construction and Major Roadway Projects	City – Transportation Planning
16	Implement Speed Limit Reductions – Neighbourhoods	City – Transportation Planning
17	Implement Speed Limit Reductions – Major Streets	City – Transportation Planning
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones	City – Traffic Operations
19	Reduce Progression Speed for Traffic Signal Coordination	City – Traffic Operations
20	Carry out Education Campaigns	City – Transportation Planning
21	Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions	City – Transportation Planning
22	Include Collision History as a Factor in Prioritizing Capital Projects	City – Engineering City – Operations
23	Review Official Plan and Zoning By-laws for Vision Zero Opportunities	City – Planning City – Transportation Planning
24	Review Design Standards and Development Manual for Vision Zero Opportunities	City – Engineering City – Transportation Planning
25	Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review	City – Transportation Planning
26	Develop Safety Performance Functions	City – Transportation Planning
27	Implement Automated Speed Enforcement	City – Traffic Operations
28	Install Transverse Rumble Strips at Select Locations	City – Transportation Planning

Number	Recommended Initiative <i>(highlighting indicates initiatives identified by members of the Stakeholder Group as high priority)</i>	Lead Agency or City Department
29	Implement a Parking Ticket Forgiveness Program to Target Impaired Driving	City – Transportation Planning
30	Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events	Transit Windsor City – Special Event Resource Team
31	Support the Development of a “Safe Ride Home” Service	To be determined
32	Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections	City – Traffic Operations
33	Provide Ladder Crosswalk Markings at Signalized Intersections	City – Traffic Operations
34	Implement Fully Protected Intersections	City – Transportation Planning City – Engineering
35	Implement Leading Pedestrian Intervals	City – Traffic Operations
36	Install Pedestrian Countdown Signals	City – Traffic Operations
37	Implement Hardened Centrelines at Intersections with High Speed Left Turns	City – Transportation Planning
38	Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects	City – Engineering
39	Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects	City – Engineering
40	Implement a Road Diet Program	City – Engineering City – Transportation Planning
41	Develop a Comprehensive GIS-based Collision Information System	City – Transportation Planning
42	Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases & Leases	City – Fleet Review Committee

Initiative 1: Develop and Implement a Complete Streets Policy

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block 4B: Design Standards and Best Practices

“Complete Streets are streets that are safe for all users, regardless of age, ability, income, race, ethnicity, or mode of travel. By using a Complete Streets approach to designing road networks, we can create spaces that allow all users to thrive — not only motorists.”

- Complete Streets for Canada

The following strategy and actions from the Active Transportation Master Plan, *Walk Wheel Windsor*, relate to Complete Streets:

- Strategy 2A: Develop Complete Streets
 - Action 2A.1: Develop And Adopt A Complete Streets Policy And Design Guidelines
 - Action 2A.2: Follow Complete Street Design Principles In All New Development And Road Projects

A Windsor Complete Streets Policy is currently under development.

Developing and implementing a Complete Streets Policy will support Vision Zero goals by:

- Identifying target speeds for all street types and implementing features that discourage drivers from travelling faster than the target speed.
- Ensuring that all users are accommodated in the right-of-way appropriately, comfortably and safely.

The Complete Streets Policy is intended as a City-wide policy, but high injury corridors could be prioritized for implementation.

Initiative 2: Construct Roadway Capital Projects (for certain corridors)

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block

For some high injury corridors, there are capital projects in the current capital budget that will address the current collision patterns:

Table 17: Current Capital Projects for High Injury Corridors

High Injury Corridor	Capital Project
Tecumseh Road East (Jefferson to Forest Glade)	Tecumseh Road East Infrastructure Improvements (ECP-005-07)
EC Row Expressway (Howard to Banwell)	EC Row Expressway Environmental Assessment (Transportation Planning Environmental Study Reports – OPS-009-07)

Initiative 3: Obtain Collision Data through Provincial ARIS System

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	4A: Improved Data Sources and Information Sharing

Currently, City staff obtain collision data from the Windsor Police Service's Collision Reporting Centre contractor. There are issues with this current approach:

- Police resources involved in manually redacting collision reports to remove personally identifying information are considerable. Because of this, the lag between when the collision occurs and when the collision data is provided to City staff is significant: the process typically takes at least several months and often takes more than a year.
- Collision reports prepared by other police agencies are not reflected in the collision data received by City staff. Collisions where another police force responds, even if they occur on Windsor streets, are not reflected in the collision data currently received. This has led to concerns that the collision database may not provide a full picture of the collisions occurring on City streets, particularly at intersections along the City boundary, where OPP or LaSalle Police may be the first police force to respond to some collisions.

All police forces in Ontario are required to transmit all collision reports to the Province. The Ontario Ministry of Transportation has recently made collision data available to municipalities

through its ARIS (Authorized Requestor Information Service) system. City staff are actively pursuing access to collision data through the ARIS system. Anticipated benefits of this new approach:

- Much quicker access to collision data after a collision: the ARIS service standard is to make the collision report available within four weeks of the collision.
- Collision data from all police forces will be available, ensuring that City staff have a full picture of the collisions occurring on City streets.

Initiative 4: Continue to Implement the Transit Master Plan

Lead Agency/Department	Transit Windsor
Strategic Priorities Addressed	1B: Drug and Alcohol Impairment 1C: Inattentive Driving

The 2019 Transit Master Plan, *More than Transit*, provides a long-term vision to grow and improve transit service in Windsor. Increasing the convenience and appeal of transit as a travel mode is complementary to Vision Zero goals in many ways; in particular, providing an alternative to driving a motor vehicle will help to directly address the safety issues caused by driver impairment and inattentive driving by providing these road users with another travel mode besides driving.

Initiative 5: Review Yellow and All-Red Intervals for Traffic Signals

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 3A: High Injury Corridors 3B: Signalized Intersections

Increasing the length of yellow and all-red intervals at signals can be an effective collision countermeasure, particularly for right angle collisions. In the short term, Traffic Operations will be carrying out a review of their yellow and all-red interval lengths against Ontario Traffic Manual guidelines to determine if adjustments are needed.

Initiative 6: Install Retroreflective Backboards for Traffic Signals

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 3B: Signalized Intersections

Retroreflective backboards are included in the US Federal Highway Administration’s (FHWA) list of “Proven Safety Countermeasures;” the FHWA notes that they can reduce total collisions at a signalized intersection by up to 15%. Retroreflective backboards help to improve driver compliance with traffic signals by making them more conspicuous in both daytime and nighttime conditions, as can be seen in Figure 3.



Figure 3: Retroreflective Backboards (source: Virginia DOT / FHWA)

Traffic Operations has installed retroreflective backboards at some intersections as a pilot measure, and will be implementing them City-wide at all traffic signals over time. Currently, the plan is to install retroreflective backboards at new and reconstructed signals.

Initiative 7: Increase Winter Roadway Maintenance

Lead Agency/Department	Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users

Operations is currently planning to bring forward a budget issue to the 2023 budget recommending increased levels of winter roadway maintenance (e.g. salting and plowing). This measure will help to address collisions involving failing to yield at intersections by improving pavement friction under existing conditions, and vulnerable road user collisions by ensuring that painted and buffered bicycle lanes are kept clear during winter conditions.

Initiative 8: Driver Simulation Training for Commercial Motor Vehicle Operators

Lead Agency/Department	Human Resources
Strategic Priorities Addressed	1A: Vehicle Speeds 1C: Inattentive Driving 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users

This measure, aimed at improving the City’s Commercial Vehicle Operator Registration rating, will involve training the City’s commercial motor vehicle drivers in a simulator. The training will focus on spatial awareness, with the goal of reduced collision rates for City vehicles.

Initiative 9: Commercial Motor Vehicle Driver Evaluation by Independent Party

Lead Agency/Department	Human Resources
Strategic Priorities Addressed	1A: Vehicle Speeds 1C: Inattentive Driving 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users

This measure, aimed at improving the City’s Commercial Vehicle Operator Registration rating, will involve contracting with an outside, independent service provider to carry out driver evaluation of the City’s commercial motor vehicle drivers.

Initiative 10: Conduct Road Safety Audits of Identified High Injury Corridors

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

Road safety audits for each of the identified high injury corridors will identify road safety issues that are specific to these areas. The key deliverable for each road safety audit will be a report including recommended countermeasures.

The identified high injury corridors are as follows:

- Motor vehicle collisions:
 - E.C. Row Expressway (Howard to Banwell)
 - Wyandotte Street (Pelissier to Gladstone)
- Pedestrian collisions:
 - Tecumseh Road East (Jefferson to Forest Glade Drive)
 - Wyandotte Street (Ouellette to Chilver)
- Cyclist collisions:
 - Wyandotte Street (Pelissier to Parent)

Initiative 11: Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects

Lead Agency/Department	Transportation Planning Engineering
Strategic Priorities Addressed	1A: Vehicle Speeds 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block

For major roadway projects, such as widenings and new streets, a preliminary design is selected and developed through the environmental assessment process. These preliminary designs are used as the basis for detailed design and construction.

These preliminary designs are often prepared well in advance of construction, and detailed design and construction of the preliminary design from a single environmental assessment can take multiple phases over several years. Windsor has a number of preliminary designs that have not yet proceeded to detailed design, or with phases that have not proceeded to detailed design.

Aspects of the designs that are expected to be of particular importance to this review:

- Lane widths
- Horizontal and vertical alignment
- Curb radii
- Cycling facilities
- Pedestrian crossings
- Intersection control

Initiative 12: Establish a Fatal Collision Response Team

Lead Agency/Department	To Be Determined
Strategic Priorities Addressed	4A: Improved Data Sources and Information Sharing

Certain other municipalities have successfully implemented fatal collision response teams to allow for rapid response to fatal collisions. These teams are typically made up of members from:

- Emergency response agencies (e.g. Police, Fire, EMS)
- Medical trauma care providers (e.g. hospitals)
- Agencies responsible for investigating collisions (typically Police)
- Agencies and departments responsible for carrying out road safety audits (typically the municipal Transportation Planning Department)

- Agencies and departments responsible for designing and maintaining transportation infrastructure and implementing transportation policy (e.g. Operations, Engineering, Traffic Operations, Transportation Planning)

In the Council resolution adopting the Vision Zero Policy (CR82/2020), Council requested that Administration provide information related to developing a fatal collision response team.

This initiative would entail setting up a multi-disciplinary, multi-agency fatal collision response team that would be activated as soon as possible after a fatal collision. The purpose of the committee would be to allow (within the limits of applicable legislation) a quick and free exchange of information in order to rapidly identify and address factors that could help to prevent or reduce the severity of future severe collisions.

Initiative 13: Explore Data-Sharing Arrangements Between Agencies

Lead Agency/Department	To be determined
Strategic Priorities Addressed	2B: Data Gaps – People 4A: Improved Data Sources and Information Sharing

Currently, information related to collisions and road safety is compartmentalized across several agencies:

- Emergency services agencies (Police, Fire, EMS) prepare their own records related to their response to collisions;
- EMS and hospital staff have records on injuries sustained by victims and the treatment they receive;
- Police have primary responsibility for investigating collisions, and carry out detailed investigations and collision reconstructions following severe collisions;
- Police, social services agencies, and medical providers may have records related to prior points of contact and interventions involving the people who were later in fatal and major injury collisions; and
- City departments have traffic data and information about road infrastructure design, as well as information on detailed road safety audits (when carried out).

In most cases, this information is not shared beyond the originating agency; notable exceptions include:

- Windsor Police Services provides the City of Windsor with redacted MVA reports to use as the data source for the City’s collision database, and

- City staff provide speed data to Windsor Police Services as it is collected, and consult with Windsor Police Services when road safety audits identify issues that can be addressed by enforcement.

While some of this lack of sharing of information is due to legal requirements for privacy and confidentiality, there may be some opportunities to share information – particularly anonymized or aggregated data – to inform road safety-related decisions of these agencies while still complying with relevant laws.

This initiative would entail reaching out to the departments and agencies that collect data related to road safety issues and determining information sharing arrangements that would be:

- Compliant with relevant law,
- Useful for informing road safety decisions, and
- Are within the scope of what the agency who is the custodian of the data is willing and able to provide.

Initiative 14: Carry out a Resident Survey

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	2B: Data Gaps – People

While collision data provides a wealth of information that can be used to inform road safety decisions, certain key details are not reflected in collision data, including:

- Locations that road users – particularly vulnerable road users – avoid because of perceived safety issues;
- The *reasons behind* behaviours that lead to increased likelihood or increased severity of collisions, including:
 - Speeding;
 - Inattentive driving;
 - Impaired driving; and
 - Failure to use safety equipment (or failure to use it properly) such as helmets, seat belts, and infant car seats.
- Details that are relevant for policy responses to road safety issues, but either are not collected in MVA reports or, due to privacy laws, cannot be obtained without the consent of the involved parties. Including:
 - How do social determinants of health correlate with road safety outcomes in Windsor?

- What opportunities exist *before* the collision (e.g. previous interactions with law enforcement or social services) to intervene to address risk-taking behaviours that can result in fatal or major injury collisions?

This initiative would entail developing one or more surveys for residents and – to the extent that these individuals can be identified – persons involved in fatal and major injury collisions.

Initiative 15: Implement Target Speed Requirements for New Construction and Major Roadway Projects

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block 4B: Design Standards and Best Practices

Traditionally, streets and highway designs have been based on the concept of **design speed**: all aspects of the design – e.g. sight lines, curve radii, or roadside clear zones – accommodate a vehicle travelling at a speed equal to or greater than the design speed.

Recently, the concept of target speed is coming into broader use as well, though it is not yet incorporated formally into any City of Windsor design standards or best practices. A roadway’s **target speed** is the intended speed for traffic; features of the street – lane widths, “optical width,” curve radii, etc. – are chosen to encourage vehicles to travel no faster than the target speed.

Implementing this recommendation will involve identifying target speeds for each roadway type. This work is planned to be carried out as part of the development of the Complete Streets Policy, but could be accelerated to produce standalone target speed recommendations, which would then be incorporated into the Complete Streets Policy once the policy is completed.

Initiative 16: Implement Speed Limit Reductions - Neighbourhoods

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users

Vehicle speed is a key factor in the severity of a collision. At the same time, the effect of speed limit reductions alone on vehicle speeds is usually minor without physical measures (e.g. traffic calming).

This initiative would entail reducing speed limits in neighbourhoods as follows:

Table 18: Interim and Ultimate Speed Limits – Neighbourhoods

Street Type	Interim Speed Limit (Without Physical Changes to Roadway)	Ultimate Speed Limit (After Physical Changes to Roadway to Reduce Vehicle Speeds)
Local Residential	40 km/h	Target speed [Note 1]
Class 2 Collector in residential areas	40 km/h	Target speed [Note 1]
Class 1 Collector in residential areas	Review case by case	Target speed [Note 1]

Notes:

- Under the initiative “Implement Target Speed Requirements for New Construction and Major Roadway Projects,” above, target speeds by road type would be determined. Once physical measures are installed on a street to encourage the target speed, the speed limit would be reduced to the target speed for the particular street.

There may be certain cases (e.g. school zones or local street bikeways) where a lower interim speed limit may be appropriate; this recommendation is not intended to prohibit enacting lower speed limits than those given in Table 18 where warranted. Streets with existing speed limits lower than the proposed interim speed limit would not have their speed limit increased.

Initiative 17: Implement Speed Limit Reductions – Major Streets

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block

Most fatal and major injury collisions involving vehicle speed occur on higher-order streets and highways, such as arterials and expressways.

This initiative would entail reducing speed limits on major streets as follows:

Table 19: Interim and Ultimate Speed Limits – Major Streets

Street Type	Interim Speed Limit (Without Physical Changes to Roadway)	Ultimate Speed Limit (After Physical Changes to Roadway to Reduce Vehicle Speeds)
Scenic Parkway	40 km/h	Target speed [Note 1]
Local Commercial Industrial	Review case by case	Target speed [Note 1]
Class 1 Collector in non-residential areas	Review case by case	Target speed [Note 1]
Urban Class 2 Arterial	50 km/h	Target speed [Note 1]

Street Type	Interim Speed Limit (Without Physical Changes to Roadway)	Ultimate Speed Limit (After Physical Changes to Roadway to Reduce Vehicle Speeds)
Rural Class 2 Arterial	Review case by case	Target speed [Note 1]
Class 1 Arterial	60 km/h	Target speed [Note 1]
Expressway	No change	Target speed [Note 1]

Notes:

- Under the initiative “Implement Target Speed Requirements for New Construction and Major Roadway Projects,” above, target speeds by road type would be determined. Once physical measures are installed on a street to encourage the target speed, the speed limit would be reduced to the target speed for the particular street.

There may be certain cases (e.g. school zones or local street bikeways) where a lower interim speed limit may be appropriate; this recommendation is not intended to prohibit enacting lower speed limits than those give in Table 19 where warranted. Streets with existing speed limits lower than the proposed interim speed limit would not have their speed limit increased.

Initiative 18: Implement Speed Limit Reductions and Increased Fines – Construction Zones

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users

The Highway Traffic Act and Traffic By-law 9148 allow for temporary reduced speed limits in construction zones, as well as doubling of speeding fines in construction zones. To date, the City of Windsor has only rarely implemented doubled speeding fines or reduced speed limits in construction zones.

This initiative would consist of:

- Installing “fines doubled when workers present” signage for all construction zones as standard practice; and
- Implementing temporary speed limit reductions in construction zones in cases where:
 - The normal design speed of the roadway cannot be maintained during construction,
 - There is the potential for conflicts between traffic and construction vehicles, or
 - A speed limit reduction would provide benefit for worker safety.

Initiative 19: Reduce Progression Speed for Traffic Signal Coordination

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1A: Vehicle Speeds 3B: Signalized Intersections

Traffic signals are coordinated along signalized corridors to provide a “green band” to allow vehicles to proceed along a corridor with a minimal amount of stopping.

Currently, the coordination is done to minimize delay based on current traffic behaviour. In the case of some corridors with high operating speeds, this practice can mean that the progression speed for the green band is higher than the speed limit.

This initiative would involve setting the progression speed used for signal coordination at the speed limit or lower. The effect of this change would be that drivers travelling significantly faster than the speed limit would tend to encounter more red lights, and drivers travelling at the speed limit would stay in the green band and encounter fewer red lights.

Initiative 20: Carry out Education Campaigns

Lead Agency/Department	To be determined
Strategic Priorities Addressed	1A: Vehicle Speeds 1B: Drug and Alcohol Impairment 1C: Inattentive Driving 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users

This initiative would entail education and outreach activities as follows:

Target Group	Campaign Content
Drivers	<ul style="list-style-type: none"> • Messaging aimed at risky driver behaviours, including: <ul style="list-style-type: none"> • Speeding • Drug and alcohol impairment • Inattentive driving and cell phone use • Respecting and watching for vulnerable road users • Establishing positive driver behaviours and attitudes among new drivers (e.g. National Teen Safe Driver Week events).

Target Group	Campaign Content
Vulnerable road users	<ul style="list-style-type: none"> • Encouragement of helmet use for cyclists, motorcyclists, and scooter riders. • Cycling skills training. • Informing cyclists as new all ages and abilities routes are built out. • Commemoration of vulnerable road user crash fatalities, such as the Ride of Silence (third Wednesday in May each year).
Bar and restaurant owners and servers	<ul style="list-style-type: none"> • Messaging aimed at reducing impaired driving. • Information on initiatives aimed at reducing impaired driving (e.g. a safe ride home program, if provided).
General	<ul style="list-style-type: none"> • Commemoration of road crash fatalities generally, such as an event for the National Day of Remembrance for Road Crash Victims (third Sunday in November each year). • Information to the public to build awareness of the Vision Zero Action Plan, its contents, and the reasons behind Vision Zero initiatives.

Initiative 21: Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	2A: Vulnerable Road Users 3A: High Injury Corridors

The prioritization criteria used in *Walk Wheel Windsor*, the Active Transportation Master Plan, are as follows. All criteria are weighted equally:

Table 20: Pedestrian and Cycling Network Prioritization Criteria – Active Transportation Master Plan

	Pedestrian Network	Cycling Network
1	Destination Density	Destination Density
2	Pedestrian Mode Share	Cycling Mode Share
3	Pedestrian Potential	Cycling Potential
4	Equity	Equity
5	Pedestrian Generators – Commercial Areas	Cycling Generators – Commercial Areas
6	Pedestrian Generators – Community Facilities	Cycling Generators – Community Facilities
7	Transit	Transit
8	Road Classification	Bicycle Network Classification

	Pedestrian Network	Cycling Network
9	Network Contribution	Level of Protection
10	Network Need	Network Need
11	Pedestrian Collisions	Cyclist Collisions
12	Traffic Volumes	Traffic Volumes
13	Road Rehabilitation	Road Rehabilitation

Currently, the collision criteria are based on total pedestrian or cyclist collisions only. Collisions are not weighted based on severity.

This initiative would entail:

- Increasing the weighting of pedestrian and cyclist collisions relative to other criteria, and
- Increasing the weighting of fatal and major injury collisions within the collision criteria.

Initiative 22: Include Collision History as a Factor in Prioritizing Capital Projects

Lead Agency/Department	Engineering Operations
Strategic Priorities Addressed	2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

While road safety concerns are considered implicitly to some degree in the prioritization process for capital projects, the City of Windsor has no formal process to give collision history a specific weighting when prioritizing capital projects.

This initiative would entail:

- Determining weightings for safety improvement versus other prioritization factors;
- Determining the history of fatal and major injury collisions in the area of each roadway capital project;
- Identifying the likely safety improvement or collision reduction associated with the capital project.
- Applying this safety improvement – along with other factors – to prioritize capital projects for roadway works.

Initiative 23: Review Official Plan and Zoning By-laws for Vision Zero Opportunities

Lead Agency/Department	Transportation Planning Planning
Strategic Priorities Addressed	4B: Design Standards and Best Practices

A key element of achieving the Vision Zero goal of zero fatal and major injury collisions is speed reduction. Many elements that are addressed by the Official Plan and Zoning By-laws have an impact on vehicle speeds, including:

- “Optical width” of the street between fixed features (e.g. building face, substantial landscaping, fencing) on either side of the street influences the speed at which drivers feel comfortable driving.
- On-street parking: where on-street parking is allowed and actually used, it creates visual “side friction” that helps to encourage drivers to slow down.
- The number of institutional or commercial buildings/driveways along a street segment can suggest to drivers that they are in a pedestrian-oriented zone and cause them to lower their speed.

This initiative would entail developing a set of recommended amendments to the Official Plan and Zoning By-laws intended to encourage lower vehicle speeds. These recommended amendments would be brought forward to Council for approval.

Initiative 24: Review Design Standards and Development Manual for Vision Zero Opportunities

Lead Agency/Department	Transportation Planning Engineering
Strategic Priorities Addressed	4B: Design Standards and Best Practices

New streets and modifications to existing streets are governed by City design standards, Standard Engineering Drawings, Best Practices, and the Development Manual. This initiative would entail reviewing these existing governing documents to ensure that:

- The required characteristics for each road classification (e.g. curve radii and pavement widths) are in accordance with the street’s target speed.
 - Note: developing target speeds by road classification is recommended as a separate initiative.
- The Complete Streets Policy is reflected in City standards and guidelines affecting City streets, and
- Street design aspects that impact the potential for fatal and major injury collisions (e.g. curb radii at intersections) are in compliance with Vision Zero principles.

This review would also consider whether additional standard drawings, best practices, etc., are required for other Vision Zero Action Plan initiatives.

Portions of this initiative would need to follow other work – for instance, a review for compliance with the Complete Streets Policy could not happen until the Complete Streets Policy is prepared and approved – but some aspects of the initiative may be able to proceed immediately.

Initiative 25: Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review

Lead Agency/Department	Transportation Planning Engineering
Strategic Priorities Addressed	2A: Vulnerable Road Users

Currently, transportation impact studies (TISes) are required for development applications (e.g. site plans, rezonings, and Official Plan amendments) if they:

- Are large enough to generate 100 peak hour site trips,
- Include a new connection to an arterial road,
- Have the potential to increase collisions at an existing collision “hot spot,” or
- Have the potential to adversely impact an intersection already experiencing capacity issues.

The standard scope for a TIS includes a discussion of impacts and issues for non-auto modes, but does not require a quantitative review for non-auto modes.

When a TIS is required for a development application, this recommendation would entail requiring the applicant’s consultant to carry out a full multimodal transportation review to ensure that:

- The development will not adversely impact non-auto modes, such as walking, biking, and transit; and
- Appropriate infrastructure to support walking, biking and transit needed to support the development is provided as off-site improvements.

Procedures and criteria for this multimodal review would be identified as part of the Complete Streets Policy.

Initiative 26: Develop Safety Performance Functions

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	4A: Improved Data Sources and Information Sharing 4B: Design Standards and Best Practices

A safety performance function is a regression model used to predict the collision frequency for a particular facility type (e.g. signalized intersections) based on a set of variables. They can be

developed for total collisions or particular collision categories (e.g. cyclist collisions). Safety performance functions can be used in network screening to identify locations that experience a higher-than-expected number of collisions based on their characteristics. They can also be used to predict the safety impact of future changes (e.g. changes in road network due to infrastructure capital projects, or changes in traffic volumes due to land development) in order to identify and prevent potential safety concerns before construction.

Currently, the City of Windsor does not use safety performance functions; all network screening is carried out based on collision rate.

This initiative would entail:

- Identifying a range of safety performance functions to develop;
- Carry out the statistical analysis needed to generate and calibrate the safety performance functions; and
- On an ongoing basis, use these safety performance functions for safety reviews and network screening.

Initiative 27: Implement Automated Speed Enforcement

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users 3A: High Injury Corridors 3C: Pedestrians Crossing Mid-block

The Ontario government recently introduced legislative changes to allow municipalities to implement automated speed enforcement (“photo radar”) in community safety zones and school zones. Council has directed City staff to investigate the feasibility of an automated speed enforcement (ASE) program for Windsor (CR258/2020).

This program would directly address vehicle speeds, which would indirectly address a number of other strategic priorities, particularly vulnerable road users, including pedestrians crossing mid-block.

Most of the high injury corridors meet the criteria in the City’s Community Safety Zone Policy for community safety zones and could be considered for automated speed enforcement. However, technical considerations might make installing speed cameras in some of these areas difficult (e.g. a lack of roadside space to install a pole and camera, or streetscaping obstructing the camera’s field of view).

Key issues to be considered when deciding whether to include this initiative in the Vision Zero Action Plan:

- The experience of other jurisdictions that have implemented automated speed enforcement
- Whether the provincially-mandated processing centre would have capacity to take on a Windsor ASE program, or, alternately, whether it would be feasible for Windsor to set up its own processing centre.

Initiative 28: Install Transverse Rumble Strips at Select Locations

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 1D: Failing to Yield at Intersections

Transverse rumble strips are grooves cut across the road surface that encourage speed reduction by generating an uncomfortable noise and vibration when vehicles drive over them at high speed. They are typically used in rural contexts for alerting drivers to the need to reduce their speed, typically for a stop-controlled intersection or sharp curve ahead. An example installation is shown in Figure 4.



Figure 4: Transverse Rumble Strip Example (Source: Neal Hawkins/Iowa DOT)

Transverse rumble strips are effective at reducing vehicle speeds, but they can create a number of issues:

- Associated noise can create a disturbance for nearby residents.
- They can be difficult for cyclists to traverse.
- Water and ice can pond in the grooves.
- Cutting rumble strips into the road surface can reduce pavement life.

This initiative would entail identifying locations to install transverse rumble strips as a pilot program. The top candidates for this program would be the approaches to rural intersections that have a history of stop sign non-compliance or a collision pattern that suggests that stop sign non-compliance may be occurring.

Initiative 29: Implement a Parking Ticket Forgiveness Program to Target Impaired Driving

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1B: Drug and Alcohol Impairment

This initiative would entail creating a framework that would allow for a parking ticket to be forgiven if an intoxicated person chose not to drive because they were impaired and instead used another way to get home.

Details of the program that would need to be resolved before implementation:

- How would it be determined that the person was intoxicated and got a safe way home?
- Where and when would the program be offered? What would the limits on the program be?

Initiative 30: Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events

Lead Agency/Department	Transit Windsor Special Event Resource Team
Strategic Priorities Addressed	1B: Drug and Alcohol Impairment

Under this initiative, attendees of special events oriented around drinking alcohol would be provided with a ticket or voucher (e.g. their event ticket) which they could use for a transit ride to and from the event at no additional charge to the attendee.

Options for funding this initiative:

- Fees collected from event organizers as a condition of their special event permit, or
- City funding (in whole or in part) as a budget item.

In the case of events that take place in areas not served by Transit Windsor or taking place outside Transit Windsor service hours, the event organizer would be required to make alternate arrangements to ensure that event attendees have travel options other than personal cars, such as:

- Taxi fares included in the event admission charge, or
- Chartered buses or vans to provide shuttle service to and from a transit terminal.

Initiative 31: Support the Development of a “Safe Ride Home” Service

Lead Agency/Department	To be determined
Strategic Priorities Addressed	1B: Drug and Alcohol Impairment

In certain other municipalities, “safe ride home” services such as Operation Red Nose/Opération Nez rouge help to deter impaired driving by providing a way for people to get themselves and their vehicles home.

Key questions that would need to be addressed before such a program could be offered in Windsor:

- Who would be responsible for operating the program?
 - In most other jurisdictions, these programs are run by not-for-profit organizations and not by municipal governments directly.
- How would the program be funded?
 - In the case of Operation Red Nose/Opération Nez rouge, the program is funded by a combination of corporate sponsorships, government grants, community donations and user donations. No user fee is charged, but service users have the option of making a voluntary donation.
- When and where should the program operate?
 - Operation Red Nose/Opération Nez rouge operates only in the month of December.

This initiative could entail:

- Canvassing existing not-for-profit organizations to determine interest in operating a safe ride home service
- Encouraging new or existing not-for-profit organizations to launch a safe ride home service by establishing a City grant program for this purpose.

Initiative 32: Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors

Currently, the City of Windsor does not typically paint stop bars or crosswalks at unsignalized intersections. Previously, four options for stop bars at unsignalized intersections have been identified; to date, none of these options have been selected for implementation:

Table 21: Options and Costs for Stop Bars and Crosswalks at Unsignalized Crossings

Option	Annual Cost Increase
1 – All Stop Bars and Crosswalks	\$2,250,000
2 – Collectors and Arterials	\$955,000
3 – Arterials, Scenic Parkway and Multi-Use Trail Crossings Only	\$300,000
4 – Top 30 High Collision Unsignalized Intersections (from 2019 Road Safety Report)	\$25,000

If this initiative is carried forward, it could entail some sort of stop bar and crosswalk pavement marking program; either one of the four options previously identified or an alternate option to implement the pavement markings at a limited number of intersections.

Initiative 33: Provide Ladder Crosswalk Markings at Signalized Intersections

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

High-visibility crosswalk treatments such as ladder crosswalks can help emphasize the potential to drivers of pedestrians at an intersection; this tends to increase driver compliance when yielding to pedestrians.

The Ontario Traffic Manual identifies ladder crosswalks as an optional feature at signalized intersections.

This initiative would entail installing ladder crosswalk markings at a set of signalized intersections to be determined. Pedestrian high injury corridors could be prioritized for ladder crosswalks.



Figure 5: Ladder Crosswalks (Source: City of Hamilton)

Initiative 34: Implement Fully Protected Intersections

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

Protected intersections have been implemented across North America as cities have expanded their protected bikeway networks. Also known as setback or offset intersections, this design keeps bicycles physically separate from motor vehicles up until the intersection, providing a high degree of comfort and safety for people of all ages and abilities. This design can reduce the likelihood of high-speed vehicle turns, improve sightlines, and dramatically reduce the distance and time during which people on bikes are exposed to conflicts. For example, in San Francisco, a protected intersection design resulted in 98% of drivers yielding to people on bikes, and 100% yielding to people walking. A study in New York found that protected intersections had fewer vehicle-bike conflicts than even a dedicated turn lane with a dedicated bike signal phase.

(Source: NACTO)

An example of a protected intersection is provided in Figure 6.

This initiative would entail considering protected intersections in future environmental assessments for roadway projects as appropriate, with the aim of implementing protected intersections at a set of locations.

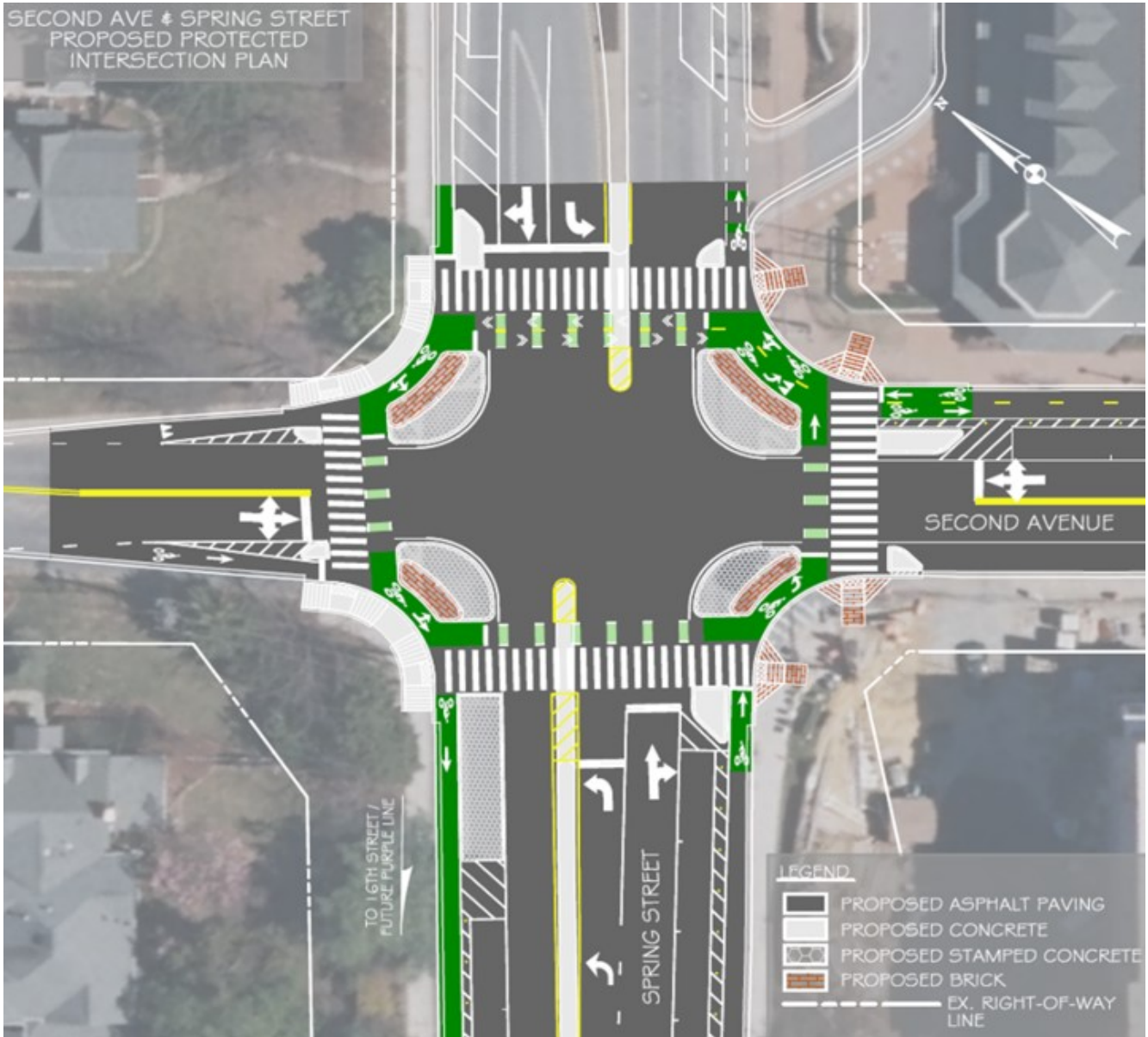


Figure 6: Protected Intersection (Source: Montgomery County Division of Transportation Engineering / Kittelson Associates)

Initiative 35: Implement Leading Pedestrian Intervals

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

With a leading pedestrian interval, the walk signal is activated while the intersection remains in “all red” for vehicles, typically for 3 to 7 seconds. This allows the pedestrians to have a head start on vehicles, putting the pedestrians in a more visible position in the crosswalk before vehicles are released.

In other jurisdictions, leading pedestrian intervals have been found to reduce pedestrian collisions at treated intersections by up to 60%. Nevertheless, there are potential issues related to leading pedestrian intervals:

- Driver unfamiliarity with leading pedestrian intervals – particularly the long “all red” period for vehicles – may lead to misunderstandings of the purpose for the change as well as problems with driver compliance.
- At some intersections, holding vehicles for an additional 3 to 7 seconds per phase would create significant capacity issues, which could result in safety issues in some circumstances (e.g. increased queue spillback leading to increased rear end collisions).

This initiative would entail:

- Identifying candidate intersections,
- Implementing leading pedestrian intervals, and
- An education and outreach program to ensure that drivers and pedestrians are aware of the reasons for the change.

Initiative 36: Install Pedestrian Countdown Signals

Lead Agency/Department	Traffic Operations
Strategic Priorities Addressed	2A: Vulnerable Road Users 3B: Signalized Intersections

Pedestrian countdown displays have been found to provide a safety benefit, particularly in reducing pedestrian collisions. Pedestrian countdown displays are recognized by the Ontario Traffic Manual as optional.

There are issues with their use in some situations, however: most pedestrian countdown displays currently on the market do not communicate with the traffic signal controller, and instead base the countdown time shown on the length of the green interval from the *previous* cycle. Because of this, pedestrian countdown displays work best in cases where phase lengths are steady from cycle to cycle. In cases when phase lengths change significantly from one cycle to the next, the countdown display can show an incorrect time remaining, potentially creating confusion and discomfort for pedestrians.

This initiative would entail identifying intersections where pedestrian countdown displays could be installed, either:

- Locations that already operate with steady phase lengths from cycle to cycle, or

- Locations where the traffic signal timings and phasings could be adapted to suit the limitations of pedestrian countdown displays currently on the market.

Initiative 37: Implement Hardened Centrelines at Intersections with High Speed Left Turns

Lead Agency/Department	Transportation Planning
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections

Centreline hardening involves using features – typically rubber humps or bollards – at major intersections to discourage taking left turns at high speed. These measures improve pedestrian safety by:

- Reducing collision severity by forcing left turning vehicles to travel at lower speeds, and
- Improving pedestrian visibility to drivers by forcing vehicles to approach the crosswalk at a right angle.

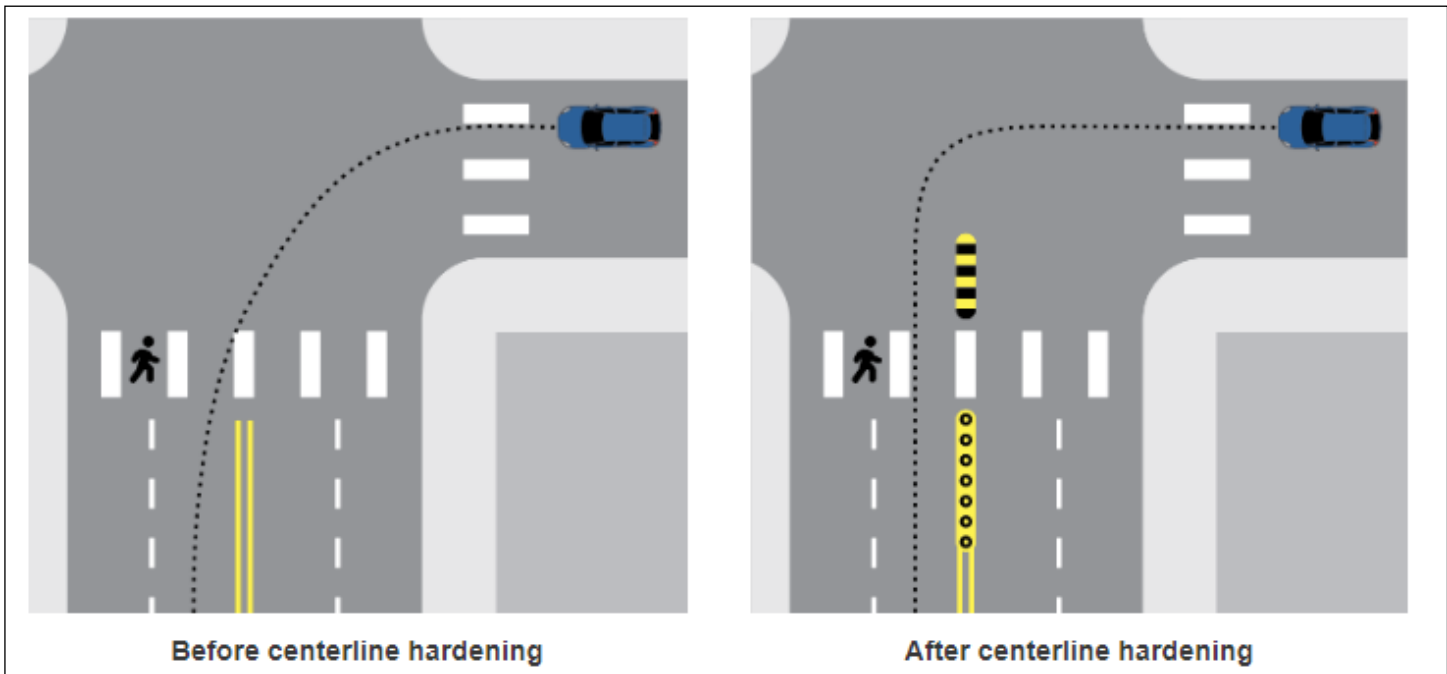


Figure 7: Centreline Hardening Example (source: Insurance Institute for Highway Safety)

Initiative 38: Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects

Lead Agency/Department	Engineering
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 3A: High Injury Corridors 3B: Signalized Intersections 4B: Design Standards and Best Practices

Roundabouts are effective at reducing the severity of intersection collisions, since they virtually eliminate right angle (“T-bone”) and turning collisions, two types of collisions with high injury potential.

Other jurisdictions, particularly the Region of Waterloo, have adopted policies that identify roundabouts as the preferred intersection control type. In that jurisdiction, before other intersection control types are considered, a screening is carried out to confirm that a roundabout is not appropriate.

This initiative would entail adopting a similar policy for Windsor.

Potential issues with this initiative:

- Navigating a roundabout, particularly a multi-lane roundabout, can be uncomfortable for pedestrians and cyclists.
- Visually impaired pedestrians can have more difficulty judging gaps in traffic at a roundabout than at a traffic signal.
- Roundabouts can have negative impacts on their surroundings:
 - Typically, roundabouts need more right-of-way space at the intersection than is needed for a similar signalized intersection.
 - Typically, access controls (e.g. restrictions on driveways) are needed for a longer distance from the intersection for a roundabout than for a signalized intersection.

Initiative 39: Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects

Lead Agency/Department	Engineering
Strategic Priorities Addressed	1A: Vehicle Speeds 1D: Failing to Yield at Intersections 2A: Vulnerable Road Users 3B: Signalized Intersections 4B: Design Standards and Best Practices

Conventional right turn channels can contribute to high vehicle turning speeds and poor visibility of pedestrians, creating the potential for severe collisions.

This initiative would entail adopting a policy or best practice against right turn channels for new construction. For road reconstructions and other major roadway projects, the preference would be to remove existing right turn channels where possible.

In situations where the right turn channel island is required (e.g. when there would be no suitable place for traffic signal poles without the island), a “smart” right turn channel would be acceptable, as shown in Figure 8.

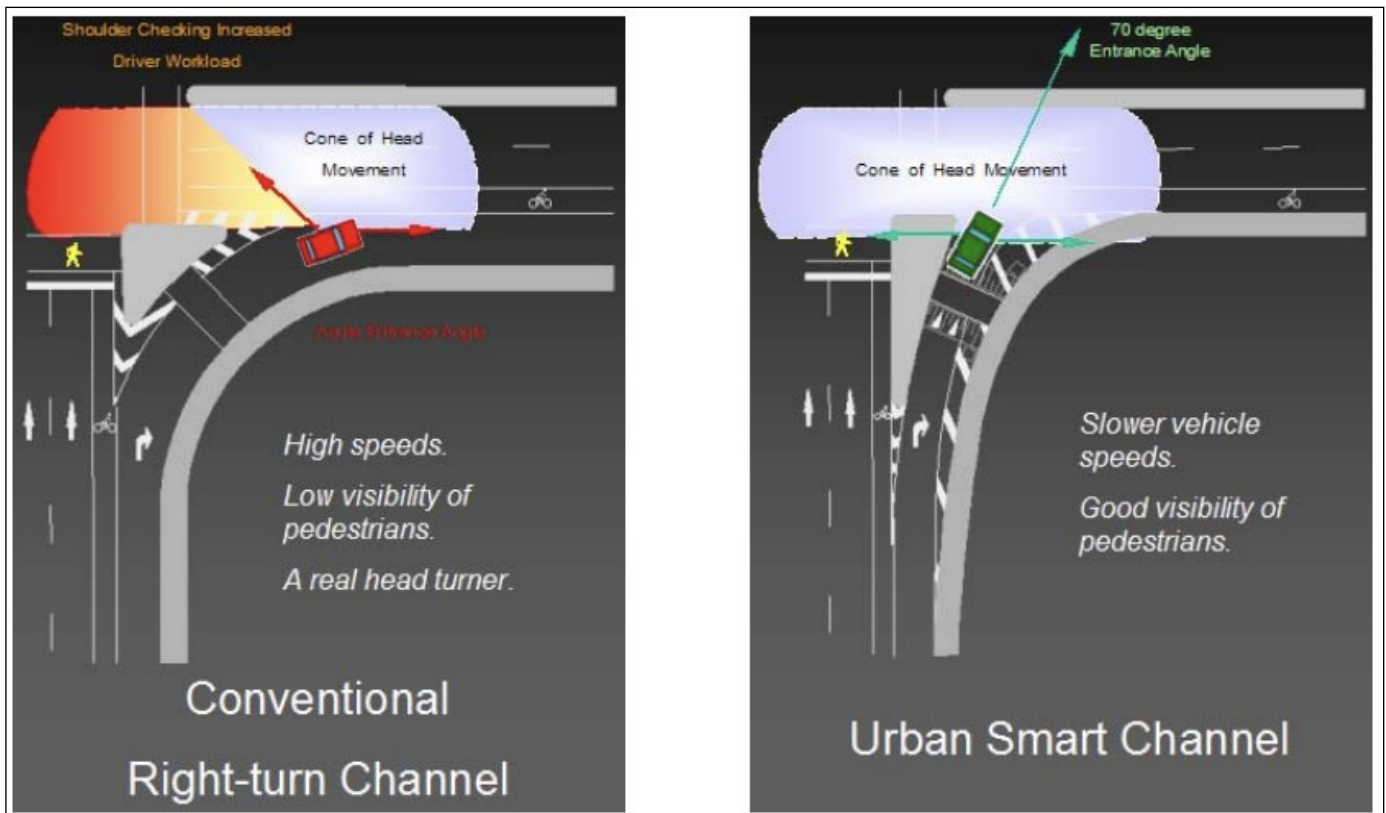


Figure 8: Conventional Right Turn Channel vs. "Smart" Right Turn Channel (source: City of Ottawa)

Initiative 40: Implement a Road Diet Program

Lead Agency/Department	Engineering Transportation Planning
Strategic Priorities Addressed	1A: Vehicle Speeds 2A: Vulnerable Road Users 3A: High Injury Corridors 3B: Signalized Intersections 3C: Pedestrians Crossing Mid-block

A road diet is the reallocation of roadway space to better serve road users, particularly for roads that have significant amounts of excess capacity.

A typical road diet is a “4 to 3” conversion, where a 4-lane undivided street (with 2 lanes in each direction and turns from shared lanes) is restriped so that there is a single lane in each direction and a two-way left turn lane. A recent example of a “4 to 3” conversion in Windsor is Eugenie Street; the layout before and after the road diet can be seen in Figure 9. Depending on turning volumes, a “4 to 3” road diet can often result in negligible decrease in capacity, since providing a two-way left turn lane allows through traffic to flow unimpeded by vehicles stopped waiting for a gap to turn.



Figure 9: Road Diet Example: Eugenie Street

Road diets may also involve reducing the number of excess lanes on a street by physically reducing the pavement width. In these types of road diets, other benefits (e.g. a reduction in paved area resulting in lower flooding risk) can be achieved.

Road diets are effective at reducing speeding, which in turn tends to decrease collision severity, especially for vulnerable road users. The reallocation of roadway width can provide space for measures to improve conditions for vulnerable users, such as bikeway infrastructure or bump-outs or pedestrian refuges to reduce crossing widths. Some road diet types are effective at improving sight lines at signalized intersections.

This initiative would entail identifying candidate locations and then implementing road diets.

Initiative 41: Develop a Comprehensive GIS-based Collision Information System

Lead Agency/Department	Geomatics Transportation Planning
Strategic Priorities Addressed	4A: Improved Data Sources and Information Sharing

*A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data. GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there). This provides a foundation for mapping and analysis that is used in science and almost every industry. GIS helps users understand patterns, relationships, and geographic context. The benefits include improved communication and efficiency as well as better management and decision making.
(Source: ESRI.com)*

The City of Windsor uses GIS extensively and has a significant amount of data in GIS form. Currently, the Windsor Collision Database is a standalone database, not connected to other data sources. This initiative would entail translating data from the collision database into a GIS, which would allow more efficient analysis of collision data to identify collision “hot spots” and City-wide trends.

Having a GIS-based collision information system would also allow for comparisons with other mapped data, which would enable analyses that City staff have not been able to do to date, such as identifying correlations between road safety outcome and neighbourhood characteristics (e.g. social determinants of health), which could inform future road safety policies or outreach programs.

Initiative 42: Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases

Lead Agency/Department	Fleet Transit Windsor Windsor Fire Rescue Service Purchasing
Strategic Priorities Addressed	1D: Failing to Yield at Intersections 2A: Vulnerable Road Users

As the operator of a significant fleet of vehicles, the City of Windsor has the opportunity to directly reduce the likelihood of its own vehicles being involved in a fatal or major injury collision by developing and implementing safety-related criteria for use when purchasing vehicles. In doing so, Windsor may be able to indirectly influence other fleet operators – e.g. other major Windsor employers or other municipalities – to adopt similar measures and provide an indirect safety benefit beyond its own vehicle fleet.

The Fleet Review Committee (a staff committee chaired by the Executive Director of Operations, with representatives from several City departments) reviews and approves standard vehicle features for various vehicle categories in the City fleet, from compact cars to large trucks.

The current list of vehicle standard features includes some safety-related items (e.g. ABS brakes), but does not include measures such as:

- Air bags
- Vehicle features that reduce the likelihood of severe injury in a pedestrian collision
- Collision warning or lane departure warning systems
- Back-up cameras (all vehicles) or 360 degree camera systems (large trucks)

This initiative would entail recommending that the Fleet Review Committee:

- Explore additional safety-related features that could be added to the current list of vehicle standard features, and
- Consider the development of lists of additional safety-related features that could be used, as appropriate, in requests for proposals. This would allow vendors to receive preferential consideration for bids that would provide greater than the minimum level of safety.

Special considerations with this initiative:

- By Council-approved charter, vehicle standard features must be approved by the Fleet Review Committee, which has the authority to approve or deny new standard features.
- Requiring additional safety features has the potential to increase the cost of vehicle purchases. This increase in cost may be in excess of the value of the desired safety feature itself, since vehicle options are often bundled in option packages.

4. Action Plan Goals

Goal Types

All initiatives included in the Vision Zero Action Plan have an associated activity, impact and outcome, as summarized in Figure 10.

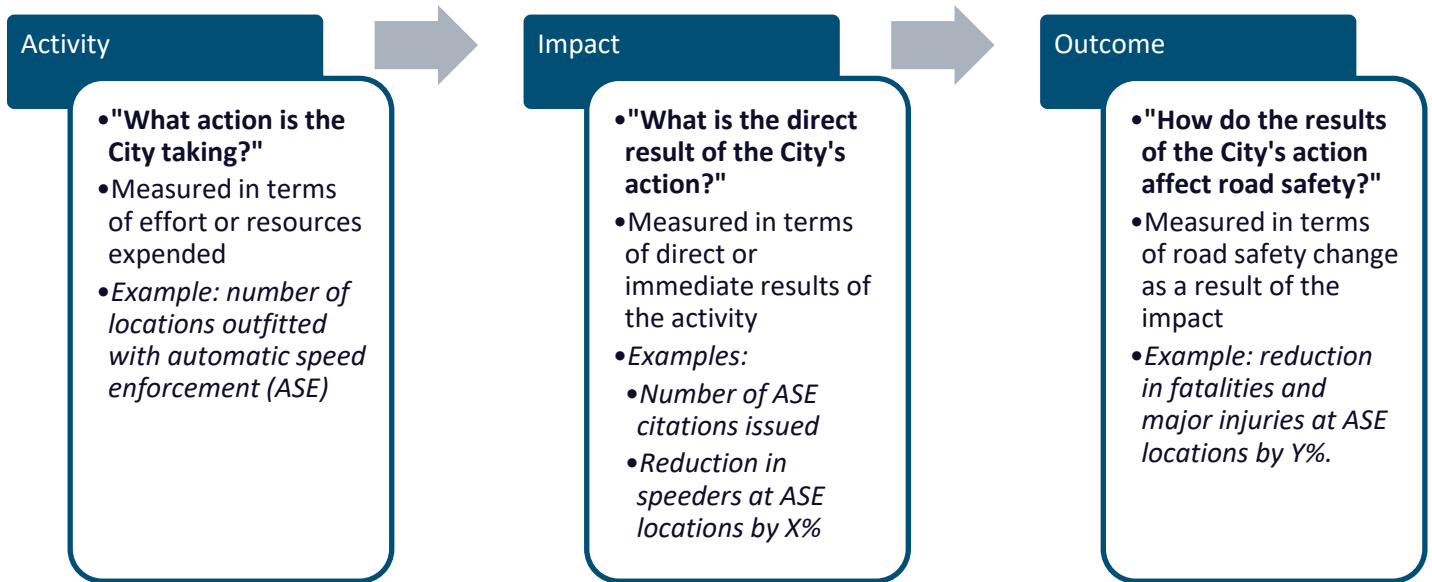


Figure 10: Activity, Impact and Outcome Goals

Identified goals in the Vision Zero Action Plan goals can relate to an activity, impact or outcome. Each has advantages and disadvantages, as noted in Table 22.

Table 22: Activity, Impact and Outcome Goals

Goal Type	Activity Goals	Impact Goals	Outcome Goals
Examples	<ul style="list-style-type: none"> • Number of countermeasures installed • Lane-kilometers of street with reduced speed limit 	<ul style="list-style-type: none"> • Change in operating speed for a treated roadway • Number of red light camera citations issued 	<ul style="list-style-type: none"> • City-wide reduction in severe collisions • Reduction in severe collisions at a treated location

Goal Type	Activity Goals	Impact Goals	Outcome Goals
Strengths	<ul style="list-style-type: none"> City can exert direct control to achieve goal Future performance can be predicted with high levels of certainty 	<ul style="list-style-type: none"> Provides timely feedback on the performance of road safety interventions 	<ul style="list-style-type: none"> Direct measurement of the focus of concern
Weaknesses	<ul style="list-style-type: none"> Proxy measure for safety; relationship between activity and impact/outcome is subject to uncertainty 	<ul style="list-style-type: none"> Proxy measure for safety; relationship between impact and outcome is subject to uncertainty 	<ul style="list-style-type: none"> Significant lag in results (on the order of years) from when action is taken until outcome can be measured
Approach Used for Vision Zero Action Plan	<ul style="list-style-type: none"> Activity goals are reflected in the Implementation Plan 	<ul style="list-style-type: none"> Impact goals are identified where indicators are available 	<ul style="list-style-type: none"> Outcome goals are identified for all strategic priorities

Activity goals are addressed in **Section 5 – Implementation Plan**. Impact and outcome goals are addressed in **Interim Goals – Road Safety Outcomes** and Error! Reference source not found. below.

Overall Goal

For all Vision Zero programs, the overall goal is zero fatalities and major injuries due to road crashes, ideally within an identified timeline.

The recommended overall goal of the Vision Zero Action Plan is zero fatal and major injury collisions **within 15 years** of adopting the Vision Zero Action Plan.

Interim Goals – Road Safety Outcomes

For all indicators that are given in terms of fatalities and major injuries, interim goals are as follows:

- 5 years after Vision Zero Action Plan adoption: 33% reduction from 2015-2019 baseline levels

- 10 years after Vision Zero Action Plan adoption: 67% reduction from 2015-2019 baseline levels
- 15 years after Vision Zero Action Plan adoption: 100% reduction from 2015-2019 baseline levels

Interim collision goals for each strategic priority are provided in Table 23. Impact goals are provided in Table 24.

Table 23: Interim Goals by Strategic Priority

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
Overall	Fatalities and major injuries (all causes and victim categories)	37.2 per year	24.8 per year	12.4 per year	0 per year
1A: Vehicle Speeds	Fatalities and major injuries involving the following driver actions: <ul style="list-style-type: none"> • Exceeding speed limit • Speed too fast for conditions • Lost control 	11.0 per year	7.3 per year	3.7 per year	0 per year
	Fatalities and major injuries involving either: <ul style="list-style-type: none"> • Traffic control type identified as “traffic controller” or • Road condition identified as “under construction” 	0.8 per year	0.5 per year	0.3 per year	0 per year
1B: Drug and Alcohol Impairment	Fatalities and major injuries involving the following driver conditions: <ul style="list-style-type: none"> • Had been drinking • Ability impaired, alcohol • Ability impaired, alcohol (over 0.08) • Ability impaired, drugs 	4.8 per year	3.2 per year	1.6 per year	0 per year
1C: Inattentive Driving	Fatalities and major injuries involving the driver condition “inattentive”	3.8 per year	2.5 per year	1.3 per year	0 per year
1D: Failing to Yield at Intersections	Fatalities and major injuries at intersections involving the following driver actions: <ul style="list-style-type: none"> • Failed to yield right-of-way • Disobeyed traffic control • Improper turn 	12.2 per year	8.1 per year	4.1 per year	0 per year
2A: Vulnerable Road Users	Pedestrian fatalities and major injuries	8.4 per year	5.6 per year	2.8 per year	0 per year

Strategic Priority	Indicator	2015-2019 Baseline	Goals		
			5 years	10 years	15 years
(Pedestrians, Cyclists, and Motorcyclists)	Cyclist fatalities and major injuries	3.2 per year	2.1 per year	1.1 per year	0 per year
	Motorcyclist fatalities and major injuries	6.0 per year	4.0 per year	2.0 per year	0 per year
3A: High Injury Corridors	Pedestrian fatalities and major injuries – Tecumseh Road East (Jefferson to Forest Glade Drive)	0.8 per year	0.5 per year	0.3 per year	0 per year
	Pedestrian fatalities and major injuries – Wyandotte Street (Ouellette to Chilver)	0.8 per year	0.5 per year	0.3 per year	0 per year
	Cyclist fatalities and major injuries – Wyandotte Street (Pelissier to Parent)	0.6 per year	0.4 per year	0.2 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – EC Row Expressway (Howard to Banwell)	1.8 per year	1.2 per year	0.6 per year	0 per year
	Motor vehicle driver and passenger fatalities and major injuries – Wyandotte Street (Pelissier to Gladstone)	1.0 per year	0.7 per year	0.3 per year	0 per year
3B: Signalized Intersections	Fatalities and major injuries at signalized intersections	11.6 per year	7.7 per year	3.9 per year	0 per year
4A: Improved Data Sources and Information Sharing	N/A				
4B: Design Standards and Best Practices	N/A				

Table 24: Impact Goals by Strategic Priority

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
1A: Vehicle Speeds	% of treated locations with operating speed within 5 km/h of target speed	N/A	80%	Immediate after treatment	This indicator should be summarized by category (e.g. speed limit reduction, radar speed feedback sign, permanent traffic calming, Complete Street installation)
	# of automated speed enforcement citations issued	0	Downward trend in citations issued at each treated intersection	1 year after treatment	
1B: Drug and Alcohol Impairment	# of riders per year using "Safe Ride Home" service	0	To be determined	To be determined	Goals to be identified as part of service development

Strategic Priority	Indicator	2015-2019 Baseline	Goals		Notes
			Target	Timeframe	
1C: Inattentive Driving	N/A				
1D: Failing to Yield at Intersections / 3B: Signalized Intersections	# of red light camera citations issued	0	Downward trend in citations issued at each treated intersection	1 year after treatment	
2A: Vulnerable Road Users (Pedestrians, Cyclists, and Motorcyclists)	N/A				
3A: High Injury Corridors	See note	N/A	To be determined	To be determined	As part of each road safety audit, impact goals will be developed based on the audit's conclusions and recommendations
4A: Improved Data Sources and Information Sharing	Mean days from crash date to date crash report is entered into City database	477 days	60 days	Immediate after implementation of ARIS-based collision data system	
	Percentage of crash reports entered into the database within 90 days after the crash	0%	90%	Immediate after implementation of ARIS-based collision data system	
	% of fatal collisions where Fatal Collision Response Team was activated	N/A	100%	Immediate after establishment of the Fatal Collision Response Team	
4B: Design Standards and Best Practices	N/A				
Multiple	Education campaign reach	N/A	To be determined	To be determined	Campaign goals will be developed individually for each educational campaign

5. Implementation Plan

The implementation plan is provided in Table 25.

Table 25: Implementation Plan

Number	Recommended Initiative	Responsibility	Timeframe			Phasing Considerations
			Short 0-5 years	Medium 5-10 years	Long 10-15 years	
1	Develop and Implement a Complete Streets Policy	<i>Development:</i> Transportation Planning	X			
		<i>Implementation:</i> Engineering Operations Planning	X	X	X	
2	Construct Roadway Capital Projects (for certain corridors)	Engineering		X	X	Tecumseh Rd E: section of concern is "2032+" in current capital budget. EC Row Ave EA: should proceed after City-wide Transportation Master Plan (scheduled to start Fall/Winter 2022)
3	Obtain Collision Data through Provincial ARIS System	Transportation Planning	X			
4	Continue to Implement the Transit Master Plan	Transit	X	X	X	Has its own implementation plan
5	Review Yellow and All-Red Intervals for Traffic Signals	Traffic Operations	X			
6	Install Retroreflective Backboards for Traffic Signals	Traffic Operations	X	X		
7	Increase Winter Roadway Maintenance	Operations	X			
8	Driver Simulation Training for Commercial Motor Vehicle Operators	Human Resources	X			
9	Commercial Motor Vehicle Driver Evaluation by Independent Party	Human Resources	X			
10	Conduct Road Safety Audits of Identified High Injury Corridors	Transportation Planning	X			
11	Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects	Engineering	X	X		Will proceed project-by-project prior to detailed design.
12	Establish a Fatal Collision Response Team	Traffic Operations WPS Engineering Risk Management Coroner's Office	X			
13	Explore Data-Sharing Arrangements Between Agencies	Transportation Planning	X			
14	Carry out a Resident Survey	Transportation Planning	X			
15	Implement Target Speed Requirements for New Construction and Major Roadway Projects	Engineering Operations	X			Can proceed as a standalone item or as part of Initiative #1.

Number	Recommended Initiative	Responsibility	Timeframe			Phasing Considerations
			Short 0-5 years	Medium 5-10 years	Long 10-15 years	
16	Implement Speed Limit Reductions – Neighbourhoods	Traffic Operations	X			
17	Implement Speed Limit Reductions – Major Streets	Traffic Operations	X			
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones	Traffic Operations Operations	X			
19	Reduce Progression Speed for Traffic Signal Coordination	Traffic Operations	X			
20	Carry out Education Campaigns	Transportation Planning	X	X	X	
21	Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions	Asset Planning Engineering Operations	X			
22	Include Collision History as a Factor in Prioritizing Capital Projects	Asset Planning Engineering	X			
23	Review Official Plan and Zoning By-laws for Vision Zero Opportunities	Planning	X	X		Official Plan update can proceed in 2023, Zoning would follow.
24	Review Design Standards and Development Manual for Vision Zero Opportunities	Engineering	X	X		Some items will require the Complete Streets Policy (Initiative #1) to be approved first.
25	Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review	Transportation Planning Planning	X			Cannot proceed until multimodal level of service guidelines are developed (part of initiative #1).
26	Develop Safety Performance Functions	Transportation Planning	X			
27	Implement Automated Speed Enforcement	Traffic Operations	X			
28	Install Transverse Rumble Strips at Select Locations	Transportation Planning	X			
29	Implement a Parking Ticket Forgiveness Program to Target Impaired Driving	Parking Enforcement	Pilot			Start with short-duration pilot project (e.g. over holidays for one year) Follow-up report from pilot program with recommendations going forward.
30	Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events	Transit Windsor Special Event Resource Team	X			
31	Support the Development of a “Safe Ride Home” Service	Transportation Planning	X			
32	Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections	Traffic Operations	Pilot			Start with a limited pilot program. Develop recommendations for future implementation based on the results of the pilot.

Number	Recommended Initiative	Responsibility	Timeframe			Phasing Considerations
			Short 0-5 years	Medium 5-10 years	Long 10-15 years	
33	Provide Ladder Crosswalk Markings at Signalized Intersections	Traffic Operations	Pilot			Start with a limited pilot program. Develop recommendations for future implementation based on the results of the pilot.
34	Implement Fully Protected Intersections	Traffic Operations Operations Engineering		X		For projects where the environmental assessment or preliminary design has already taken place, consideration of fully protected intersections can be considered as part of initiative #11.
35	Implement Leading Pedestrian Intervals	Traffic Operations	Pilot			Start with a limited pilot program. Develop recommendations for future implementation based on the results of the pilot.
36	Install Pedestrian Countdown Signals	Traffic Operations	Pilot			Start with a limited pilot program. Develop recommendations for future implementation based on the results of the pilot.
37	Implement Hardened Centrelines at Intersections with High Speed Left Turns	Traffic Operations Operations Engineering	X	X		Start with a limited pilot program. Identify locations as part of audit of high injury corridors. Develop recommendations for future implementation based on the results of the pilot.
38	Adopt a "Roundabouts First" Policy or Best Practice for New Intersections and Major Roadway Projects	Engineering Transportation Planning	X			
39	Adopt a "No Right Turn Channels" Policy or Best Practice for New Intersections and Major Roadway Projects	Engineering Transportation Planning	X			
40	Implement a Road Diet Program	Engineering Transportation Planning	X	X		
41	Develop a Comprehensive GIS-based Collision Information System	Geomatics Asset Planning	X			
42	Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases	Fleet Review Committee	X			

Cost Implications

Initiatives that can be implemented without a cost increase or that will result in a net cost savings are summarized in Table 26.

Table 26: Initiatives with No Cost Increase or Net Cost Savings

Number	Recommended Initiative	Notes
1	Develop and Implement a Complete Streets Policy (Development portion)	Policy development can be accommodated in existing budgets.
3	Obtain Collision Data through Provincial ARIS System	Application fees have already been paid. No ongoing fees for continued use of system.
5	Review Yellow and All-Red Intervals for Traffic Signals	No cost increase – this initiative involves adjusting the criteria for work that already occurs.
11	Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects	The cost of the value engineering and road safety review is expected to be offset by savings in construction costs, particularly due to narrower proposed lane widths leading to reduced material quantities.
12	Establish a Fatal Collision Response Team	Can be accommodated in existing budgets.
13	Explore Data-Sharing Arrangements Between Agencies	Can be accommodated in existing budgets.
15	Implement Target Speed Requirements for New Construction and Major Roadway Projects	Zero cost to the City for this initiative. Ongoing, this initiative is expected to reduce construction costs for roadway projects, particularly due to narrower proposed lane widths leading to reduced material quantities.
18	Implement Speed Limit Reductions and Increased Fines – Construction Zones	Zero cost to the City for this initiative.
19	Reduce Progression Speed for Traffic Signal Coordination	No cost increase – this initiative involves adjusting the criteria for work that already occurs.
21	Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions	No cost increase – this initiative involves adjusting the criteria for work that already occurs.
22	Include Collision History as a Factor in Prioritizing Capital Projects	No cost increase – this initiative involves adjusting the criteria for work that already occurs.
23	Review Official Plan and Zoning By-laws for Vision Zero Opportunities	Can be accommodated in existing budgets.
24	Review Design Standards and Development Manual for Vision Zero Opportunities	No cost increase – this initiative involves adjusting the criteria for work that already occurs.
25	Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review	Zero cost to the City for this initiative.
26	Develop Safety Performance Functions	Can be accommodated in existing budgets.
27	Implement Automated Speed Enforcement	Ongoing revenue is expected to offset the costs to set up and operate the program.
38	Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects	Zero cost to the City to implement the policy/best practice.

		Capital and operating cost of a roundabout is comparable to that of a signalized intersection designed for the same traffic volumes.
39	Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects	<p>Zero cost to the City to implement the policy/best practice.</p> <p>Eliminating right turn channels – or using urban smart channels for retrofits – can create a cost increase or savings, depending on the project specifics. Overall, a net cost savings is expected.</p>

Initiatives other than those listed in Table 26 will require funding allocation. In most cases, funding requests will be presented to Council for approval through the annual capital and operating budget process.

6. Monitoring and Reporting

Reports for the Vision Zero Action Plan will be prepared by Transportation Planning Services and presented to the Environment, Transportation & Public Safety Standing Committee.

Annual Reporting

The format of the annual Road Safety Report will be revised to include details on each of the identified Vision Zero Action Plan goals and indicators, including the difference between interim targets and actuals.

Accompanying the Road Safety Report will be a report summarizing Vision Zero Action Plan activities undertaken over the previous year.

Ongoing Review

At regular intervals for the life of the Vision Zero Action Plan, a review of the Vision Zero Action Plan will be carried out by City staff. Recommended revisions, if any, will normally be presented to the Environment, Transportation & Public Safety Standing Committee and subsequently to Council for approval.

Recommended intervals for these ongoing reviews, measured in terms of time from adoption of the Vision Zero Action Plan:

- 2.5 to 3 years
- 5 years
- 10 years
- 15 years

Additional updates to the Vision Zero Action Plan may be proposed to Standing Committee and/or Council by way of Administration report at any time if the need arises.

Supplemental Vision Zero Implementation Plan

The supplemental Vision Zero Implementation Plan is to illustrate the current plan for the implementation of each of the 42 recommended Initiatives. Some initiatives cannot be started until the completion of previous initiatives. Other initiatives perhaps could be started with the previous steps mentioned, the outcome would be less effective. The supplemental plan is intended to illustrate the most efficient way to implement the 42 initiatives.

Some of the initiatives could very well fall into multiple process trains, some of the initiatives will fall under policy driven and single step processes at later time. The goal is to illustrate the starting point of the initiatives.

Table 1: Supplemental Vision Zero Implementation Plan

Category	Initiatives
Data Collection and Analysis Driven	<ul style="list-style-type: none"> (1) #3 Obtain Collision Data through Provincial ARIS System (1) #41 Develop a Comprehensive GIS-based Collision Information System (2) #21 Adjust Project Prioritization Criteria in the Active Transportation Master Plan to Place a Greater Emphasis on Safety and Collisions (2) #26 Develop Safety Performance Functions (2) #10 Conduct Road Safety Audits of Identified High Injury Corridors (3) #16 Implement Speed Limit Reductions – Neighbourhoods (3) #17 Implement Speed Limit Reductions – Major Streets (3) #22 Include Collision History as a Factor in Prioritizing Capital Projects (3) #27 Implement Automated Speed Enforcement (3) #32 Provide Stop Bars and Crosswalk Markings at Unsignalized Intersections (3) #33 Provide Ladder Crosswalk Markings at Signalized Intersections (3) #34 Implement Fully Protected Intersections (3) #35 Implement Leading Pedestrian Intervals (3) #36 Install Pedestrian Countdown Signals (3) #37 Implement Hardened Centrelines at Intersections with High Speed Left Turns (3) #40 Implement a Road Diet Program

Category	Initiatives
Complete Streets Policy Driven	<ul style="list-style-type: none"> (1) #1a Develop and Implement a Complete Streets Policy (Develop) (2) #1b Develop and Implement a Complete Streets Policy (Implement) (3) #15 Implement Target Speed Requirements for New Construction and Major Roadway Projects (3) #23 Review Official Plan and Zoning By-laws for Vision Zero Opportunities (3) #25 Require Transportation Impact Studies for New Developments to Include a Full Multimodal Review (2) #24 Review Design Standards and Development Manual for Vision Zero Opportunities (3) #11 Carry out a Value Engineering & Road Safety Review of Existing Approved Preliminary Designs for Roadway Projects
Single Step	<ul style="list-style-type: none"> (1) #2 Construct Roadway Capital Projects (for certain corridors) (1) #4 Continue to Implement the Transit Master Plan (1) #5 Review Yellow and All-Red Intervals for Traffic Signals (1) #6 Install Retroreflective Backboards for Traffic Signals (1) #7 Increase Winter Roadway Maintenance (1) #8 Driver Simulation Training for Commercial Motor Vehicle Operators (1) #9 Commercial Motor Vehicle Driver Evaluation by Independent Party (1) #12 Establish a Fatal Collision Response Team (1) #13 Explore Data-Sharing Arrangements Between Agencies (1) #14 Carry out a Resident Survey (1) #18 Implement Speed Limit Reductions and Increased Fines – Construction Zones (1) #19 Reduce Progression Speed for Traffic Signal Coordination (1) #20 Carry out Education Campaigns (1) #28 Install Transverse Rumble Strips at Select Locations (1) #29 Implement a Parking Ticket Forgiveness Program to Target Impaired Driving (1) #30 Provide Free (or Cost-Included) Transit Service for Alcohol-Oriented Special Events (1) #31 Support the Development of a “Safe Ride Home” Service (1) #38 Adopt a “Roundabouts First” Policy or Best Practice for New Intersections and Major Roadway Projects (1) #39 Adopt a “No Right Turn Channels” Policy or Best Practice for New Intersections and Major Roadway Projects (1) #42 Develop Safety-Related Vehicle Design Criteria for Future City Vehicle Fleet Purchases & Leases



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March 21, 2023

Dear Jeff:

**RE: Request for Quotation for Purchase and Configuration of TES Software
Software as a Service (SaaS)**

In response to your request, the TNS Group is pleased to present this quotation. TNS Group is the owner and vendor of Traffic Engineering Software (TES). This letter provides the configuration and set up of the TES Software as a Service (SaaS). In this delivery model, the City of Windsor does not pay any upfront license fee except for data migration, configuration, and training. The City is charged on a monthly or annual basis in advance for the use of the software. In this model, the City owns the data and the database in which the data is stored but not the software.

1 INTRODUCTION

TNS Group (formerly TES Information Technology) has provided software development and consulting engineering services to the public and private sectors since the year 2000. The company focuses entirely on the field of traffic engineering and road safety and consists of multiple branches within this field including software development (custom and off-the-shelf), consulting, as well as collision data entry and management.

TES Software is the TNS Group flagship product which is used by more than 70 agencies across North America. TES Software consists of several modules:

- Infrastructure and GIS (Required),

- Collision,
- Traffic Count and Study,
- Safety,
- Collision Mapping and Geocoding,
- Sign,
- Signal, and
- Road Maintenance.

Appendix A provides a description of the above noted modules.

We have developed the TES software flexible and modular. Based on our conversations, the City is interested in the following modules:

- Infrastructure/GIS Module,
- Traffic Count & Study Module,
- Collision Module,
- Collision Mapping and Geocoding Module, and
- Safety Module.

It is imperative that the City can add or remove any module.

2 SUBSCRIPTION, SETUP, AND DATA IMPORT COSTS

2.1 Subscription, Setup, and Training Costs

- **Subscription Fee:** The monthly subscription fee for the use of the TES Software will be \$1,125 per month for 1-3 users. The modules included in this price are shown in Table 1. All services included in the Basic Maintenance Level shown in Appendix B are included in this monthly fee.
- **Setup and Training Fee:** The cost to set up the software for the City of Windsor and provide a full day in-person training is a one time fee of \$9,000 assuming 1 to 10 users.

Table 1: Modules for the City of Windsor in the Subscription Plan

Modules
Infrastructure/GIS Module (Required)
Traffic Count & Study Module
Collision Module
Collision Mapping and Geocoding Module
Safety Module

Appendix A provides details of all modules. But, the main purpose of each module is provided below:

- Infrastructure and GIS (Required)
 - Maintain all attributes of all intersections and midblocks
 - Query locations and getting all historical data associated with each location
 - Ability to show all the data elements on the map
- Traffic Counts and Study Module
 - Import turning movement and ATR counts directly from the devices
 - Calculate volume, speed, and class statistics
 - Traffic signal warrant
 - All-way stop control warrant
 - Estimate AADT for counted location
 - Predict AADT for non-counted location
 - Produce turning movement diagrams for various time periods (AM, PM, Mid-day peak periods)
- Collision Module
 - Maintain all collision data
 - Ability to query the collision data
 - Plot collision diagrams
 - Produce annual safety reports including more than 40 pages of graphs and charts
- Collision Mapping and Geocoding
 - Import collisions in the xml format from MTO ARIS system
 - Verify longitude and latitude of each collision provided in the police report
 - Validate and conduct the logical check of the collision data fields
 - Assign the collision to an intersection or midblock in the network
- Safety Module
 - Maintain Safety Performance Functions (SPFs)
 - Run network screening using different methods including the Empirical Bayes (EB) method
 - Run over-representation analysis
 - Run diagnosis, countermeasure selection, and economic appraisal
 - Select signalized intersections for Red Light Cameras (RLC)
 - Report collision statistics to MTO for RLCs
- Sign Module
 - Inventory of all signs and sign posts
 - Retroreflectivity of signs
 - Condition assessment of signs
- Signal Module
 - Inventory of all traffic signal equipment
 - Record of all maintenance activities on traffic signals
 - Keep track of all traffic signal related maintenance costs

2.2 Data Import Costs

We offer the service of importing historical collision, turning movement counts (TMC), ATR volumes, and speed data. The cost for the historical data import will be \$5,000-\$10,000, depending on the data formats and the amount of data.

2.3 Data Backup and Server Uptime

TNS will back up the City's databases on a daily basis. The backups are kept on a separate secure storage sever. TNS will transfer a copy of the database on the first day of each month to the City via our secure file transfer system.

2.4 Summary of Fees

A summary of the fees presented in Section 2.1 and Section 2.2 are shown below. All costs are exclusive of the applicable sales taxes.

- Monthly Subscription Fee: \$1,125 per month for 1-3 users
- One Time Set up and Training: \$9,000
- One Time importing of the historical collision, ATR, and TMC data: \$5,000-\$10,000
- The monthly subscription will stay unchanged for three years. After the three years, TNS will increase the rate based on the annual inflation rate reported by the Bank of Canada.

Thank you for the opportunity to respond to this request and we look forward to working with you on this exciting project. Should you have any questions, please do not hesitate to contact the undersigned, Mr. Pedram Izadpanah at 519-208-4161 ext 702, or via email at pizadpanah@tnsgroup.ca.

Sincerely,

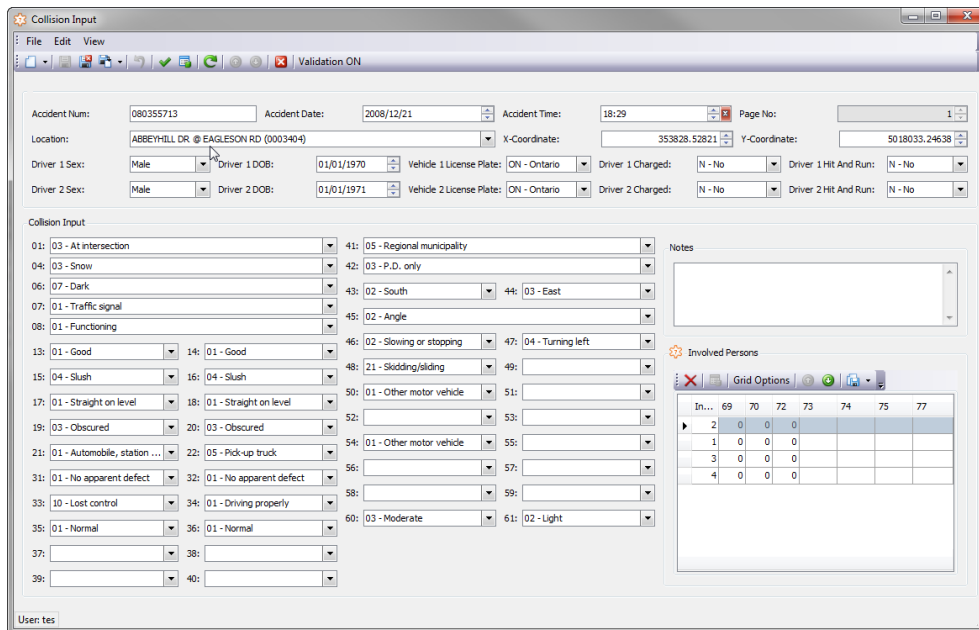


Pedram Izadpanah, Ph.D., P.Eng.
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Email : pizadpanah@tnsgroup.ca

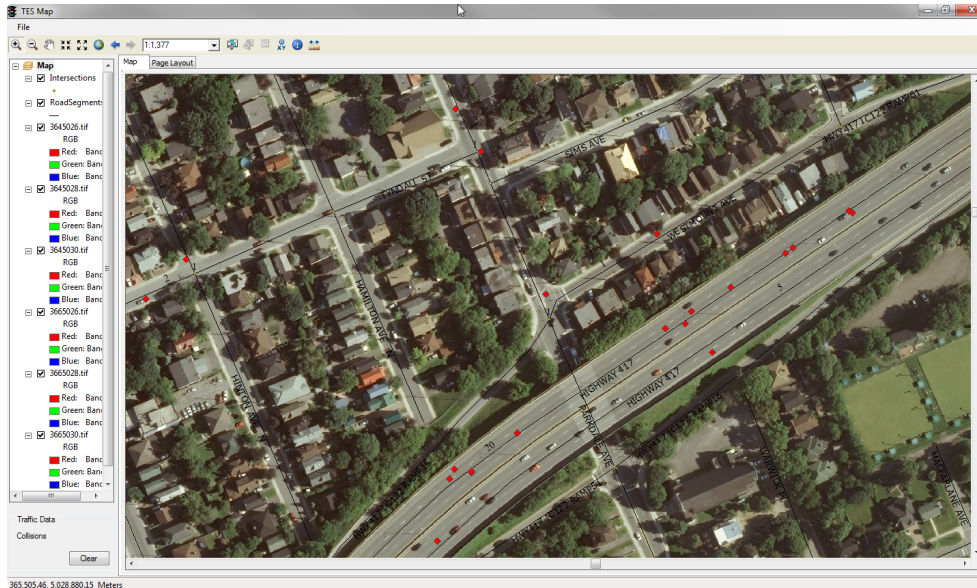
Appendix A: An Overview of TES Software Modules

1 COLLISION MODULE

This module allows for the easy input, review, and modification of individual collision information. Collision codes are validated when inputted into the system and the exact collision locations can be captured with map co-ordinates. Any additional information such as a scanned collision report, pictures, diagrams etc. can be stored together with each collision record and viewed with the click of a button.



Once collision records are inputted or imported, users can specify any collision criteria that they wish to see and display those collisions along with their exact location right on a GIS map.

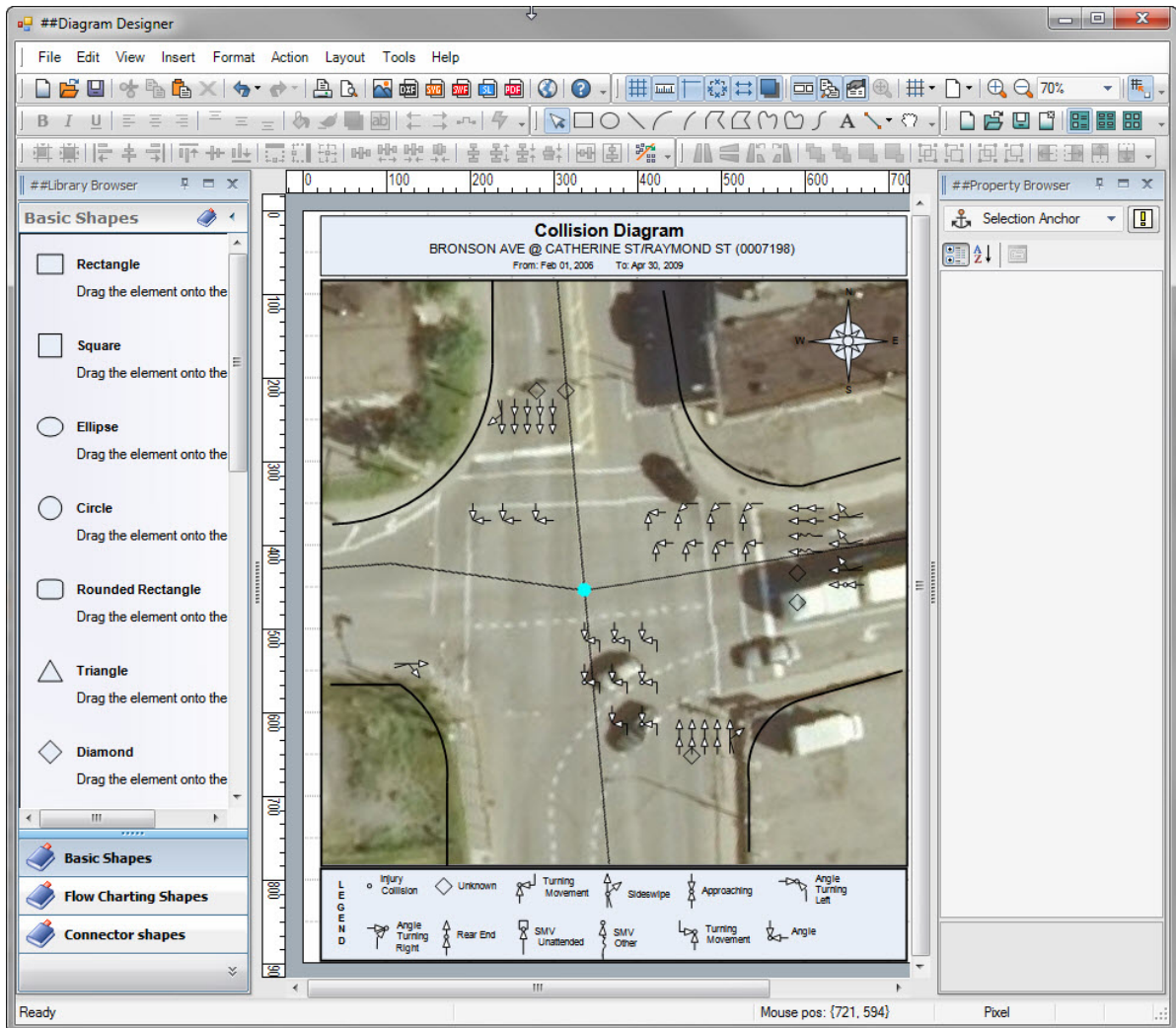


The advanced search functionality within TES lets users find any collision, or collision statistics they need in seconds. Any collision information for a particular location can be displayed by simply selecting that location on the GIS map.

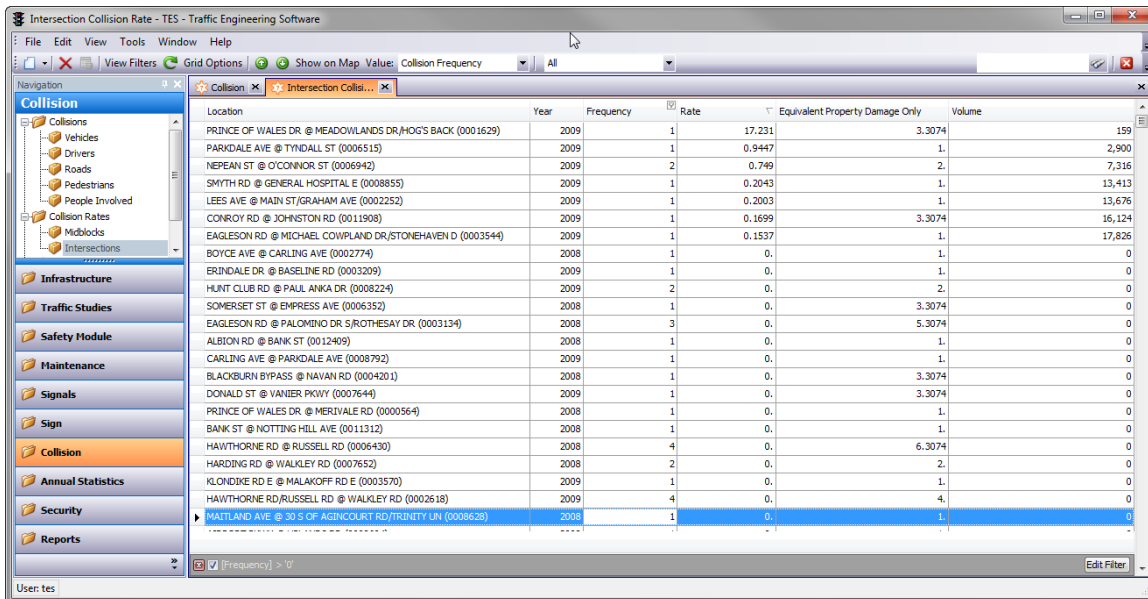
Collision diagrams can be automatically generated for a location in seconds, and you have the ability to specify the collision conditions that must be met before a collision is drawn on the diagram.

Collision diagrams can also be heavily modified by the user, allowing the user to easily adjust the appearance of the diagram by for example:

- Adding satellite imagery of the location right within the collision diagram
- Adding highlights and notes to the diagram allowing the user to easily point-out areas of interest and explain the analysis
- Export to common formats like PDF or Excel and easily distribute the diagram to the stakeholder
- Customize collision impact types

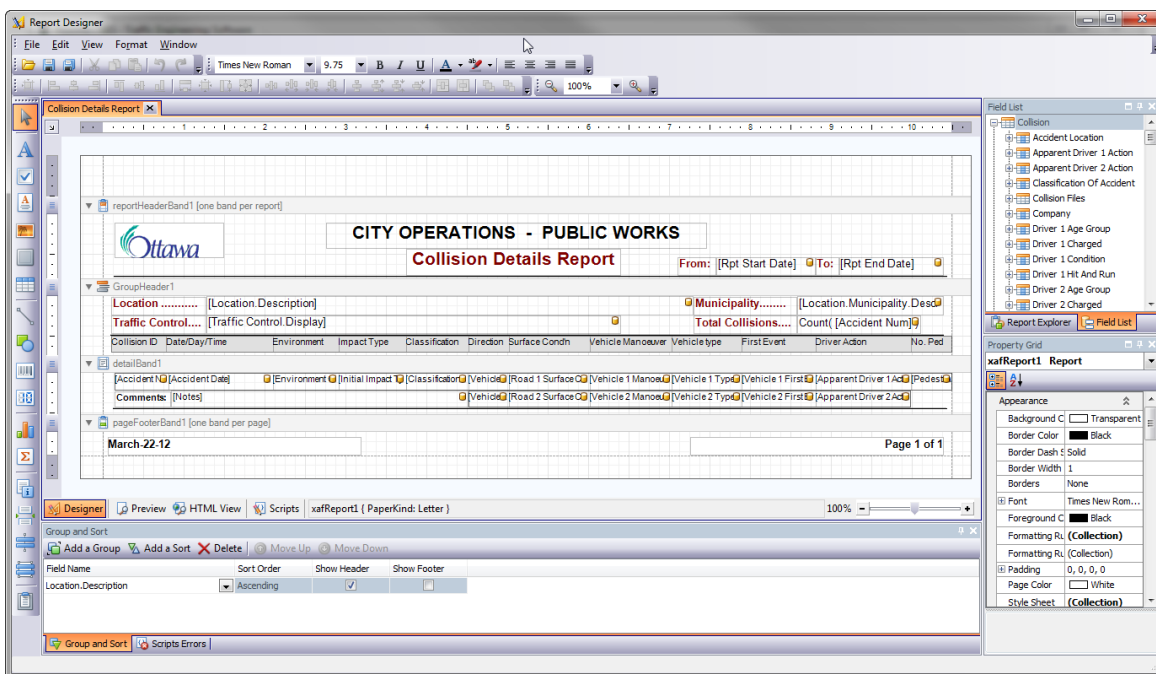


Significant time savings can also be achieved by letting TES automatically calculate the collision rates for the entire roadwork. Once complete, users can instantly see the top locations with the highest collision rates and investigate them immediately.



Location	Year	Frequency	Rate	Equivalent Property Damage Only	Volume
PRINCE OF WALES DR @ MEADOWLANDS DR/HOG'S BACK (0001629)	2009	1	17.231	3.3074	159
PARKDALE AVE @ TYNDALL ST (0006515)	2009	1	0.9447	1.	2,900
NEPEAN ST @ O'CONNOR ST (0006942)	2009	2	0.749	2.	7,316
SMYTH RD @ GENERAL HOSPITAL E (0008855)	2009	1	0.2043	1.	13,413
LEES AVE @ MAIN ST/GRAHAM AVE (0002252)	2009	1	0.2003	1.	13,676
CONROY RD @ JOHNSTON RD (0011908)	2009	1	0.1699	3.3074	16,124
EAGLESON RD @ MICHAEL COWPLAND DR/STONEHAVEN D (0003544)	2009	1	0.1537	1.	17,825
BOYCE AVE @ CARLING AVE (0002774)	2008	1	0.	1.	0
ERINDALE DR @ BASELINE RD (0003209)	2009	1	0.	1.	0
HUNT CLUB RD @ PAUL ANKA DR (0008224)	2009	2	0.	2.	0
SOMERSET ST @ EMPRESS AVE (0006352)	2008	1	0.	3.3074	0
EAGLESON RD @ PALOMINO DR S/ROTHESAY DR (0003134)	2008	3	0.	5.3074	0
ALBION RD @ BANK ST (0012409)	2008	1	0.	1.	0
CARLING AVE @ PARKDALE AVE (0008792)	2009	1	0.	1.	0
BLACKBURN BYPASS @ NAVAN RD (0004201)	2008	1	0.	3.3074	0
DONALD ST @ VANER PKWY (0007644)	2009	1	0.	3.3074	0
PRINCE OF WALES DR @ MERVILLE RD (0000564)	2008	1	0.	1.	0
BANK ST @ NOTTING HILL AVE (0011312)	2008	1	0.	1.	0
HAWTHORNE RD @ RUSSELL RD (0006430)	2008	4	0.	6.3074	0
HARDING RD @ WALKLEY RD (0007652)	2008	2	0.	2.	0
KLONDIKE RD E @ MALAKOFF RD E (0003570)	2009	1	0.	1.	0
HAWTHORNE RD/RUSSELL RD @ WALKLEY RD (0002618)	2009	4	0.	4.	0
MATLAND AVE @ 30 S OF AGINCOURT RD/TRINITY LN (0008628)	2008	1	0.	1.	0

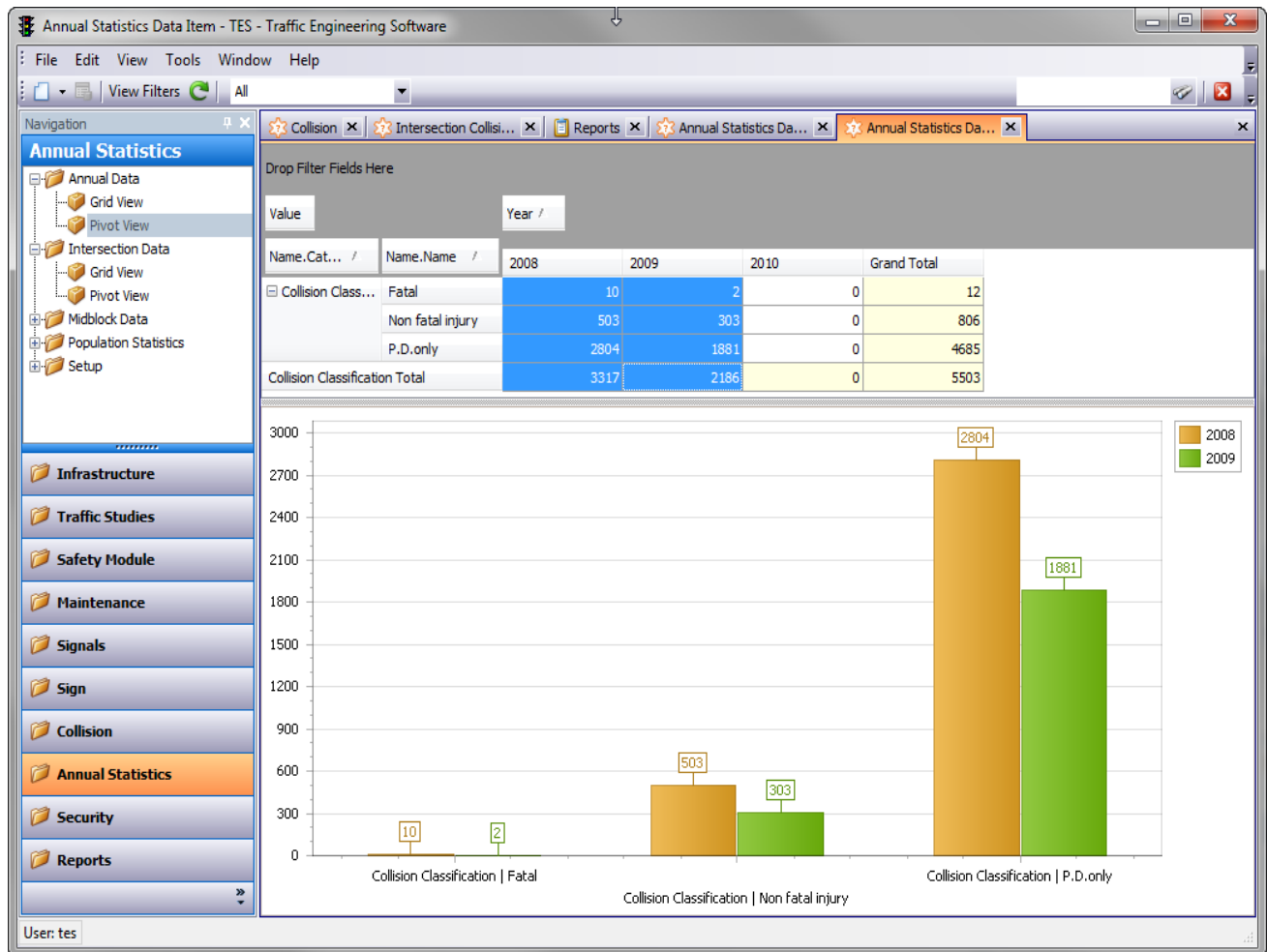
The reporting functionality is also nearly endless. TES' report builder tool lets users run a handful of canned reports and create any custom reports they want. Users can create a report, and share that template with the rest of the team. The team can then run the report as-is, or modify it further to tailor it to their needs. Everything from the formatting to the type and structure of the data displayed can be modified by the user.



The screenshot shows the Report Designer interface for a report titled "CITY OPERATIONS - PUBLIC WORKS Collision Details Report". The report is displayed in a grid layout with various fields and sections. The main content area shows a header with the Ottawa logo and the report title, followed by a group header section with fields for Location, Municipality, and Traffic Control. Below this is a table with columns for Collision ID, Date/Day/Time, Environment, Impact Type, Classification, Direction, Surface Cond, Vehicle Manoeuv, Vehicle type, First Event, Driver Action, and No. Ped. The report is currently in Designer view, and the bottom of the window shows a "Group and Sort" panel with a table for defining field names, sort orders, and whether to show headers and footers.

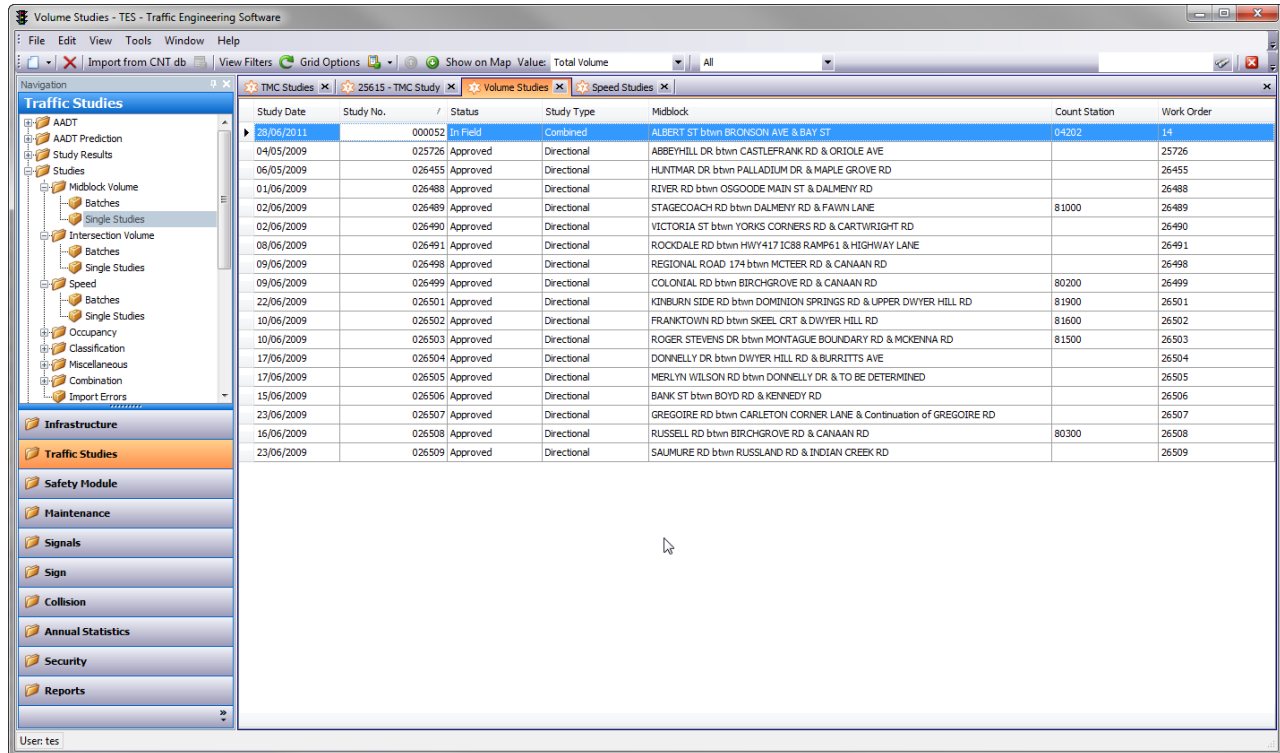
Field Name	Sort Order	Show Header	Show Footer
Location.Description	Ascending	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The annual statistics can be created on the fly. The user just selects the years to view and selects the collision attributes and a summary table with a graphical representation is created dynamically.



2 TRAFFIC STUDIES MODULE

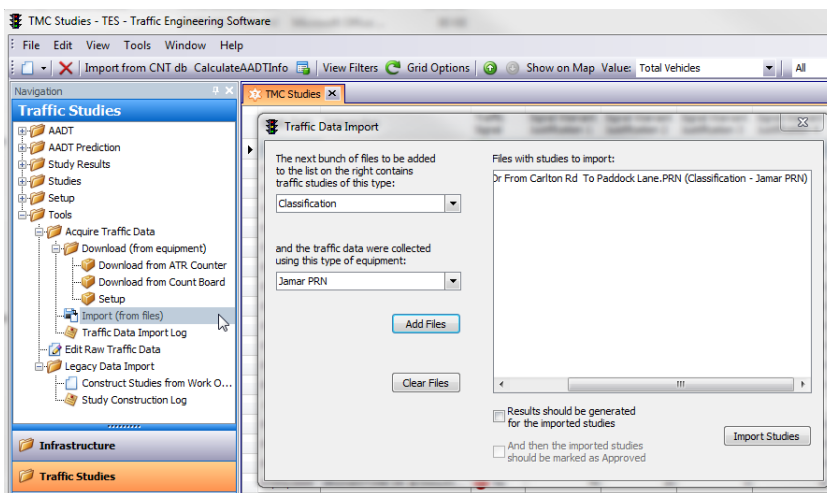
This essential module transfers traffic counts, speed, and vehicle classification data from any automatic (ATR) and manual intersection traffic counters (TMC) and stores it in a corporate database whether it is an Oracle or SQL Server. From the data that is stored a number of valuable map, reports and graphs can be generated. Each report or graph can be exported to other applications or sent directly through e-mail in PDF or Excel format. As soon as traffic count data is stored in the TES database there is no need to keep the data files. From now on all traffic count data is in digital format and it can be analyzed, exported or linked/integrated with other transportation solutions.



Study Date	Study No.	Status	Study Type	Midblock	Count Station	Work Order
28/06/2011	000052	In Field	Combined	ALBERT ST btwn BRONSON AVE & BAY ST	04202	14
04/05/2009	025726	Approved	Directional	ABBEYHILL DR btwn CASTLEFRANK RD & ORIOLE AVE		25726
06/05/2009	026455	Approved	Directional	HUNTMAR DR btwn PALLADIUM DR & MAPLE GROVE RD		26455
01/06/2009	026488	Approved	Directional	RIVER RD btwn OSGOOD MAIN ST & DALMENY RD		26488
02/06/2009	026489	Approved	Directional	STAGECOACH RD btwn DALMENY RD & FAWN LANE	81000	26489
02/06/2009	026490	Approved	Directional	VICTORIA ST btwn YORKS CORNERS RD & CARTWRIGHT RD		26490
08/06/2009	026491	Approved	Directional	ROCKDALE RD btwn HWY417 IC88 RAMP#1 & HIGHWAY LANE		26491
09/06/2009	026498	Approved	Directional	REGIONAL ROAD 174 btwn MCTEER RD & CANAAN RD		26498
09/06/2009	026499	Approved	Directional	COLONIAL RD btwn BIRCHGROVE RD & CANAAN RD	80200	26499
22/06/2009	026501	Approved	Directional	KINBURN SIDE RD btwn DOMINION SPRINGS RD & UPPER DWYER HILL RD	81900	26501
10/06/2009	026502	Approved	Directional	FRANKTOWN RD btwn SKEEL CRT & DWYER HILL RD	81600	26502
10/06/2009	026503	Approved	Directional	ROGER STEVENS DR btwn MONTAGUE BOUNDARY RD & MCKENNA RD	81500	26503
17/06/2009	026504	Approved	Directional	DONNELLY DR btwn DWYER HILL RD & BURRITTS AVE		26504
17/06/2009	026505	Approved	Directional	MERLYN WILSON RD btwn DONNELLY DR & TO BE DETERMINED		26505
15/06/2009	026506	Approved	Directional	BANK ST btwn BOYD RD & KENNEDY RD		26506
23/06/2009	026507	Approved	Directional	GREGOIRE RD btwn CARLETON CORNER LANE & Continuation of GREGOIRE RD		26507
16/06/2009	026508	Approved	Directional	RUSSELL RD btwn BIRCHGROVE RD & CANAAN RD	80300	26508
23/06/2009	026509	Approved	Directional	SAUMURE RD btwn RUSSLAND RD & INDIAN CREEK RD		26509

2.1 DATA TRANSFER

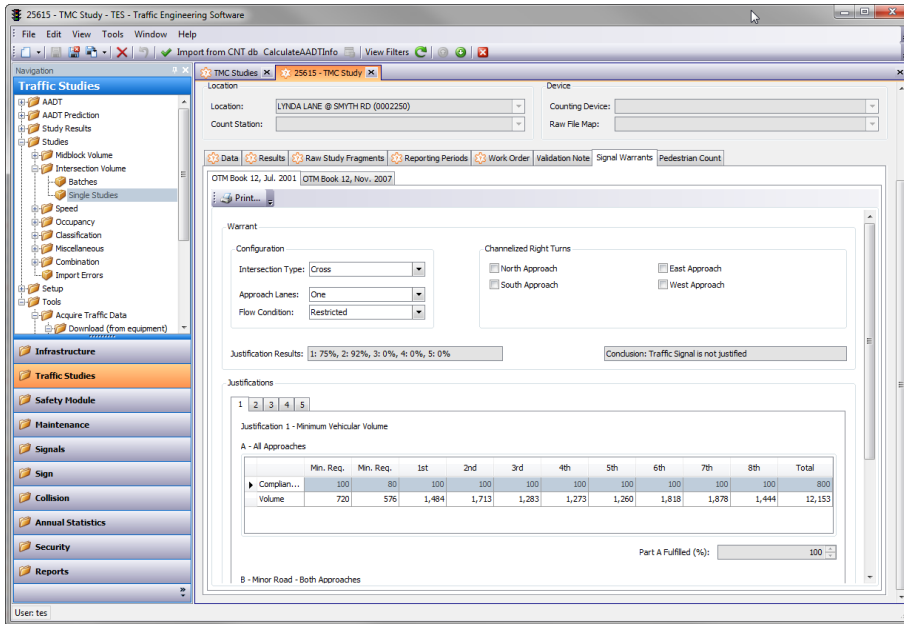
TES provides a built in transfer data function from every automatic traffic recorder on the market and from manual traffic counters. The data from a file is always being validated before it is stored in the database.



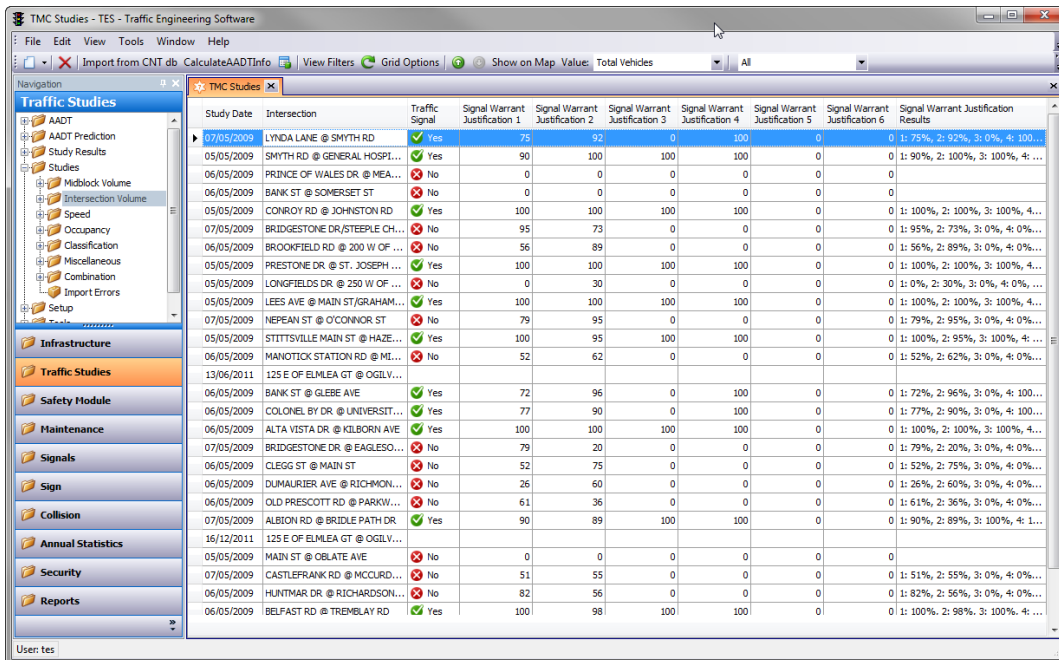
2.2 TRAFFIC SIGNAL WARRANTS

TES can automatically calculate Traffic Signal Warrants based on the OTM Book 12. Criteria within the calculation can be changed based on the user or location requirements. Therefore, users can run what-if analysis to examine in more detail under what conditions a location would become warranted.

The Collision Module is integrated with the Traffic Count Module. Therefore, an accident experience warrant is calculated automatically based on the number of preventable collisions.



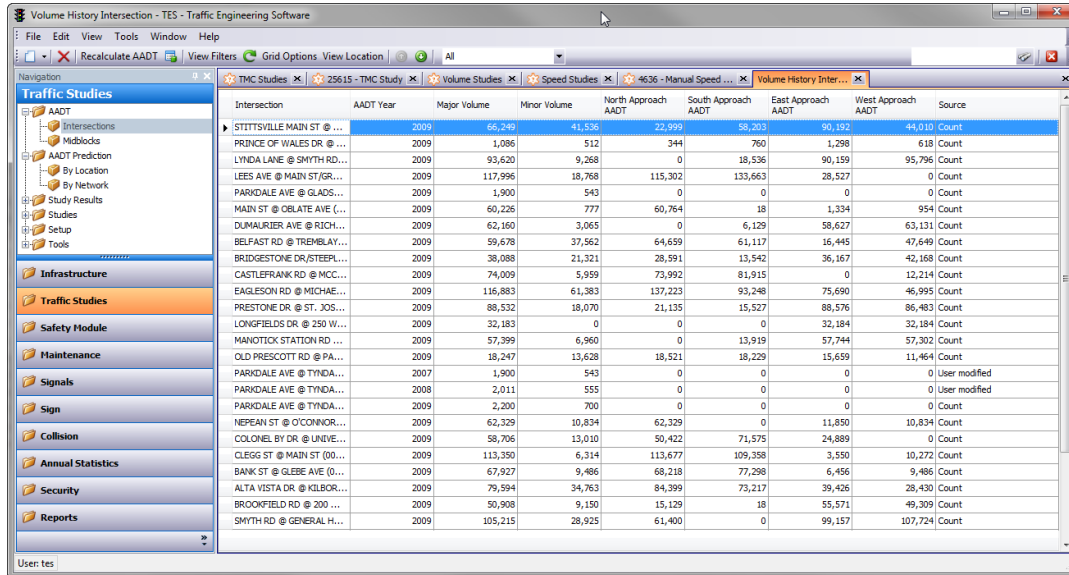
The results of signal warrants for each counted intersection are displayed and ready for a quick review.



As like with any traffic data in TES the results (i.e. Warranted un-signalized intersections) can be displayed on a map (see GIS Module).

2.3 Average Annual Daily Traffic (AADT)

TES automatically estimates AADT for each count using DOW (Day of Week), MOY (Month of Year) and 24 hours factors.



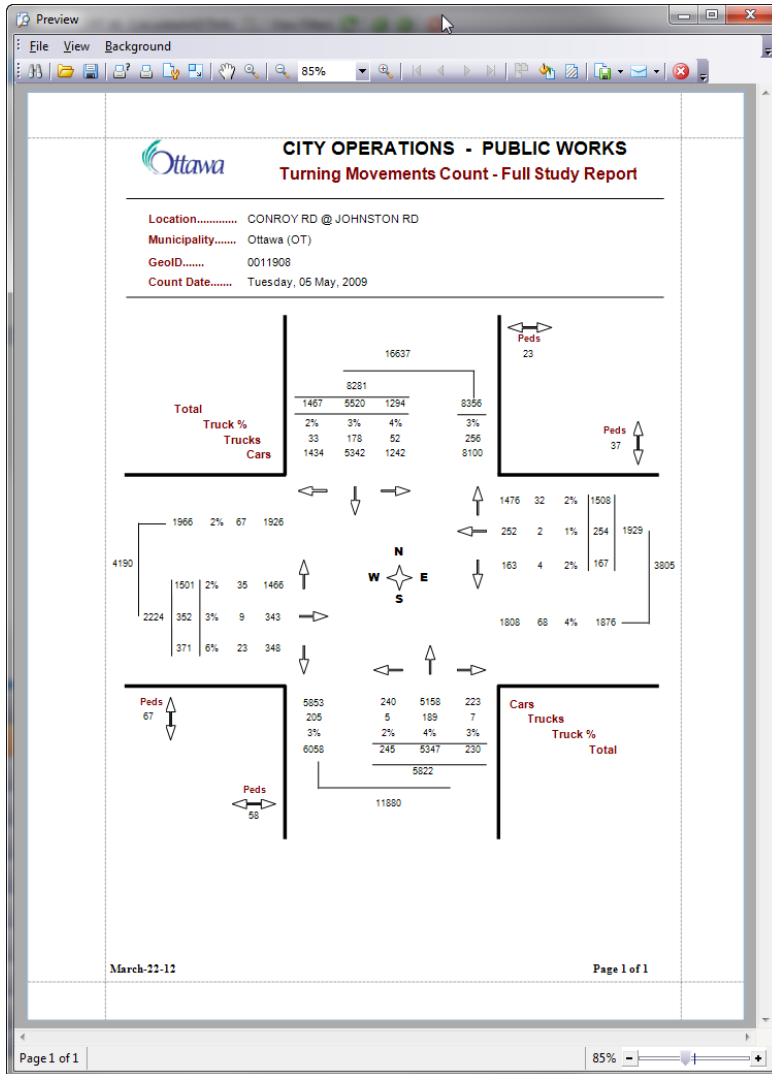
Intersection	AADT Year	Major Volume	Minor Volume	North Approach AADT	South Approach AADT	East Approach AADT	West Approach AADT	Source
STITTSVILLE MAIN ST @ ...	2009	66,292	41,536	22,999	58,203	90,192	44,010	Count
PRINCE OF WALES DR @ ...	2009	1,086	512	344	760	1,298	618	Count
LYNDA LANE @ SMYTH RD...	2009	93,620	9,268	0	18,536	90,159	95,796	Count
LEES AVE @ MAIN ST/CR...	2009	117,996	18,768	115,302	133,663	28,527	0	Count
PARKDALE AVE @ GLADS...	2009	1,900	543	0	0	0	0	Count
MAIN ST @ OBLATE AVE (...)	2009	60,226	777	60,764	18	1,334	954	Count
DUMAURIER AVE @ RICH...	2009	62,160	3,065	0	6,129	58,627	63,131	Count
BELFAST RD @ TREMBLAY...	2009	59,678	37,562	64,659	61,117	16,445	47,649	Count
BRIDGESTONE DR/STEEPL...	2009	38,088	21,321	28,591	13,542	36,167	42,168	Count
CASTLEFRANK RD @ MCC...	2009	74,009	5,959	73,992	81,915	0	12,214	Count
EAGLESON RD @ MICHA...	2009	116,883	61,383	137,223	93,248	75,690	46,995	Count
PRESTON DR @ ST. JOS...	2009	88,532	18,070	21,135	15,527	88,576	86,483	Count
LONGFIELDS DR @ 250 W...	2009	32,183	0	0	0	32,184	32,184	Count
MANOTICK STATION RD ...	2009	57,399	6,960	0	13,919	57,744	57,302	Count
OLD PRESCOTT RD @ PA...	2009	18,247	13,628	18,521	18,229	15,659	11,464	Count
PARKDALE AVE @ TYNDA...	2007	1,900	543	0	0	0	0	User modified
PARKDALE AVE @ TYNDA...	2008	2,011	555	0	0	0	0	User modified
PARKDALE AVE @ TYNDA...	2009	2,200	700	0	0	0	0	Count
NEPEAN ST @ O'CONNOR...	2009	62,329	10,834	62,329	0	11,850	10,834	Count
COLONEL BY DR @ UNEVE...	2009	58,706	13,010	50,422	71,575	24,889	0	Count
CLEGG ST @ MAIN ST (00...	2009	113,350	6,314	113,677	109,358	3,550	10,272	Count
BANK ST @ GLEBE AVE (0...	2009	67,927	9,486	68,218	77,298	6,456	9,486	Count
ALTA VISTA DR @ KILBOR...	2009	79,594	34,763	84,399	73,217	39,426	28,430	Count
BROOKFIELD RD @ 200 ...	2009	50,908	9,150	15,129	18	55,571	49,309	Count
SMYTH RD @ GENERAL H...	2009	105,215	28,925	61,400	0	99,157	107,724	Count

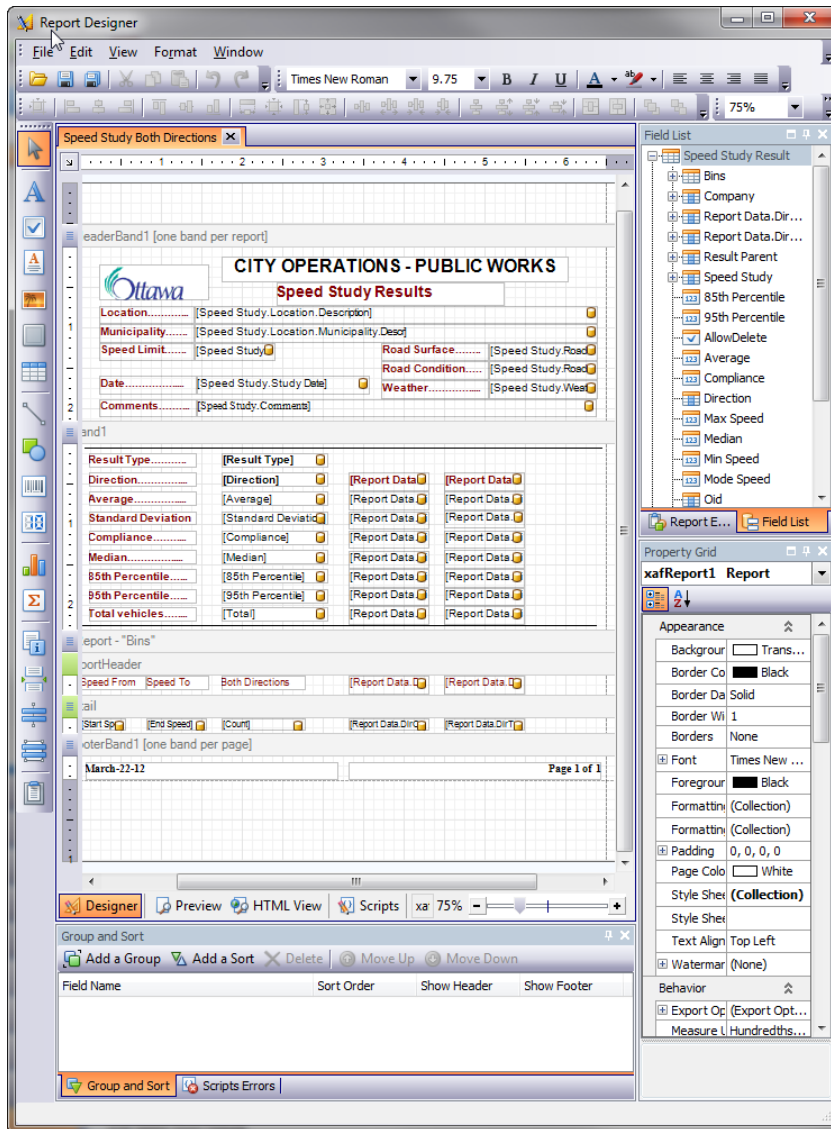
Also, TES has built in the AADT prediction functions by location and by network. The 'predication by location' generates the AADT for missing years based on existing data. The 'predication by network' generates missing AADT for each location along corridors based on the existing data and road network setup.

As like with any traffic data in TES, the AADT volume can be displayed on a map (see GIS Module).

2.4 REPORTING

TES' report builder tool lets users run a handful of canned reports and create any custom reports they want. Users can create a report, and share that template with the rest of the team. The team can then run the report as-is, or modify it further to tailor it to their needs. Everything from the formatting to the type and structure of the data displayed can be modified by the user. Also, all data can be exported into other formats (Excel, html, txt, pdf, rtf) with just one click.





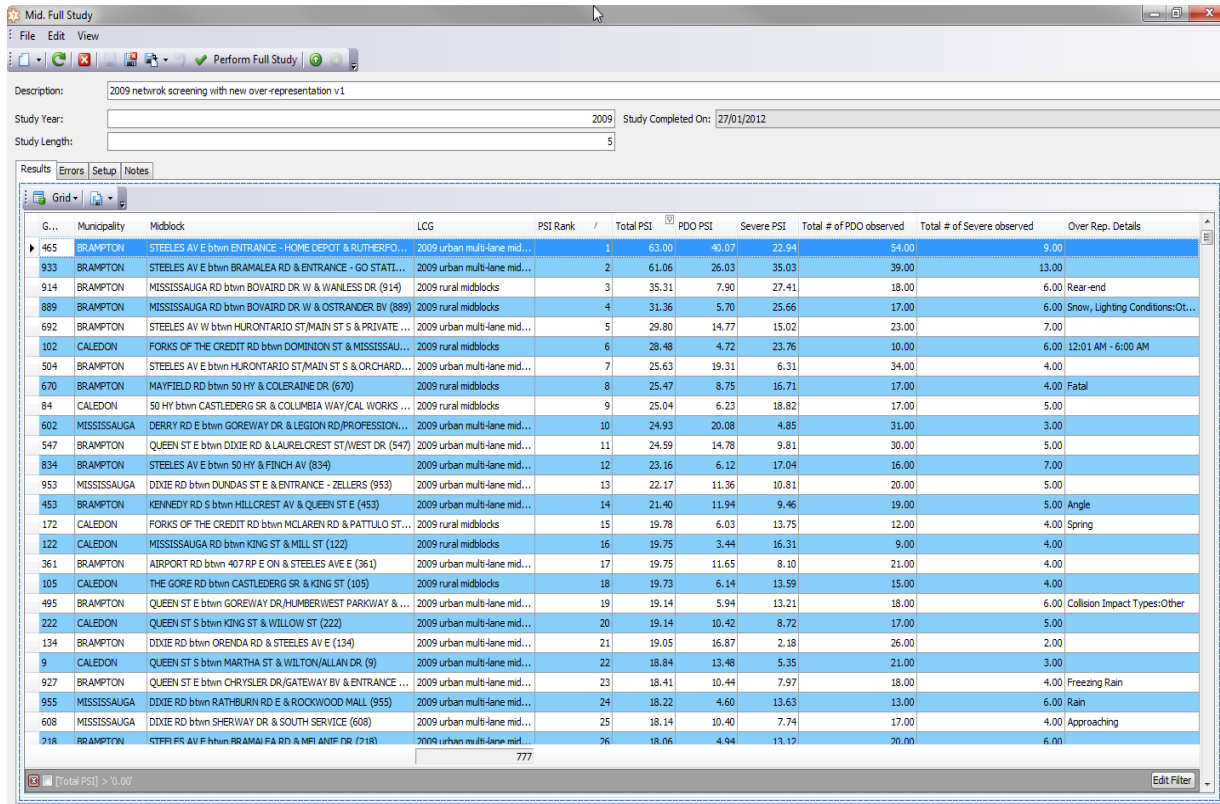
3 SAFETY MODULE

TES Safety Module provides state-of-the-art safety analysis based on the Highway Safety Manual which can quickly determine the most high risk intersections and road segments within the entire road network.

TES uses statistical modeling (SPF – Safety Performance Functions) to determine relationships between traffic volume, collisions, and road geometry for different types of locations within the municipality’s road network. Using this information, TES can evaluate all sites quickly and accurately to determine their ‘Potential for Safety Improvements’ (PSI) and Over-representation.

The safety module is used for network screening for intersections and midblocks using Empirical Bayes (EB) method and for diagnostics analysis of locations with potential for safety improvements. This module assists municipalities to allocate their resources to locations which have potential for safety improvements and improve safety of their municipality. Annual network screening using TES

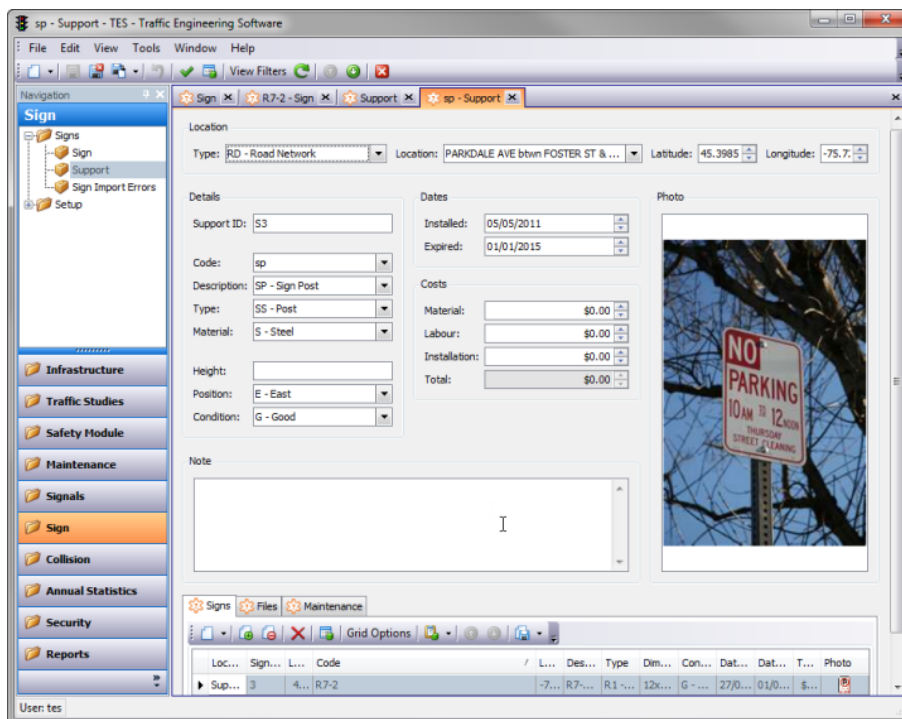
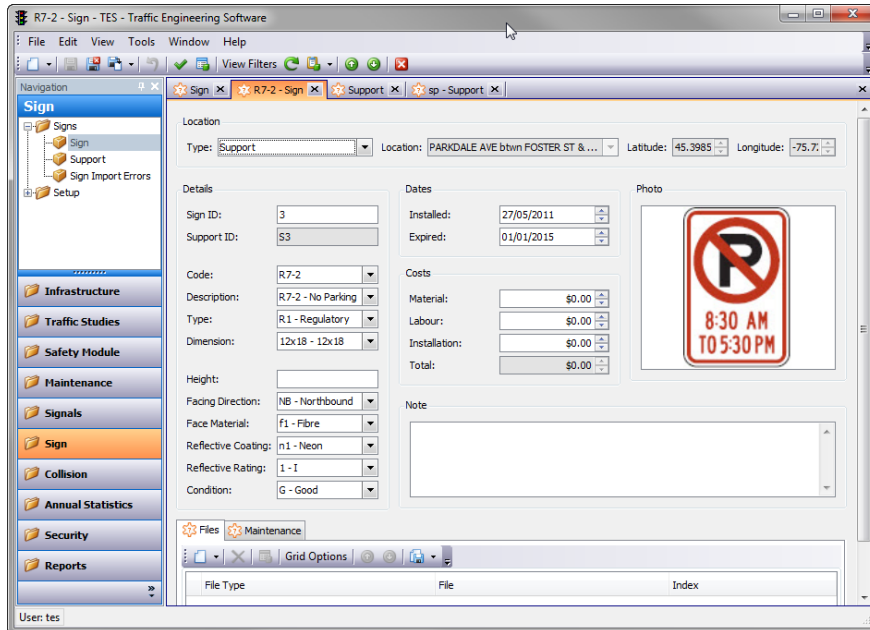
allows to identify safety issues proactively and reduce municipal liability and potentially mitigate thousands of dollars in damages and law suites.



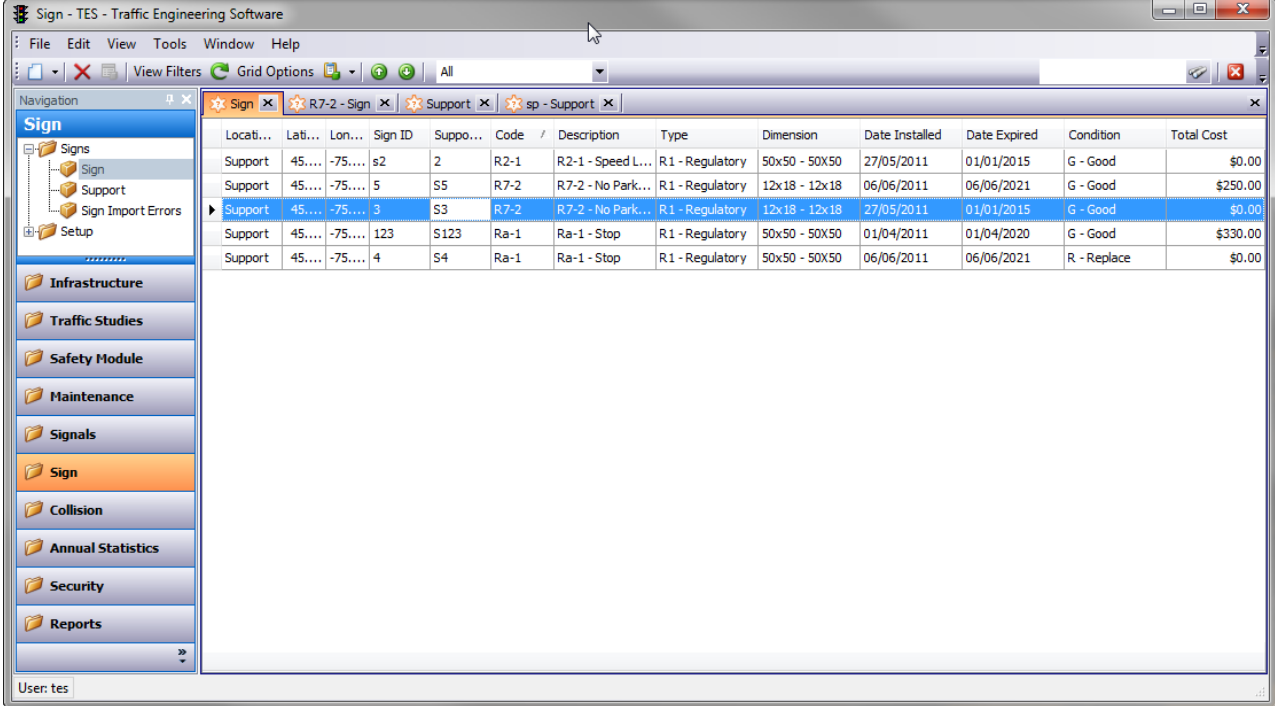
G...	Municipality	Midblock	LCG	PSI Rank	Total PSI	PDO PSI	Severe PSI	Total # of PDO observed	Total # of Severe observed	Over Rep. Details
465	BRAMPTON	STEELES AV E btwn ENTRANCE - HOME DEPOT & RUTHERFO...	2009 urban multi-lane mid...	1	63.00	40.07	22.94	54.00	9.00	
933	BRAMPTON	STEELES AV E btwn BRAMALEA RD & ENTRANCE - GO STATI...	2009 urban multi-lane mid...	2	61.06	26.03	35.03	39.00	13.00	
914	BRAMPTON	MISSISSAUGA RD btwn BOVAIRD DR W & WANLESS DR (914)	2009 rural midblocks	3	35.31	7.90	27.41	18.00	6.00	Rear-end
889	BRAMPTON	MISSISSAUGA RD btwn BOVAIRD DR W & OSTRANDER BV (889)	2009 rural midblocks	4	31.36	5.70	25.66	17.00	6.00	Snow, Lighting Conditions:Ot...
692	BRAMPTON	STEELES AV W btwn HURONTARIO ST/MAIN ST S & PRIVATE ...	2009 urban multi-lane mid...	5	29.80	14.77	15.02	23.00	7.00	
102	CALEDON	FORKS OF THE CREDIT RD btwn DOMINION ST & MISSISSAU...	2009 rural midblocks	6	28.48	4.72	23.76	10.00	6.00	12:01 AM - 6:00 AM
504	BRAMPTON	STEELES AV E btwn HURONTARIO ST/MAIN ST S & ORCHARD...	2009 urban multi-lane mid...	7	25.63	19.31	6.31	34.00	4.00	
670	BRAMPTON	MAYFIELD RD btwn 50 HY & COLERAINE DR (670)	2009 rural midblocks	8	25.47	8.75	16.71	17.00	4.00	Fatal
84	CALEDON	50 HY btwn CASTLEDERG SR & COLUMBIA WAY/CAL WORKS ...	2009 rural midblocks	9	25.04	6.23	18.82	17.00	5.00	
602	MISSISSAUGA	DEFRY RD E btwn GOREWAY DR & LEGION RD/PROFESSION...	2009 urban multi-lane mid...	10	24.93	20.08	4.85	31.00	3.00	
547	BRAMPTON	QUEEN ST E btwn DIXIE RD & LAURELCREST ST/WEST DR (547)	2009 urban multi-lane mid...	11	24.59	14.78	9.81	30.00	5.00	
834	BRAMPTON	STEELES AV E btwn 50 HY & FINCH AV (834)	2009 urban multi-lane mid...	12	23.16	6.12	17.04	16.00	7.00	
953	MISSISSAUGA	DIXIE RD btwn DUNDAS ST E & ENTRANCE - ZELLERS (953)	2009 urban multi-lane mid...	13	22.17	11.36	10.81	20.00	5.00	
453	BRAMPTON	KENNEDY RD S btwn HILLCREST AV & QUEEN ST E (453)	2009 urban multi-lane mid...	14	21.40	11.94	9.46	19.00	5.00	Angle
172	CALEDON	FORKS OF THE CREDIT RD btwn MCLAREN RD & PATTULO ST...	2009 rural midblocks	15	19.78	6.03	13.75	12.00	4.00	Spring
122	CALEDON	MISSISSAUGA RD btwn KING ST & MILL ST (122)	2009 rural midblocks	16	19.75	3.44	16.31	9.00	4.00	
361	BRAMPTON	AIRPORT RD btwn 407 RP E ON & STEELES AVE E (361)	2009 urban multi-lane mid...	17	19.75	11.65	8.10	21.00	4.00	
105	CALEDON	THE GORE RD btwn CASTLEDERG SR & KING ST (105)	2009 rural midblocks	18	19.73	6.14	13.59	15.00	4.00	
495	BRAMPTON	QUEEN ST E btwn GOREWAY DR/HUMBERWEST PARKWAY & ...	2009 urban multi-lane mid...	19	19.14	5.94	13.21	18.00	6.00	Collision Impact Types:Other
222	CALEDON	QUEEN ST S btwn KING ST & WILLOW ST (222)	2009 urban multi-lane mid...	20	19.14	10.42	8.72	17.00	5.00	
134	BRAMPTON	DIXIE RD btwn ORENDA RD & STEELES AV E (134)	2009 urban multi-lane mid...	21	19.05	16.87	2.18	26.00	2.00	
9	CALEDON	QUEEN ST S btwn MARTHA ST & WILTON/ALLAN DR (9)	2009 urban multi-lane mid...	22	18.84	13.48	5.35	21.00	3.00	
927	BRAMPTON	QUEEN ST E btwn CHRYSLER DR/GATEWAY BV & ENTRANCE ...	2009 urban multi-lane mid...	23	18.41	10.44	7.97	18.00	4.00	Freezing Rain
955	MISSISSAUGA	DIXIE RD btwn RATHBURN RD E & ROCKWOOD MALL (955)	2009 urban multi-lane mid...	24	18.22	4.60	13.63	13.00	6.00	Rain
608	MISSISSAUGA	DIXIE RD btwn SHERWAY DR & SOUTH SERVICE (608)	2009 urban multi-lane mid...	25	18.14	10.40	7.74	17.00	4.00	Approaching
718	BRAMPTON	STEELES AV E btwn BRAMAJ FA RD & MFL ANIF DR (718)	2009 urban multi-lane mid...	26	18.06	4.94	13.12	20.00	6.00	
				777						

4 SIGN MODULE

TES' Sign Inventory Module allows users to easily manage sign and support inventory data with their maintenance log. The sign library based on the Canadian, USA or European OTM, MUTCD standards together with a municipality's own custom designed signs can be easily used in TES. The sign data collected in the field is flawlessly imported into database.



The type of sign, condition, retro-reflectivity, maintenance, and cost can be easily filtered, reported and exported to many formats (ie. PDF, Excel, RTF, etc.).



The screenshot shows the TES Traffic Engineering Software interface. The main window displays a table of sign data. The table has the following columns: Locati..., Lat..., Lon..., Sign ID, Suppo..., Code / Description, Type, Dimension, Date Installed, Date Expired, Condition, and Total Cost. The data rows are as follows:

Locati...	Lat...	Lon...	Sign ID	Suppo...	Code / Description	Type	Dimension	Date Installed	Date Expired	Condition	Total Cost
Support	45....	-75....	s2	2	R2-1 R2-1 - Speed L...	R1 - Regulatory	50x50 - 50X50	27/05/2011	01/01/2015	G - Good	\$0.00
Support	45....	-75....	5	S5	R7-2 R7-2 - No Park...	R1 - Regulatory	12x18 - 12x18	06/06/2011	06/06/2021	G - Good	\$250.00
Support	45....	-75....	3	S3	R7-2 R7-2 - No Park...	R1 - Regulatory	12x18 - 12x18	27/05/2011	01/01/2015	G - Good	\$0.00
Support	45....	-75....	123	S123	Ra-1 Ra-1 - Stop	R1 - Regulatory	50x50 - 50X50	01/04/2011	01/04/2020	G - Good	\$330.00
Support	45....	-75....	4	S4	Ra-1 Ra-1 - Stop	R1 - Regulatory	50x50 - 50X50	06/06/2011	06/06/2021	R - Replace	\$0.00

As like with any traffic data in TES the signs can be displayed on a map together with a label representing a selected sign attribute (see GIS Module).

5 SIGNAL MODULE

The TES Software signal module can assist municipalities to inventory all components of traffic signals and log maintenance activities on traffic signals. The traffic signal module is integrated with the GIS module and allows municipalities to display traffic signals sharing the same attributes with similar icons and different from others on the map (i.e. show pre-emption traffic signal with a different icon than other traffic signals).

The following figures show sample screenshots of the TES Software traffic signal module.

The signal module is able to inventory the components of the controllers of traffic signals including type of the controller, phasing, type of actuation, etc.

Controller - TES - Traffic Engineering Software

File Edit View Tools Window Help

View Filters Grid Options Show on Map Value: None All

Navigation Controller 00701511 - Contro...

Controller No	Default Location	Install Date	No Phases	Type	Make	Model	Actuation	Hydro Authority	System No	Avg Load	Failure Mode	Communic...	Hyd Ac
00714579	AIRPORT RD @ STONECREST DR/BRAYDON BV (...)		4	8 Phase	Eagle	EPAC 380	Semi	Hydro One...		160	Red red	Bell	
00706974	AIRPORT RD @ STEELES AV E (INT_3995)		8	8 Phase	Eagle	EPAC 380	Full	Hydro One...	9056	199	Red red	Bell	
00705243	AIRPORT RD @ SLOUGH ST (INT_4768)		3	4 Phase	T.C.T	LMD 8400	Semi	Enersource	0620	176	Red red	Bell	
00713976	AIRPORT RD @ SANDALWOOD PY E/HUMBER WE...		4	4 Phase	Eagle	EPAC 340	Semi	Hydro One...	9458	178	Red red	Bell	
00704265	AIRPORT RD @ RIPON ST/PRIVATE DR (INT_5170)		2	4 Phase	Eagle	EPAC 340	Semi	Enersource	0625	175	Red red	Bell	
00710022	AIRPORT RD @ QUEEN ST E/7HY (INT_2798)		8	8 Phase	Eagle	EPAC 380	Full	Hydro One...	9287	220	Red red	Bell	
00702513	AIRPORT RD @ ORLANDO DR/SILVER DART DR/...		3	4 Phase	Eagle	EPAC 340	Semi	Enersource	0431	161	Amber red	Bell	
00727873	AIRPORT RD @ OLDE BASE LINE RD/MONO RD (...)		2	4 Phase	Eagle	EPAC 340	Semi	Enersource	9926	0	Red red	Bell	
00703134	AIRPORT RD @ NORTHWEST DR/MCDONNELL D...		6	8 Phase	Eagle	EPAC 380	Semi	Enersource	0432	169	Amber red	Bell	
00712379	AIRPORT RD @ NORTH PARK DR/COTTRELL BV ...		2	4 Phase	Eagle	EPAC 340	Semi	Hydro One...	9450	174	Amber red	Bell	
00704806	AIRPORT RD @ MORNING STAR DR (INT_4977)		5	8 Phase	Eagle	EPAC 380	Semi	Enersource	0483	176	Red red	Bell	
00717433	AIRPORT RD @ MAYFIELD RD (INT_1383)		2	2 Phase	Eagle	EPAC 340	None	Enersource	9653	0	Amber red	Bell	
00716782	AIRPORT RD @ LACOSTE BV (INT_1449)	03/09/2007	4	8 Phase	Eagle	EPAC 380	Semi	Enersource	9658	0	Red red	Bell	
00723569	AIRPORT RD @ KING ST (INT_1170)	11/28/1980	2	2 Phase	T.C.T	LMD 8200	None	Enersource	9900	0	Red red	Bell	
00703317	AIRPORT RD @ INTERNATIONAL CENTRE ENTRA...	02/04/1981	4	8 Phase	Eagle	EPAC 380	Semi	Enersource	0463	179	Red red	Bell	
00703961	AIRPORT RD @ HULL ST (INT_5255)		3	4 Phase	Eagle	EPAC 380	None	Enersource	0464	181	Amber red	Bell	
00701234	AIRPORT RD @ GTAA ENTRANCE (INT_9941)		3	4 Phase	Eagle	EPAC 340	Semi	Enersource	0434	140	Red red	Bell	
00710629	AIRPORT RD @ ENTRANCE - HOPEWELL (PRIVAT...		5	8 Phase	Eagle	EPAC 380	Semi	Hydro One...	9464	174	Red red	Bell	
00705756	AIRPORT RD @ ENTRANCE - ALPA LUMBER (INT_...	03/11/2002	2	4 Phase	Eagle	EPAC 340	Semi	Enersource	0626	139	Red red	Bell	27
00709621	AIRPORT RD @ COVENTRY RD/NEVETS RD (INT_...		3	4 Phase	Eagle	EPAC 340	Semi	Hydro One...	9457	177	Red red	Bell	
00716155	AIRPORT RD @ COUNTRYSIDE DR S (INT_1515)		0	8 Phase	Eagle	EPAC 380	None	Hydro One...	9650	173	Red red	Bell	
00708851	AIRPORT RD @ CLARK BV (INT_3142)		3	4 Phase	LFE (C)	LMD 8400 (T)	Semi	Hydro One...	9256	177	Amber red	Bell	
00736694	AIRPORT RD @ CHARLESTON SR (INT_267)		2	4 Phase	Eagle	EPAC 340	Full	Enersource	9922	0	Red red	Bell	
00700304	AIRPORT RD @ BRESLER DR/JETLINER RD (INT_...		8	8 Phase	Eagle	EPAC 380	Semi	Enersource		203	Red red	Bell	
00713083	AIRPORT RD @ BOVAIRD DR E/CASTLEMORE RD ...		6	8 Phase	Eagle	EPAC 380	Full	Hydro One...		207	Red red	Bell	
00704471	AIRPORT RD @ BEVERLEY ST/VICTORY CR (INT_...	09/06/1974	2	2 Phase	Eagle	EPAC 320	Semi	Enersource	0484	175	Red red	Bell	27
00701511	AIRPORT RD @ AMERICAN DR/SILVER DART DR ...	02/14/1975	7	8 Phase	T.C.T	LC 8800	Semi	Enersource	0405	183	Red red	Bell	27
10713393	10 HY/HURONTARIO ST/MAIN ST N @ BOVAIRD ...		8	8 Phase	Eagle	EPAC 380	Semi	Hydro One...	9585	232	Red red	Bell	

DB Connection: TES / peelpd / User: tes

For each controller, the signal module incorporates the signal timing plan coded in each controller:

00701511 - Controller - TES - Traffic Engineering Software

File Edit View Tools Window Help

View Filters Grid Options

Navigation Controller 00701511 - Contro...

Controller

Default Location: AIRPORT RD @ AMERICAN DR/SILVER D... System: Zone:

Controller No: 00701511 System No: 0405 Signal Type: Intersection Signal

Model: LC 8800 Sys Equip: Install Date: 02/14/1975

Make: T.C.T Communication: Bell Authority:

Type: 8 Phase Circuit No: CCFDC37050 Hydro Authority: Enersource

No Phases Used: 7 Group No: 400 Hydro Account No: 2742336

Actuation: Semi Failure Mode: Red red Invoice Sent To:

Serial No: 123456789 MMU: Avg Load (KW): 183

Master: Date RCCU TBC Dwid:

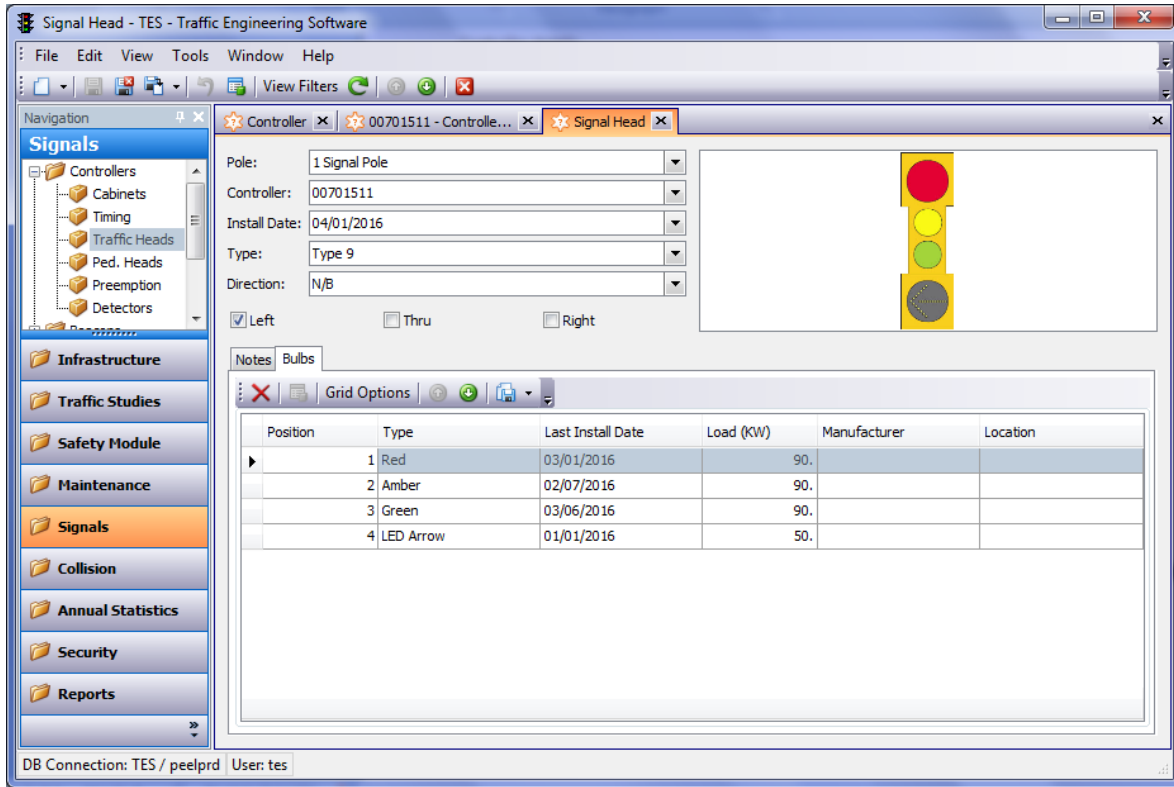
Cabinet: 1

Timings Traffic Signals Pedestrian Signals Preemptions Special Functions Detectors Slaves Intersections Midblocks Maintenance Files

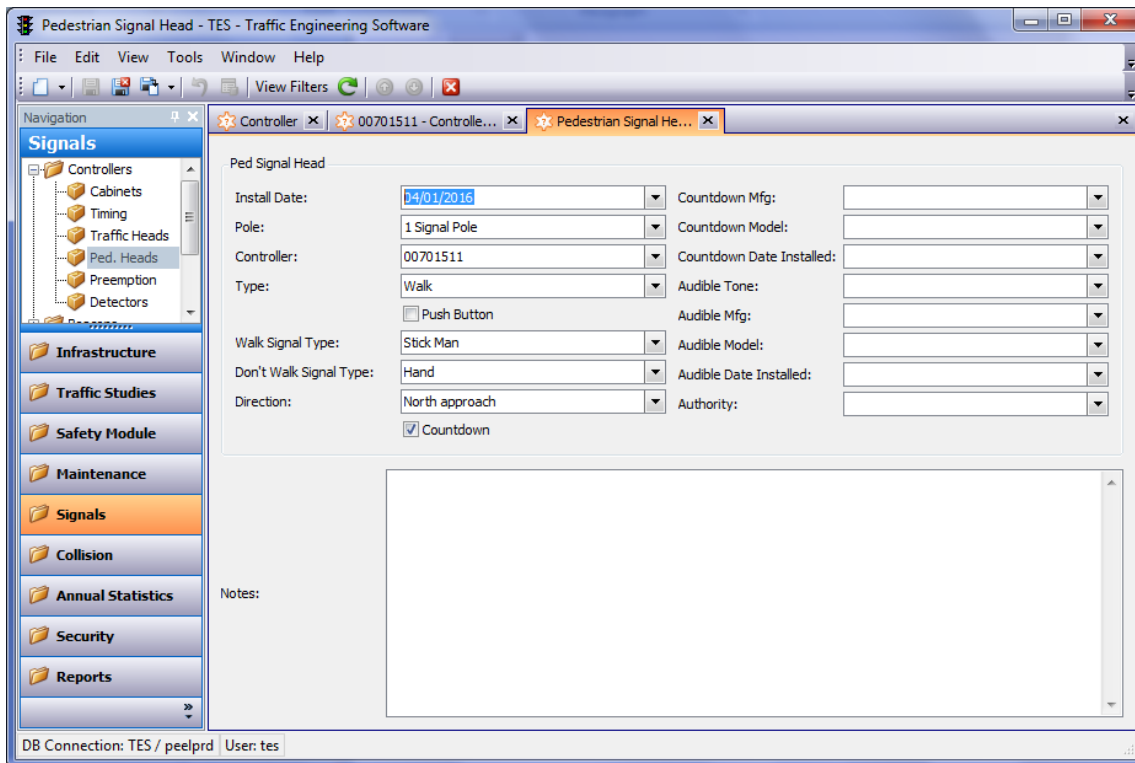
Name	Cycle	Offset	Start Time	End Time	Start Month	End Month	Start Day	End Day	Implemented Date
AM	90	0	06:00:00 AM	11:00:00 AM	January	January	Monday	Monday	
PM	90	0	05:00:00 PM	06:00:00 AM	January	January	Monday	Monday	

DB Connection: TES / peelpd / User: tes

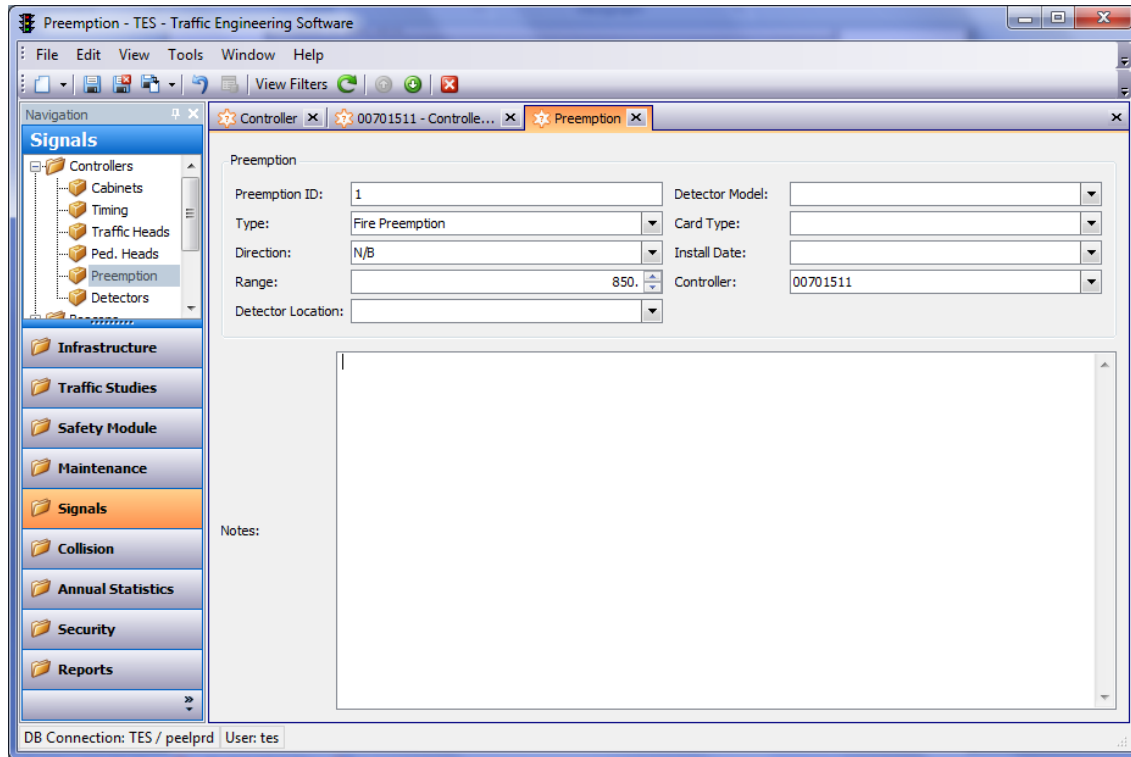
Details of each traffic signal head can be inventories in the TES traffic signal module including the type of the pole and signal head bulbs.



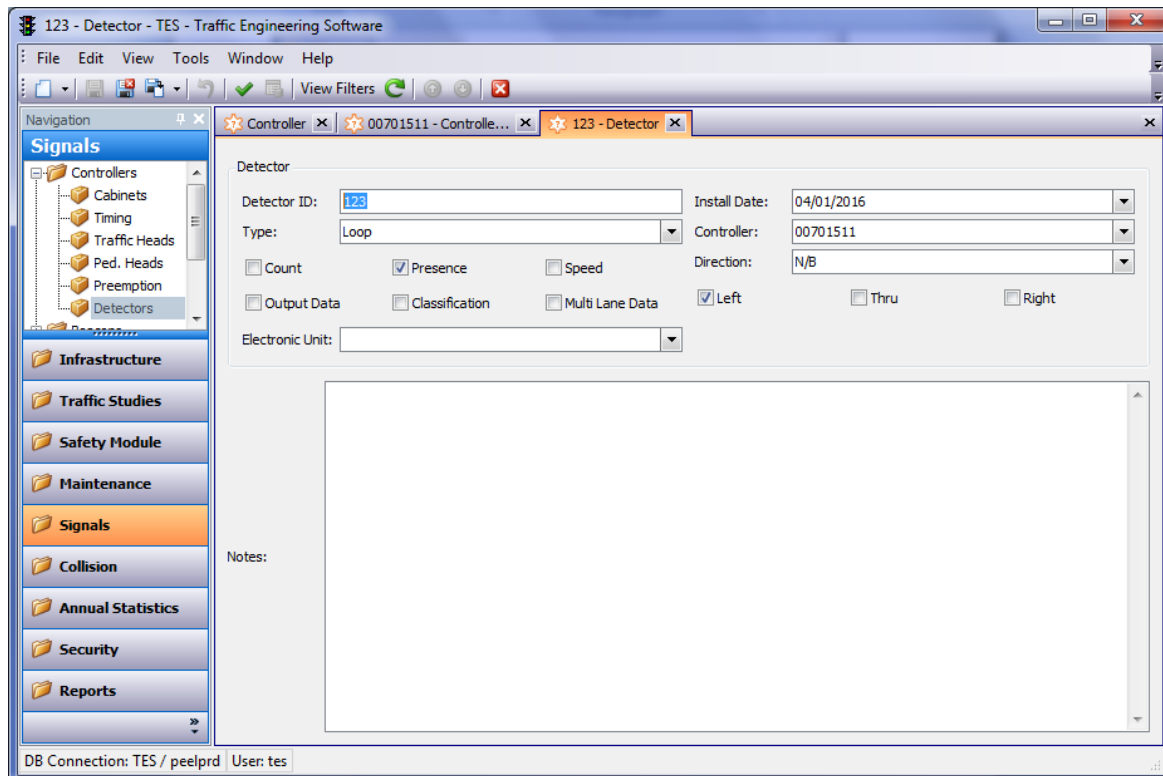
All components of pedestrian signal heads can be inventoried.



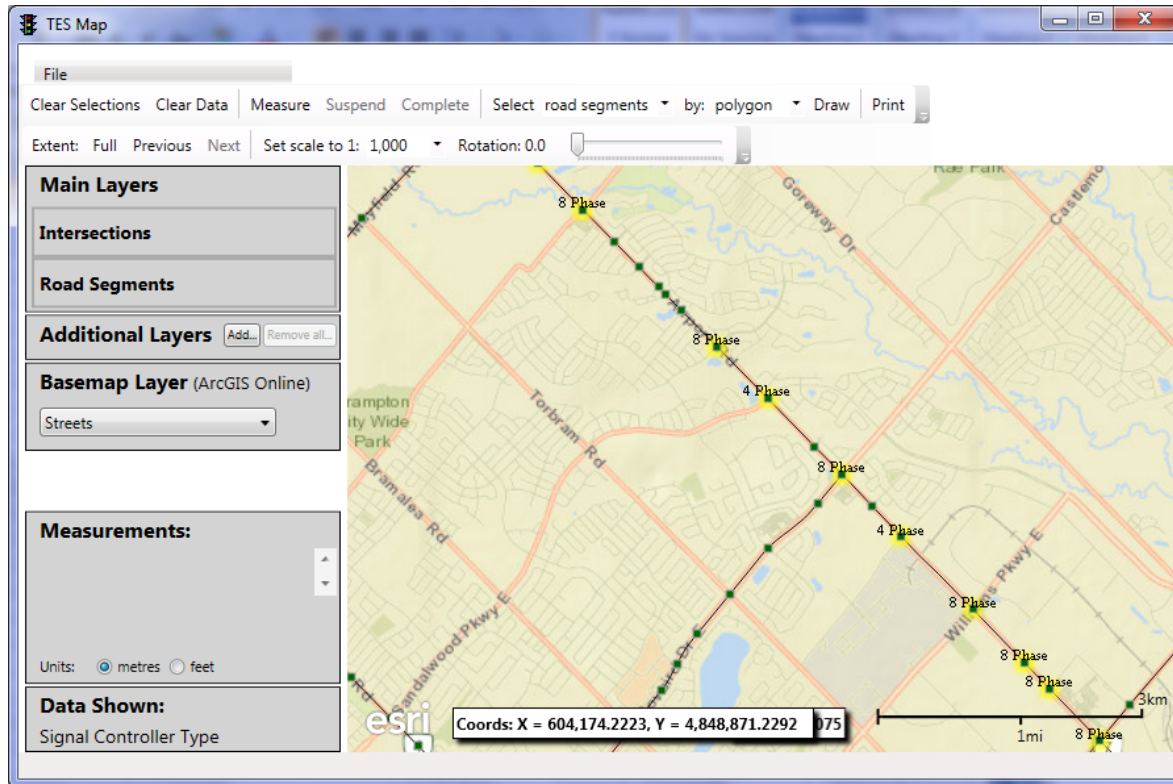
Details of traffic signals equipped with pre-emption are incorporated into the traffic signal module.



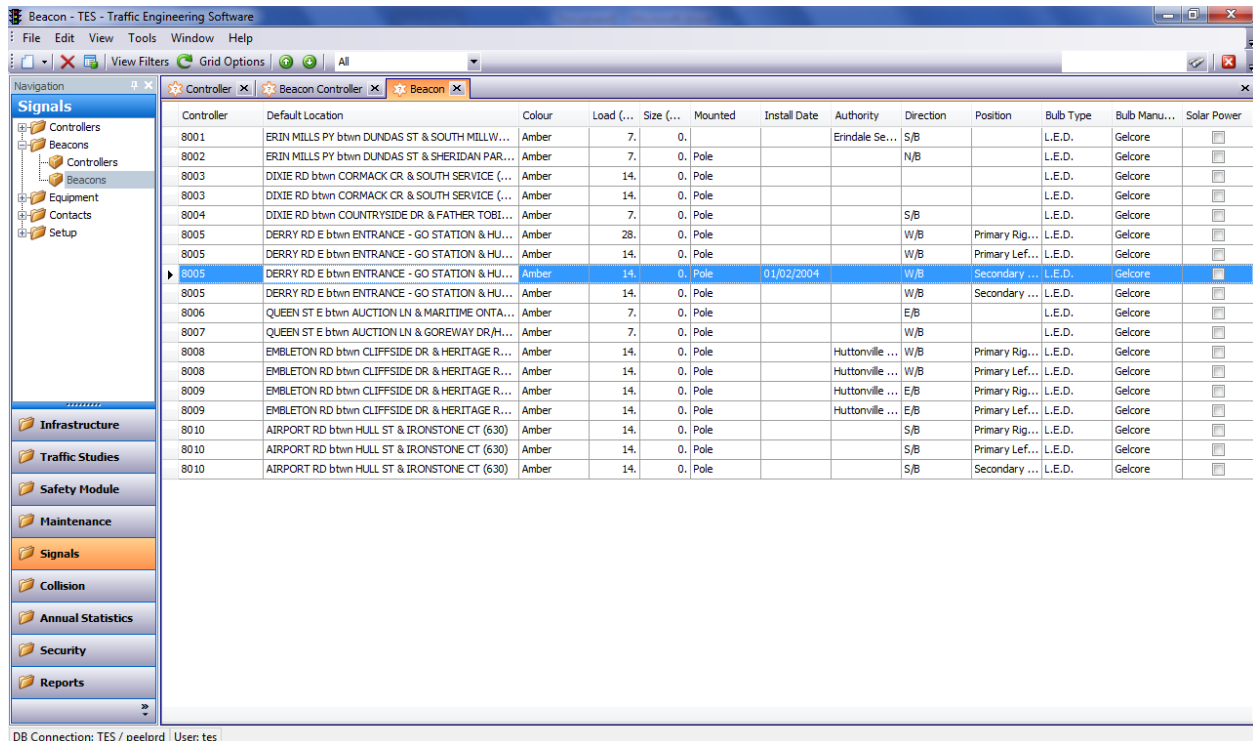
Details of traffic signal detectors are inventoried including type (loop, camera, etc), function (presence, count, etc), lane on which the detector is located, among other attributes.



Traffic signals can be displayed on GIS based on the criteria defined by the user.



The signal module also can inventory flashing beacons installed at stopped controlled intersections or any other types of beacons (e.g. traffic signal ahead, watch end of the queue).



Controller	Default Location	Colour	Load (...)	Size (...)	Mounted	Install Date	Authority	Direction	Position	Bulb Type	Bulb Manu...	Solar Power
8001	ERIN MILLS PY btwn DUNDAS ST & SOUTH MILLW...	Amber	7.	0.			Erindale Se...	S/B		L.E.D.	Gelcore	<input type="checkbox"/>
8002	ERIN MILLS PY btwn DUNDAS ST & SHERIDAN PAR...	Amber	7.	0.	Pole			N/B		L.E.D.	Gelcore	<input type="checkbox"/>
8003	DIXIE RD btwn CORMACK CR & SOUTH SERVICE (...)	Amber	14.	0.	Pole					L.E.D.	Gelcore	<input type="checkbox"/>
8003	DIXIE RD btwn CORMACK CR & SOUTH SERVICE (...)	Amber	14.	0.	Pole					L.E.D.	Gelcore	<input type="checkbox"/>
8004	DIXIE RD btwn COUNTRYSIDE DR & FATHER TOBI...	Amber	7.	0.	Pole			S/B		L.E.D.	Gelcore	<input type="checkbox"/>
8005	DERRY RD E btwn ENTRANCE - GO STATION & HJ...	Amber	28.	0.	Pole			W/B	Primary Rig...	L.E.D.	Gelcore	<input type="checkbox"/>
8005	DERRY RD E btwn ENTRANCE - GO STATION & HJ...	Amber	14.	0.	Pole			W/B	Primary Lef...	L.E.D.	Gelcore	<input type="checkbox"/>
8005	DERRY RD E btwn ENTRANCE - GO STATION & HJ...	Amber	14.	0.	Pole	01/02/2004		W/B	Secondary ...	L.E.D.	Gelcore	<input type="checkbox"/>
8005	DERRY RD E btwn ENTRANCE - GO STATION & HJ...	Amber	14.	0.	Pole			W/B	Secondary ...	L.E.D.	Gelcore	<input type="checkbox"/>
8006	QUEEN ST E btwn AUCTION LN & MARITIME ONTA...	Amber	7.	0.	Pole			E/B		L.E.D.	Gelcore	<input type="checkbox"/>
8007	QUEEN ST E btwn AUCTION LN & GOREWAY DR/H...	Amber	7.	0.	Pole			W/B		L.E.D.	Gelcore	<input type="checkbox"/>
8008	EMBLETON RD btwn CLIFFSIDE DR & HERITAGE R...	Amber	14.	0.	Pole		Huttonville ...	W/B	Primary Rig...	L.E.D.	Gelcore	<input type="checkbox"/>
8008	EMBLETON RD btwn CLIFFSIDE DR & HERITAGE R...	Amber	14.	0.	Pole		Huttonville ...	W/B	Primary Rig...	L.E.D.	Gelcore	<input type="checkbox"/>
8009	EMBLETON RD btwn CLIFFSIDE DR & HERITAGE R...	Amber	14.	0.	Pole		Huttonville ...	E/B	Primary Rig...	L.E.D.	Gelcore	<input type="checkbox"/>
8009	EMBLETON RD btwn CLIFFSIDE DR & HERITAGE R...	Amber	14.	0.	Pole		Huttonville ...	E/B	Primary Lef...	L.E.D.	Gelcore	<input type="checkbox"/>
8010	AIRPORT RD btwn HULL ST & IRONSTONE CT (630)	Amber	14.	0.	Pole			S/B	Primary Rig...	L.E.D.	Gelcore	<input type="checkbox"/>
8010	AIRPORT RD btwn HULL ST & IRONSTONE CT (630)	Amber	14.	0.	Pole			S/B	Primary Lef...	L.E.D.	Gelcore	<input type="checkbox"/>
8010	AIRPORT RD btwn HULL ST & IRONSTONE CT (630)	Amber	14.	0.	Pole			S/B	Secondary ...	L.E.D.	Gelcore	<input type="checkbox"/>

Beacon - TES - Traffic Engineering Software

File Edit View Tools Window Help

View Filters

Navigation

- Signals
 - Controllers
 - Beacons
 - Controllers
 - Beacons
 - Equipment
 - Contacts
 - Setup
- Infrastructure
- Traffic Studies
- Safety Module
- Maintenance
- Signals
- Collision
- Annual Statistics
- Security
- Reports

Controller x Beacon Controller x Beacon x Beacon x

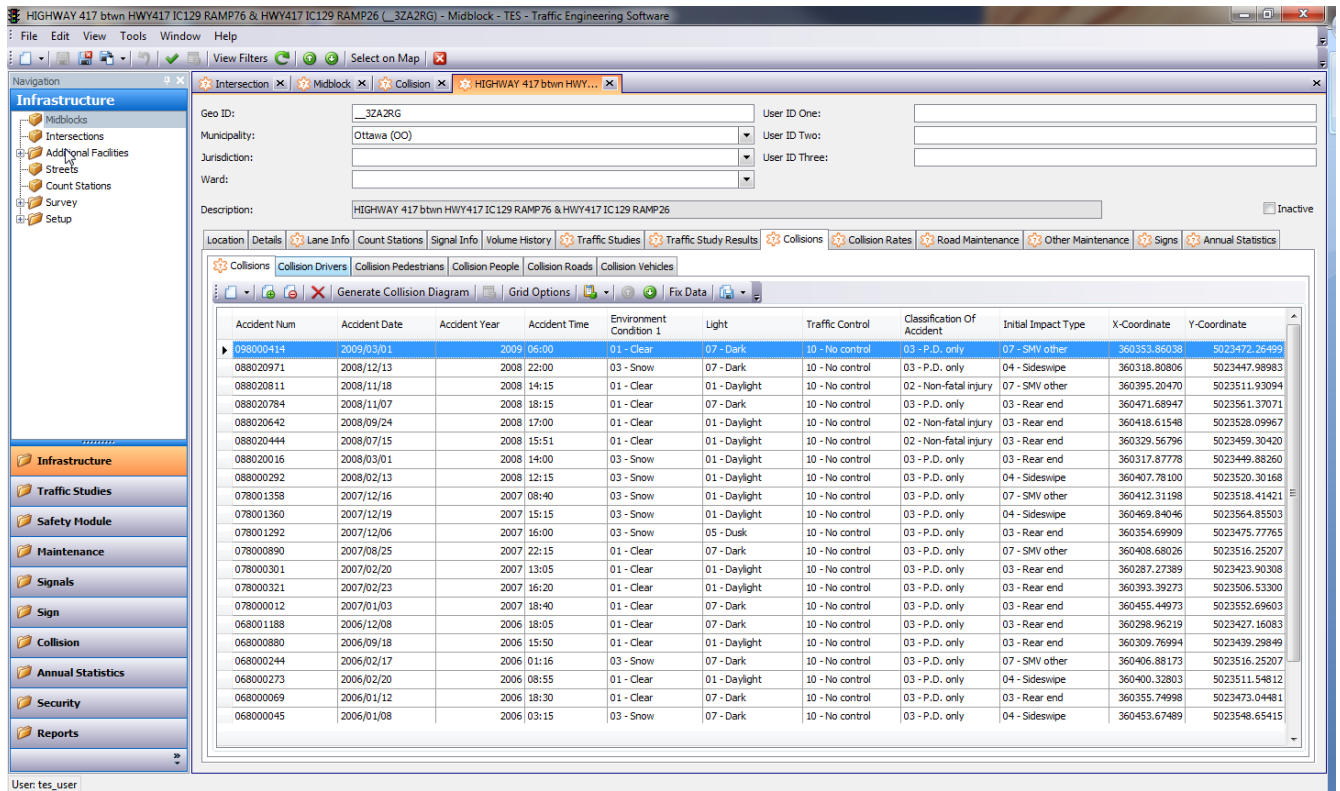
Beacon

Controller:	8005	Authority:	
Default Location:	DERRY RD E btwn ENTRANCE - GO STATION ...	Direction:	W/B
Type:		Position:	Secondary Right Side
Colour:	Amber	Bulb Type:	L.E.D.
Load (KW):	14	Bulb Manufacturer:	Gelcore
Size (mm):	0	Serial No:	
Mounted:	Pole	<input type="checkbox"/> Solar Power	
Install Date:	01/02/2004		

DB Connection: TES / peelpd User: tes

6 ROAD NETWORK MODULE

The Road Network Module provides an intersections and midblocks model for managing traffic engineering data. All traffic engineering data is tied to the Municipal Road Network.

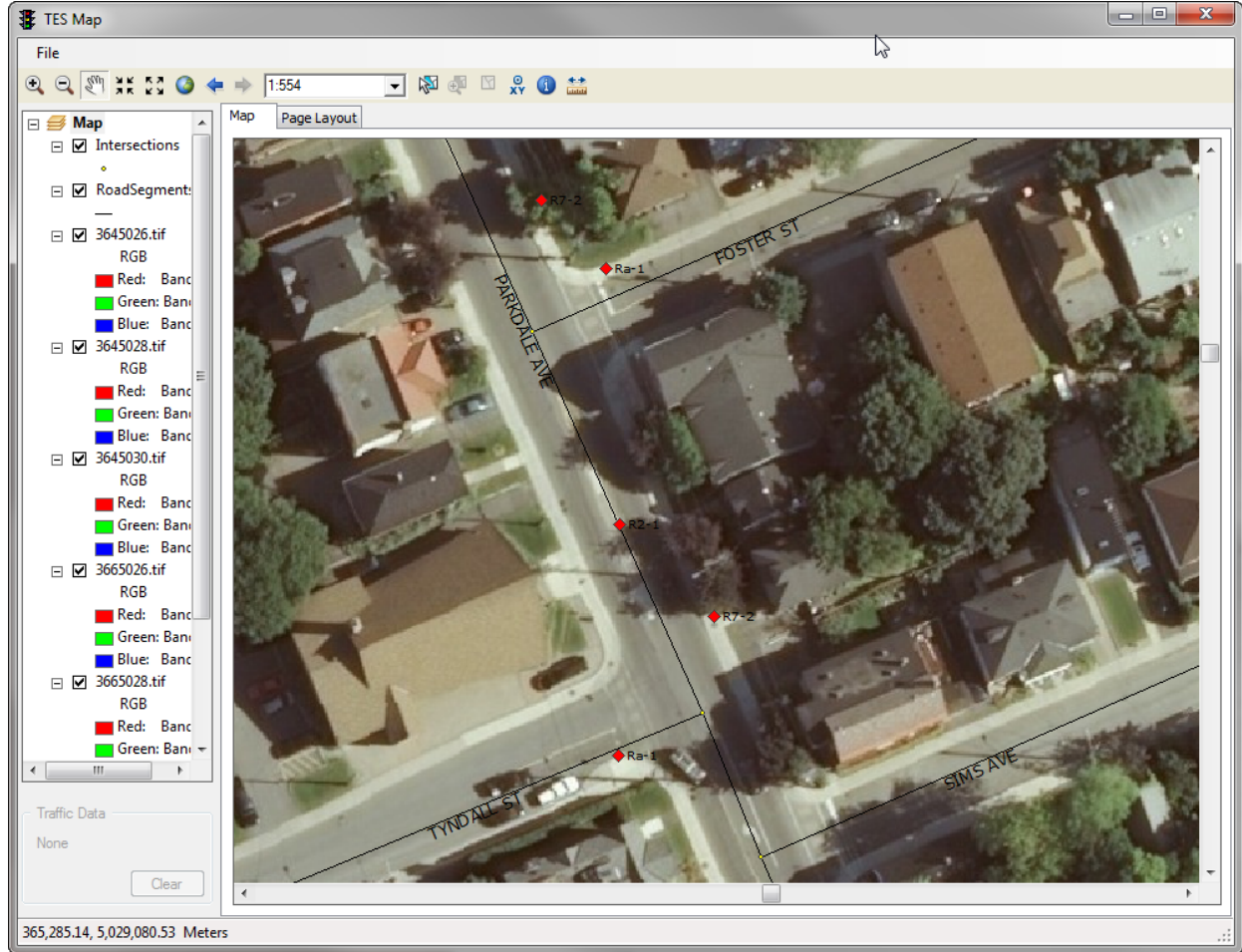


Accident Num	Accident Date	Accident Year	Accident Time	Environment Condition 1	Light	Traffic Control	Classification Of Accident	Initial Impact Type	X-Coordinate	Y-Coordinate
098000414	2009/03/01	2009	06:00	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	360353.86038	5023472.26499
088020971	2008/12/13	2008	22:00	03 - Snow	07 - Dark	10 - No control	03 - P.D. only	04 - Sideswipe	360318.80806	5023447.98983
088020811	2008/11/18	2008	14:15	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	07 - SMV other	360395.20470	5023511.93094
088020784	2008/11/07	2008	18:15	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	03 - Rear end	360471.68947	5023561.37071
088020642	2008/09/24	2008	17:00	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	03 - Rear end	360418.61548	5023528.09967
088020444	2008/07/15	2008	15:51	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	03 - Rear end	360329.56796	5023459.30420
088020016	2008/03/01	2008	14:00	03 - Snow	01 - Daylight	10 - No control	03 - P.D. only	03 - Rear end	360317.87778	5023449.88260
088000292	2008/02/13	2008	12:15	03 - Snow	01 - Daylight	10 - No control	03 - P.D. only	04 - Sideswipe	360407.78100	5023520.30168
078001358	2007/12/16	2007	08:40	03 - Snow	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	360412.31198	5023518.41421
078001360	2007/12/19	2007	15:15	03 - Snow	01 - Daylight	10 - No control	03 - P.D. only	04 - Sideswipe	360469.84046	5023564.85503
078001292	2007/12/06	2007	16:00	03 - Snow	05 - Dusk	10 - No control	03 - P.D. only	03 - Rear end	360354.69909	5023475.77765
078000990	2007/08/25	2007	22:15	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	360408.68026	5023516.25207
078000301	2007/02/20	2007	13:05	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	03 - Rear end	360287.27289	5023423.90308
078000321	2007/02/23	2007	16:20	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	03 - Rear end	360393.39273	5023506.53300
078000012	2007/01/03	2007	18:40	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	03 - Rear end	360455.44973	5023552.69603
068001188	2006/12/08	2006	18:05	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	03 - Rear end	360298.96219	5023427.16083
068000880	2006/09/18	2006	15:50	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	03 - Rear end	360309.76994	5023439.29849
068000244	2006/02/17	2006	01:16	03 - Snow	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	360406.88173	5023516.25207
068000273	2006/02/20	2006	08:55	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	04 - Sideswipe	360400.32803	5023511.54812
068000069	2006/01/12	2006	18:30	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	03 - Rear end	360355.74998	5023473.04481
068000045	2006/01/08	2006	03:15	03 - Snow	07 - Dark	10 - No control	03 - P.D. only	04 - Sideswipe	360453.67489	5023548.65415

Each location's attributes and traffic engineering data associated with the selected location can be easily filtered, reported and displayed on a map (see GIS Module). TES' open database concept allows the integration of TES' data with other infrastructure solutions or GIS systems.

7 GIS MODULE

TES incorporates ESRI's ArcEngine (an industry standard GIS format) to produce traffic engineering maps within the TES application. With the custom built function the user can easily locate intersection or midblocks on a map and preview any traffic engineering data for the selected locations. Also, the user is able to filter any traffic engineering data stored in TES and display it on a map whether it is collisions, volume, speed, warrants, sign, signals or any other data.



Each user can add additional layers including the aerial photo and change each layer attribute. Maps with displayed data can be printed directly from TES or exported into PDF file format.

Appendix B: Annual Maintenance and Support

TES Software Maintenance Plans

● Basic *(A maximum of 20hr/year)*

- Phone, email, and remote support for any technical issues related to the TES Software
- Phone, and email support for any traffic engineering/operations related issues that are impacted or influenced by the TES Software
- Assistance with GIS and road additions and changes that impact GIS and TES
- Minor customization and updating of reports in TES as required
- Software bug fixes
- Provision of support for IT staff in any issue related to TES (TES Software, Database, or GIS)
- Software installation support for any new installations (installation of the software on a new computer)
- Software/updates installation support for any new updates
- Unlimited access to the ESRI GIS functionality within the TES software (i.e. no need to purchase ESRI ArcGIS licenses for each user to have the GIS mapping functionality)
- Provision of the TES Software updates within the same version of the Software

● Premium

- All items included in the basic maintenance plan plus:
- An additional 10 hr/year of the services provided under the basic maintenance plan
- Annual Safety Performance Function (SPF) calibration
- TES software safety module set up
- Conduct annual network screening for mid-blocks and intersections
- Conduct over representation analysis
- Add new traffic counters to the TES Software
- Traffic count data import services up to 10 hrs per year
- Customization up to 10 hrs per year
- Report customization
- Configuring and running the red light camera site selection tool
- Review of traffic volume data (temporal, spatial, and quality) to identify locations for annual traffic volume data collection
- Additional support is charged at a lower rate

● Ultimate

- This is a full service plan. All updates, changes, queries, and reports are performed by TES staff.
- Additionally, all items described in the premium maintenance plan are included in the ultimate plan. The customization is increase to 20 hrs per year

Subject: Follow-up - CQ7-2020 40 km/h Residential Speed Limits - City-wide

Moved by: Councillor McKenzie
Seconded by: Councillor Kaschak

Decision Number: **ETPS 822**

THAT the City of Windsor **IMPLEMENT** a blanket Option 2 from report S 111/2020 to be funded through the Budget Stabilization Reserve Fund, (BSR); and,

THAT Administration **BE DIRECTED** to use a target speed of 40 km/h or lower for the design of all traffic calming plans on local roads; and,

THAT in the upcoming Complete Streets Policy, Administration **BE DIRECTED** to use a target speed of 40 km/h or lower for residential local roads and to incorporate this into the policy; and,

THAT Traffic By-law 9148 **BE AMENDED** as listed and attached in Appendix 1; and,

THAT the City Solicitor **BE DIRECTED** to prepare the necessary documents to amend the by law; and,

THAT Administration **REPORT BACK** to the Environment, Transportation and Public Safety Standing Committee within 12 months of implementation of the speed limit changes listed in Appendix 1 with the results of the speed reduction pilot program; and,

THAT an Additional Information Memo **BE PROVIDED** when this report proceeds to Council that outlines the cost implications and the details related to the changes to Bylaw 9143 as it relates to Option 2 – To Reduce the City-wide default speed limit to 40 km/h.

Carried.

Councillors Francis and Costante voting nay.

Report Number: S 13/2021
Clerk's File: ST2021

Clerk's Note:

- a) The recommendation of the Standing Committee and Administration are **not** the same.

- b) Please refer to Item 8.2 from the Environment, Transportation & Public Safety Standing Committee Meeting held March 24, 2021.
- c) To view the stream of this Standing Committee meeting, please refer to:
<http://csg001-harmony.sliq.net/00310/Harmony/en/PowerBrowser/PowerBrowserV2/20210406/-1/5227>

Subject: Follow-up - CQ7-2020 40 km/h Residential Speed Limits - City-wide

Reference:

Date to Council: March 24, 2021
Author: Jeff Hagan
Transportation Planning Senior Engineer
519-255-6267 ext 6003
jhagan@citywindsor.ca
Planning & Building Services
Report Date: February 10, 2021
Clerk's File #: ST2021

To: Mayor and Members of City Council

Recommendation:

1. THAT Administration **BE DIRECTED** to use a target speed of 40 km/h or lower for the design of all traffic calming plans on local roads.
2. THAT in the upcoming Complete Streets Policy, Administration **BE DIRECTED** to use a target speed of 40 km/h or lower for residential local roads and to incorporate this into the policy.
3. THAT Traffic By-law 9148 **BE AMENDED** as listed and attached in Appendix 1.
4. THAT the City Solicitor **BE DIRECTED** to prepare the necessary documents to amend the by law.
5. THAT Administration **REPORT BACK** to the Environment, Transportation and Public Safety Standing Committee within 12 months of implementation of the speed limit changes listed in Appendix 1 with the results of the speed reduction pilot program.
6. THAT Administration **REPORT BACK** with a list of streets for the implementation of a 40 km/h speed limit for consideration for the 2022 capital and operating budgets.

Executive Summary:

As directed by Council, a strategy has been prepared to address traffic calming as well as speed limit reductions as an alternative to traffic calming in a comprehensive way. The strategy is made up of the following components:

- Speed humps and any alternative traffic calming measures: an update to the Traffic Calming Policy is provided in a separate accompanying report (report S 24/2021 Traffic Calming Policy Update 2021).
- Speed limit reductions as an alternative to traffic calming: as outlined in the table below.

Case	Proposed Approach
Physical changes are being made to the street (e.g. traffic calming, road reconstruction) or newly constructed streets	<ul style="list-style-type: none"> • Traffic calming plans: use a target speed of 40 km/h for local residential streets. • Other projects: incorporate a target speed of 40 km/h for local residential streets into the upcoming Complete Streets Policy.
No physical changes to the street – low existing average speeds	<ul style="list-style-type: none"> • Identify local residential streets where average speeds already support a 40 km/h speed limit. • Bring forward a list of 40 km/h candidate streets for Council to consider for inclusion in the 2022 capital and operating budget.
No physical changes to the street – higher existing average speeds	<ul style="list-style-type: none"> • Implement lowered speed limits in select locations as a pilot program. • Report back in 12 months on the results of the pilot program, including: <ul style="list-style-type: none"> ○ Change in speeds before/after ○ Speed comparison against neighbourhoods that remained at 50 km/h ○ Police enforcement experience ○ Resident attitudes to the change • Develop recommendations for phasing based on the outcome of the pilot study.

The proposed 40 km/h pilot program includes two speed areas and four individual streets. Initial cost is \$12,000; ongoing maintenance cost is \$800 per year.

Background:

At the March 2, 2020 meeting of Council, Councillor Kaschak asked the following Council Question:

CQ7-2020

Asks that if Council decides to move forward with reducing the speed limit to 40 km/h on all city residential streets, that administration advise of the timelines and cost to implement this across the city.

A response to this Council Question was provided in report S 111/2020 CQ7-2020 40 km/h Residential Speed Limits (Attached as Appendix 2 for reference). This report was brought before the Environment, Transportation and Public Safety Standing Committee on October 21, 2020 and then came before Council on November 9, 2020. The report outlined high-level costs, advantages, disadvantages and risks of three options to implement the speed reduction:

1. Keep the default City-wide speed limit at 50 km/h and place 40 km/h speed limit signs on residential streets,
2. Decrease the default City-wide speed limit to 40 km/h and place 50 km/h speed limit signs on major roads that would remain at 50 km/h, and
3. Keep the default City-wide speed limit at 50 km/h and implement 40 km/h speed areas in residential neighbourhoods.

In response to report S 111/2020, Council made the following resolution:

CR559/2020

That the report of the Transportation Planning Senior Engineer dated October 5, 2020 entitled "CQ7-2020 40 km/h Residential Speed Limits" BE REFERRED to Administration to allow for a report within 120 days on a comprehensive strategy, looking at speed limits as an alternative, in addition to speed bumps and any alternative traffic calming measure that makes sense, for Council's consideration in a fulsome manner; and that administration ALSO INCLUDE any outstanding CQ's on traffic calming at the same time

The requested strategy is provided to Council as follows:

- Speed humps and any alternative traffic calming measures: report S 24/2021 Traffic Calming Policy Update 2021
- Consideration of speed limit reductions as an alternative to traffic calming: report S 13/2021 (this report)

The outstanding Council Questions relating to traffic calming are addressed in Table 1.

Table 1: Traffic Calming Council Questions

Council Question	Addressed by	Notes
<p>CQ14-2018 Asks for a report soon on the feasibility of installing a school crosswalk on Cabana Road East in the vicinity of Roseland Public School for the safety of children crossing in light of the recent widening of the street to four lanes.</p>	<p>Report S 156/2018 (deferred by Resolution B5/2020, attached as Appendix 3)</p> <p>Report S 29/2019 (deferred by Resolution B5/2020, attached as Appendix 4)</p> <p>Report C 45/2019 (deferred by Resolution B5/2020, attached as Appendix 5)</p>	<p>This Council Question does not address traffic calming. However, Council has directed (B5/2020) that the report come forward at the same time as the Traffic Calming Policy update.</p>
<p>CQ14-2019 Asks that Council receive an administrative report outlining how residents can have traffic calming components introduced in their neighbourhoods if they don't meet warrant benchmarks?</p> <p>CQ 15-2019 Asks that administration report back to council regarding traffic calming methods for local streets that do not meet warrants for stop signs. My focus is specifically regarding the installation of speed humps being installed on some potential residential streets like in many other Ontario cities specifically Ottawa and Toronto. For proven traffic calming results.</p>	<p>Report S 58/2020 (referred to 2021 budget)</p> <p>Report S 24/2021 (Traffic Calming Policy Update 2021)</p>	

Council Question	Addressed by	Notes
<p>CQ21-2020 That given the significant cluster of developments through the Howard Avenue corridor between Cabana and South Cameron and increasing concerns among current residents around the capability of the municipal infrastructure directly impacted to support these developments, that Administration prepare a report evaluating those capacities and what if any appropriate investments should proceed in order to accommodate the new developments. The analysis should include a consolidated traffic impact study, an analysis of the condition of the roadway, the need for traffic management infrastructure and/or traffic calming as well as active transportation capacities or deficiencies.</p>	<p>N/A</p>	<p>Report S 24/2021 (Traffic Calming Policy Update 2021) provides recommendations for traffic calming on arterial roads (e.g. Howard Avenue) in a general sense.</p> <p>The requested traffic analysis is being done as part of the Howard Avenue detailed design project, currently in progress.</p> <p>Based on the project schedule, this report is anticipated to be brought to the April 2021 Environment, Transportation and Public Safety Standing Committee meeting.</p>

At its January 19, 2021 meeting, the Windsor Bicycling Committee moved to endorse Option 2 from report S 111/2020 (i.e. reducing the default speed limit to 40 km/h City-wide and signing streets that would remain at 50 km/h).

Methods of Setting Speed Limits

There is no single standard legislative framework or engineering best practice for setting of speed limits. Most jurisdictions in North America use the engineering approach to set speed limits. In this approach, speed limits are based primarily on the 85th percentile speed or design speed of the roadway, or on a scoring system where the roadway characteristics are each assigned scores as a measure of risk.

In Ontario – as well as other jurisdictions across North America – the injury minimization approach is gaining popularity, particularly in jurisdictions that have adopted Vision Zero. In this approach, speed limits are set based on the crash types that are likely to occur, along with the human body’s tolerance to withstand these forces.

For the injury minimization approach, areas where motor vehicles are likely to share space with pedestrians and cyclists are typically posted with 40 km/h speed limits, either by signing streets individually or by implementing speed areas, depending on the specifics of the neighbourhood road layout.

Effects of Speed Limit Changes

Methods and Practices for Setting Speed Limits: An Informational Report (FHWA 2012) provides additional information on the effects of speed limit changes on operating speeds:

A change in the speed limit almost always changes the mean speed of traffic. However, the changes are not always proportional. For the most part, the change in the mean speed of traffic created by a change in speed limit is around 25 percent of the change in the speed limit. In other words, a speed limit increase or reduction of 6 mph (10 km/h) yields about a 1.5 mph (2.5 km/h) raising or lowering of the mean speed, respectively.

This reduction in speed is typically associated with a reduction in both crash risk and crash severity. However, the report provides the following cautions with regard to reducing speed limits to minimize injuries:

[S]peed limits need to be credible—they must generally reflect driver expectancies regarding travel speed. So while obtaining safe travel speeds is the prime objective of the injury minimization approach (as well as the major challenge), it should be noted that many jurisdictions need to understand they are starting from a point where driver expectancies result in operating speeds that are higher than the target speeds of an injury minimization approach.

In order to achieve safe speeds and make the associated speed limits credible for the driving population, road authorities need to:

- Make the road and its environment more “self-explaining” through traffic control devices, publicity and education campaigns, and reconstruction where required; and*
- Build a case over time for a new paradigm as to what is regarded and legislated as a safe speed limit for the street network.*

Target Speed vs. Design Speed

The term “target speed” is used throughout this report and in the quoted material. The concept of target speed differs from the more widely known concept of design speed:

- **Design speed:** all roadway features are designed to allow vehicles under normal driving conditions to travel at a speed no lower than the design speed under normal driving conditions.
- **Target speed:** the features of the roadway are designed to discourage vehicles from travelling faster than the target speed.

The target speed approach can consider factors that are not normally considered in the design speed approach (e.g. the “optical width” of the street, or the presence of on-street parking).

Discussion:

To develop a proposed strategy for speed limit reductions in residential neighbourhoods, the following questions were considered:

- What are the issues that the speed limit reduction is intended to address? What other tools are available to address these issues?
- What are the likely effects of the speed limit reduction?

Issues to be Addressed

The issue that speed limit reductions are intended to address was inferred to be excessive vehicle speed, along with related impacts such as:

- Increased collision risk or increased collision severity,
- Pedestrian and cyclist comfort, and
- Noise and neighbourhood enjoyment.

Report S 24/2021 Traffic Calming Policy Update 2021 provides a proposed range of traffic calming measures that directly address speeding concerns, as well as processes that address resident speeding concerns. However, regardless of how streamlined the process is for approving or prioritizing neighbourhood speeding concerns received from residents, it would be impractical and cost-prohibitive to place physical traffic calming measures on all neighbourhood streets where speeding occurs.

Proposed Strategy

The proposed strategy for implementing 40 km/h speed limits in residential neighbourhoods is broken down into three components, as summarized in Table 2.

Table 2: Neighbourhood Speed Limit Reduction Strategy

Case	Proposed Approach
Physical changes are being made to the street (e.g. traffic calming, road reconstruction) or newly constructed streets	<ul style="list-style-type: none"> • Traffic calming plans: use a target speed of 40 km/h for local residential streets. • Other projects: incorporate a target speed of 40 km/h for local residential streets into the upcoming Complete Streets Policy.
No physical changes to the street – low existing average speeds	<ul style="list-style-type: none"> • Identify local residential streets where average speeds already support a 40 km/h speed limit. • Bring forward a list of 40 km/h candidate streets for Council to consider for inclusion in the 2022 capital and operating budget.
No physical changes to the street – higher existing average speeds	<ul style="list-style-type: none"> • Implement lowered speed limits in select locations as a pilot program. • Report back in 12 months on the results of the pilot program, including: <ul style="list-style-type: none"> ○ Change in speeds before/after ○ Speed comparison against neighbourhoods that remained at 50 km/h ○ Police enforcement experience ○ Resident attitudes to the change • Develop recommendations for phasing based on the outcome of the pilot study.

Immediately implementing a speed limit reduction in residential neighbourhoods City-wide is not recommended for the following reasons:

- **Uncertain outcomes:** based on the available Windsor data and studies from other jurisdictions, it is uncertain whether the speed limit reduction will provide benefit in terms of either vehicle speed reduction or reduced collision frequency or severity. A pilot study in a limited area would allow for this issue to be examined more thoroughly.
- **Resources and staffing:** implementing the speed limit reduction in a single phase will create significant resource demands. In order to install all of the required signage in a short timeframe, additional temporary staff may be required. In contrast, a phased approach over several years would allow for implementation at existing staffing levels.
- **Competing priorities:** the upcoming Vision Zero Action Plan will make recommendations regarding road safety initiatives. Committing resources to a speed limit reduction program now will reduce the Corporation's flexibility in responding to the Vision Zero Action Plan's recommendations when they come forward. The Vision Zero Action Plan is expected to be brought forward for approval in approximately 1 year.

Further details on each component of the proposed strategy are provided below:

Physical Changes or New Construction

Projects involving significant physical changes to the street or the construction of new streets provide opportunities to incorporate design features into the roadway to encourage compliance with a 40 km/h speed limit.

The Traffic Calming Policy provides one process where physical features can be added to a residential street can be added to a street to encourage lower speeds. Should Council so direct, Administration would be able to use 40 km/h as the target speed for traffic calming plans on local streets and for the design of traffic calming features in new subdivisions.

For streets where significant physical changes are being made to a street but no traffic calming request has been received (e.g. roadway reconstructions for sewer or watermain projects), the opportunity also exists to design the reconstructed roadway to encourage a 40 km/h vehicle speed.

The recommendations of the Active Transportation Master Plan, *Walk Wheel Windsor*, include a recommendation to develop a Complete Streets Policy and design guidelines. *Walk Wheel Windsor* identified the following goals for Complete Streets:

- Enhance safety for all travel modes
- Expand transportation choice
- Support universal accessibility
- Enhance connection to community
- Develop a sense of place

The Complete Streets design guidelines would address the following:

- Existing road improvements to entire sections or localized changes to intersections;
- Road and sidewalk rehabilitation projects, providing opportunities to reallocate street space; and
- Street operations and maintenance programs to better support specific travel modes, as well as mobility needs for all ages and abilities throughout the year and across the network.

Should Council so direct, a target speed of 40 km/h for residential local streets could be identified in the Complete Streets Policy and incorporated into the Complete Streets design guidelines. This target speed would be in keeping with Complete Streets principles as they apply to low-speed, low-volume neighbourhood streets.

No Physical Changes to the Street

As noted in *Background*, above, speed limit reductions will generally cause moderate reductions in average driver speeds along with a significant decrease in speed limit compliance. A phased approach over several years to the speed limit reduction rollout is recommended for the following reasons:

- A phased approach would allow the installation of the required signage without the need to hire additional staff; and
- A phased approach would allow targeted speed enforcement neighbourhood-by-neighbourhood as speed limits are lowered to help reinforce compliance with the new 40 km/h speed limit.

It is recommended that the first phase of the rollout on local residential streets with higher speeds be done as a 12-month pilot program. At the end of the 12-month pilot program, the results of the pilot program would be reported back to the Environment, Transportation and Public Safety Standing Committee, along with recommendations for implementation of the remainder of the roll-out.

A review of existing available speed data indicates that a significant proportion of Windsor's local residential streets already experience speeds low enough that they would already generally comply with a 40 km/h speed limit. For these streets, targeted enforcement would not be required, but phasing of the installation would still be needed in order to manage staff workloads against other work.

Should Council so direct, a more detailed review could be carried out in order to develop a submission for the 2022 capital and operating budgets that would identify implementation phasing for these streets that already experience lower speeds.

Pilot Program

Candidate locations for the pilot program are shown in Figures 1 through 6. These locations were chosen based on the following factors:

- The street (or all streets in the speed area) is a local residential road with an existing speed limit of 50 km/h;
- The street (or, for speed areas, streets in the area where speed data is available) experiences higher speeds, as confirmed with recent speed data;
- There are similar nearby streets or areas that can be used for comparisons;
- For speed areas: there are a limited number of "gateway" streets into and out of the area.



Figure 1: Pilot Program 40 km/h Speed Area 1 (Bounded by Forest Glade Drive, Tecumseh Road East, Robinet Road & Mulberry Drive)



Figure 2: Pilot Program 40 km/h Speed Area 2 (Bounded by Howard Avenue, Cabana Road East, Holburn Street & Scofield Avenue)

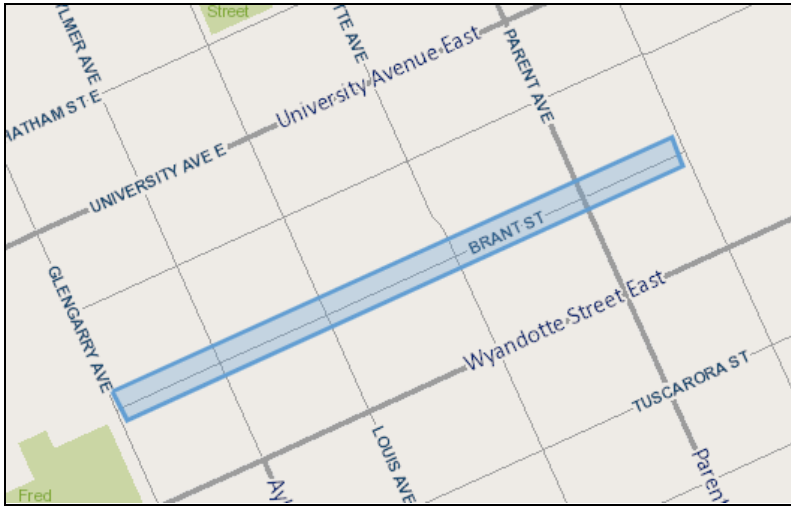


Figure 3: Brant Street 40 km/h Zone (Glengarry to Langlois)

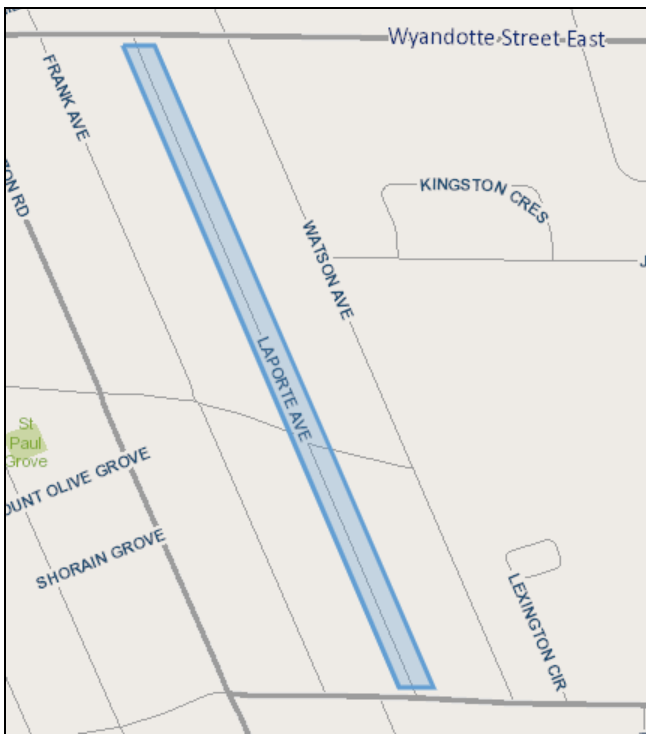


Figure 4: Laporte Avenue 40 km/h Zone (Wyandotte to Little River)

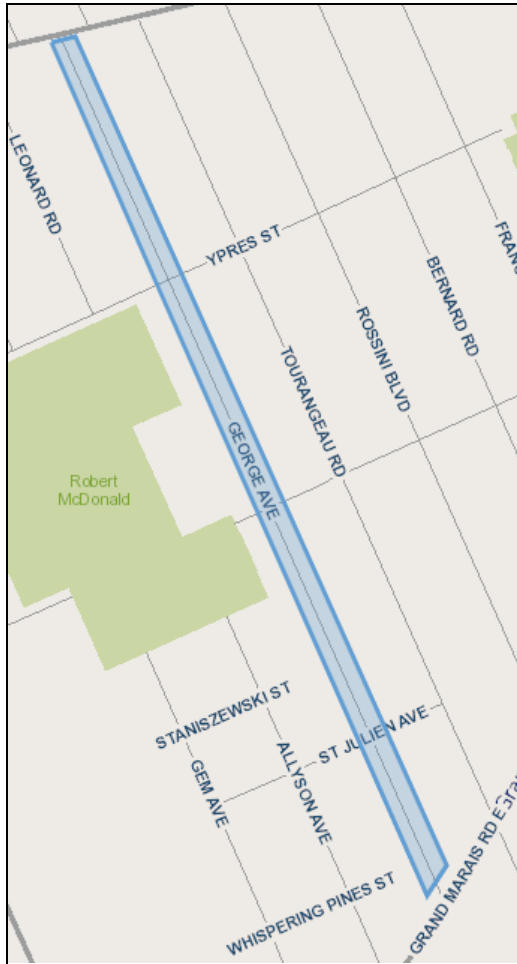


Figure 5: George Avenue 40 km/h Zone (Tecumseh to Grand Marais)

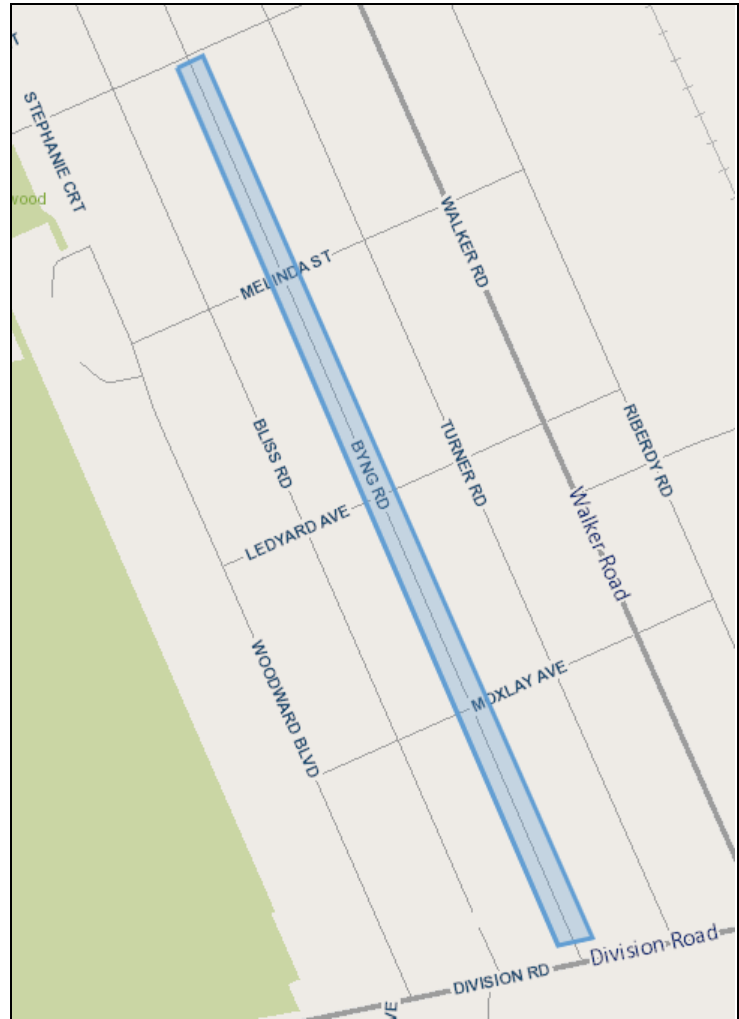


Figure 6: Byng Road 40 km/h Zone (Calderwood to Division)

Pedestrian Crossing – Cabana Road East at Karen/Clara

In previous reports about the school crossing on Cabana Road East at Karen/Clara (listed in Table 1 and attached as Appendices 3 through 5), the following conclusions were noted:

- The existing school crossing met the guidelines and warrant criteria for a school crossing;
- Traffic volumes on Cabana Road East exceeded the recommended maximum for a pedestrian crossover; and
- The warrant for a pedestrian signal was not met.

Based on these factors, no changes to existing conditions (school crossing staffed with two crossing guards) were recommended.

There are no changes to these conclusions or recommendations.

Risk Analysis:

Risks were described in report S 111/2020. No additional critical or significant risks have been identified.

Climate Change Risks

Climate Change Mitigation:

Speed limit reductions would not result in a significant direct change in greenhouse gas emissions.

In the longer term, speed limit reductions may indirectly reduce greenhouse gas emissions by allowing design standards that better encourage walking and cycling.

Climate Change Adaptation:

Speed limit reductions would not result in a significant change to climate change risks.

In the longer term, speed limit reductions may indirectly reduce climate change risks by allowing design standards that incrementally reduce the amount of hard surface in the right-of-way (and thereby reducing the impacts of severe rainfall events) or provide additional opportunities for tree plantings in the right-of-way (and thereby reducing urban heat island effects).

Financial Matters:

The estimated total cost to implement the speed reduction pilot program as recommended in the report is \$12,000 for materials and installation of the required signage and \$800 per year for ongoing maintenance. Costs are broken down by location in Table 3.

Table 3: Pilot Program Costs by Location

Location	Estimated Cost	
	Initial Installation	Ongoing Maintenance (cost per year)
Speed Area 1	\$3,600	\$240
Speed Area 2	\$4,800	\$320
Brant Street (Glengarry to Langlois)	\$600	\$20
Laporte (Wyandotte to Little River)	\$600	\$20
George (Tecumseh to Grand Marais)	\$1,200	\$40
Byng (Calderwood to Division)	\$1,200	\$40
Total	\$12,000	\$800

Initial costs can be accommodated by the Traffic Calming capital project (7069022). Annual maintenance for the 12-month pilot project can be accommodated in the current Traffic Operations operating budget. Annual maintenance beyond this 12-month period

will require an increase to the Traffic Operations operating budget, unless another source of funds is identified.

Recommendations for additional phases, including capital and operating budget impacts, will be provided in the follow-up report at the end of the pilot period.

Report S 111/2020 presented costs for three options to implement a 40 km/h speed limit in residential neighbourhoods City-wide, as summarized in Table 4.

Table 4: Cost Comparison - Speed Limit Reduction Options

Option	Estimated Cost	
	Initial Installation	Ongoing Maintenance (cost per year)
1 – Sign 40 km/h residential streets individually	\$1,043,000	\$69,000
2 – Reduce the City-wide default speed limit to 40 km/h	\$734,000	\$39,000
3 – Implement speed areas in residential neighbourhoods	\$1,088,000	\$60,000

It is anticipated that a mix of speed areas and conventionally signed 40 km/h speed limit zones, selected case-by-case based on the neighbourhood street layout, will result in an overall lower cost than either Option 1 or Option 3.

Consultations:

Dwayne Dawson, Operations

Shawna Boakes and Mike Spagnuolo, Traffic Operations

Insp. Jill Lawrence, Sgt. Morgan Evans & Barry Horrobin, Windsor Police Service

Conclusion:

A comprehensive strategy for speed limit reductions in residential neighbourhoods has been brought forward as directed.

For residential local streets where significant physical changes are proposed or for streets in new subdivisions, it is recommended that the new or reconstructed street be designed to encourage drivers to drive at 40 km/h or lower, and that design guidance to achieve these speeds be incorporated into the upcoming Complete Streets Policy.

For residential local streets where no physical changes are proposed, it is recommended that 40 km/h speed limits be rolled out in phases, with the first phase being conducted as a pilot program to gauge the effectiveness of the change, resident attitudes, and operational impacts.

Planning Act Matters:

N/A

Approvals:

Name	Title
John Revell	Chief Building Official
Josie Gualtieri	Financial Planning Administrator
Mark Winterton	City Engineer
Shelby Askin Hager	City Solicitor
Joe Mancina	City Treasurer
Onorio Colucci	Chief Administrative Officer

Notifications:

Name	Address	Email
Councillor Kaschak		
Councillor McKenzie		
Ian Bawden Constituency Assistant Brian Masse, M.P. Windsor West		masseb1a@parl.gc.ca
Shelley Armstrong Superintendent of Business Greater Essex County District School Board		Shelley.Armstrong@publicboard.ca
John Wayvon, Principal Annemarie Symchyshyn, Vice Principal Roseland Public School	620 Cabana Road East Windsor ON N9G 1A4	
Alicia Higgison Trustee & Chairperson of the Board Greater Essex County District School Board		alicia.higgison@publicboard.ca
Linda Qin Trustee Greater Essex County District School Board		linda.qin@publicboard.ca
Signatories to Cabana/Karen/Clara petition (Appendix to report S 90/2018) <i>(list provided to Clerks)</i>		

Appendices:

- 1 By-law Amendments
- 2 Report S 111/2020 CQ7-2020 40km Residential Speed Limits
- 3 Report S 156/2018 CQ14-2018 Cabana Road East / Roseland Public School Pedestrians
- 4 Report S 29/2019 Additional Information - CQ14-2018 Cabana Road East Roseland Public School Pedestrians
- 5 Report C 45/2019 Second Additional Information - S 156/2018 CQ14-2018 Cabana Road East Pedestrians

AMENDMENTS TO TRAFFIC BY-LAW 9148

ITEM	REGULATION	SECTION	DESCRIPTION	REASON
1	Text ADD	35.8	<p>After (7), add the following:</p> <p align="center">or (8)</p>	Speed reduction pilot program
2	Text ADD	35	<p>Add the following as subsection (8) and renumber the subsequent subsections accordingly:</p> <p>Forty (40) kilometres per hour on all streets and portions of streets in designated areas set out in Schedule "U" hereof pursuant to the powers granted to Council by Section 128(2.1) and (2.2) of the Highway Traffic Act, R.S.O. 1990, Chapter H.8., excluding any streets or portions of streets within the designated area that has a different rate of speed as set out in accordance with the provisions of subsections (1), (2), (3), (4), (5), (6) or (7).</p>	Speed reduction pilot program
3	Schedule "U" – 40 km/h Speed Areas ADD	Entire schedule	Add new Schedule "U", attached.	Speed reduction pilot program

SCHEDULE "U"

40 KM/H SPEED AREAS

AREA NUMBER	AREA DESCRIPTION
1	The area bounded by, but not including, Forest Glade Drive, Tecumseh Road East, Robinet Road & Mulberry Drive.
2	The area bounded by, but not including, Howard Avenue, Cabana Road East, Holburn Street & Scofield Avenue

AMENDMENTS TO TRAFFIC BY-LAW 9148

ITEM	SCHEDULE	STREET	FROM	TO	REASON
4	Schedule "J" – FORTY (40) KILOMETERS PER HOUR SPEED LIMIT ADD	Brant St	Glengarry Ave	Langlois St	Speed reduction pilot program
5	Schedule "J" – FORTY (40) KILOMETERS PER HOUR SPEED LIMIT ADD	Laporte Ave	Wyandotte St E	Little River Rd	Speed reduction pilot program
6	Schedule "J" – FORTY (40) KILOMETERS PER HOUR SPEED LIMIT ADD	George Ave	Tecumseh Rd E	Grand Marais Rd E	Speed reduction pilot program
7	Schedule "J" – FORTY (40) KILOMETERS PER HOUR SPEED LIMIT ADD	Byng Rd	Calderwood Ave	Division Rd	Speed reduction pilot program

Subject: CQ7-2020 40 km/h Residential Speed Limits - City-wide

Reference:

Date to Council: October 21, 2020
Author: Jeff Hagan
Transportation Planning Senior Engineer
519-255-6267 ext 6003
jhagan@citywindsor.ca
Planning & Building Services
Report Date: October 5, 2020
Clerk's File #:

To: Mayor and Members of City Council

Recommendation:

THAT report S 111/2020, "CQ7-2020 40 km/h Residential Speed Limits," **BE RECEIVED** for information.

Executive Summary:

N/A

Background:

At the March 2, 2020 meeting of Council, Councillor Kaschak asked the following Council Question:

CQ7-2020

Asks that if Council decides to move forward with reducing the speed limit to 40 km/h on all city residential streets, that administration advise of the timelines and cost to implement this across the city.

This report provides the requested response.

Highway Traffic Act

In urban areas, the normal default speed limit set by the Highway Traffic Act is 50 km/h. In the City of Windsor, this default speed limit applies to all streets except those where a different speed limit has been set out in Traffic By-law 9148 and posted with appropriate speed limit signs.

A 2017 amendment to the Highway Traffic Act allows municipalities to establish, through their by-laws, a different prevailing speed limit for either a portion of the municipality or for all roads under its jurisdiction. Certain other municipalities have used this power to either:

- Establish 40 km/h as the default speed limit for the entire municipality, or
- Establish 40 km/h “speed areas” for specific neighbourhoods.

An example of speed area signage from Hamilton, Ontario is provided as Figure 1.



Figure 1: Speed Area Signage Example (source: Urbanicity.com)

Vision Zero Policy

The Vision Zero Policy was adopted by Council on February 24, 2020. The Vision Zero Policy identifies the goal of zero fatal and serious injury collisions on City of Windsor streets.

As of the 5-year collision review done for the 2017 Road Safety Report, collisions on local roads and Class 2 Collector roads (i.e. the road classifications addressed in this report) represented 14% of fatal and serious injury collisions at intersections and 24% of fatal and serious injury collisions occurring mid-block between intersections.

Discussion:

Three options were considered to implement 40 km/h speed limits on residential streets. Diagrams of each option are provided in Appendix 1:

1. Keep the default City-wide speed limit at 50 km/h and place 40 km/h speed limit signs on residential streets,
2. Decrease the default City-wide speed limit to 40 km/h and place 50 km/h speed limit signs on major roads that would remain at 50 km/h, or

- Keep the default City-wide speed limit at 50 km/h and implement 40 km/h speed areas in residential neighbourhoods.

The Council Question referred to “residential streets.” This has been interpreted to refer to streets in residential neighbourhoods that are intended for lower speeds, lower volumes of traffic, and with an emphasis on property access over mobility (i.e. local roads and Class 2 Collector roads in residential areas).

Residential properties can also be found on other, higher-order road classifications, such as Class 1 Collectors, and Class 1 and Class 2 Arterial Roads; however, since these streets are intended for higher vehicle volumes and speeds, they have not been assumed to be included in the 40 km/h speed reduction.

Advantages and disadvantages of each option are summarized in Table 1. Costs given are high-level estimates and should be confirmed with detailed cost estimates, should Council choose to move forward with any of these options.

Table 1: Comparison of Speed Limit Reduction Options

Issue for Consideration	Option		
	1 – Sign 40 km/h residential streets individually	2 – Reduce the City-wide default speed limit to 40 km/h	3 – Implement speed areas in residential neighbourhoods
Initial cost (approximate)	\$1,043,000	\$734,000	\$1,088,000
Ongoing annual maintenance cost (approximate)	\$69,000	\$39,000	\$60,000
Phasing	Implementation can be phased neighbourhood by neighbourhood (or street by street)	Cannot be phased	Implementation can be phased neighbourhood by neighbourhood
Scalability	Can be implemented only in selected neighbourhoods, if desired	Cannot be implemented in selected neighbourhoods – must be implemented City-wide	Can be implemented only in selected neighbourhoods, if desired
Driver Awareness & Understanding	Highest: all 40 km/h streets would have signage identifying the speed limit to drivers.	Lowest: no signs – except at the City boundary – would identify 40 km/h streets. An education campaign and/or educational signage may be needed to foster driver awareness of the new speed limits.	Intermediate: drivers would see signs identifying the speed limit as they enter 40 km/h zones, but the speed limit would not be communicated to drivers as often as under Option 1.

In general, the total cost to implement a 40 km/h speed limit is lowest for Option 2; however, Option 2 cannot be phased and cannot be implemented only in selected neighbourhoods.

Should Council wish to implement the speed limit reduction in phases with the cost and effort spread out over multiple years, or to implement a speed reduction only in specific areas (e.g. neighbourhoods where resident support is highest), Option 2 would not be suitable.

Feedback was received from Windsor Police Service and the Provincial Offenses Office; both indicated that, of the three options, Option 1 would be preferable from an enforcement perspective. Windsor Police Service indicated that without additional measures to encourage compliance, the increased enforcement demand associated with any of the three options would increase police effort and cost associated with speed enforcement.

The capital costs for Option 1 and Option 3 are within 4% of each other. The high-level cost estimates provided in this report do not provide enough precision to confirm which of these two options has the lower cost.

Time Required for Implementation

Option 1 & Option 3

For Option 1 and Option 3, the minimum time to begin implementing 40 km/h speed limit reductions is on the order of 6 months. This time period would allow for the required amendments to Traffic By-law 9148, utility locates, and production and installation of an initial set of signs.

The total time to implement Option 1 or Option 3 for residential neighbourhoods City-wide would depend on several factors. If carried out entirely by City staff at current staffing levels, this work would likely need to be phased over several years. Implementing either Option 1 or Option 3 City-wide in a single year would likely require hiring temporary staff at additional cost.

Option 2

For Option 2, the minimum time to implement a 40 km/h speed limit in residential neighbourhoods is approximately two years. Implementing this option in a single year would likely require hiring temporary staff at additional cost.

The City-wide default speed limit could not be changed until all major roads that would remain at 50 km/h have speed limit signs installed. This work could likely be carried out by City staff at current staffing levels over two years' construction seasons; once these new 50 km/h signs are installed, Traffic By-law 9148 would be amended to reduce the City-wide default speed limit to 40 km/h.

Option 2 cannot be phased. It would be implemented City-wide as soon as the default speed limit is changed.

Impacts of Speed Limit Changes

Speed Limit Changes in Isolation

In general, most research has found that reducing speed limits, in and of itself, does not cause significant changes in operating speeds. This conclusion was identified in the best practices review that was carried out for the 2015 Traffic Calming Policy update and was reflected in the Policy: the Policy does not support reducing speed limits as a traffic calming measure unless the speed limit change is accompanied by physical changes to the street to encourage lower speeds.

In terms of safety and collisions, research about the effectiveness of speed limit reductions has produced mixed conclusions, with some studies indicating slight reductions in collision rates and others indicating no change or slight increases. Overall, it is unlikely that there would be a measurable safety benefit from lowering speed limits from 50 km/h to 40 km/h without other measures to encourage lower speeds.

Speed Limit Changes as Part of an Overall Strategy

Reductions in operating speeds have a clearly demonstrated safety benefit, both in terms of reducing the likelihood of collisions as well as the severity of collisions that do occur.

Reduced speed limits would be an important aspect of an overall speed reduction strategy, since lower speed limits would allow lower design speeds and target speeds, which would in turn allow changes in City design standards that would encourage lower speeds.

Impacts on the School Neighbourhood Policy

The School Neighbourhood Policy was adopted by Council in 2016 (CR645/2016). At the time, the total capital cost to implement the Policy was identified as \$1.8 million; due to price increases, the current estimated cost to implement the Policy is \$2.3 million. The majority of this cost is for “40 km/h when flashing” signs in school zones.

The School Neighbourhood Policy does not require “40 km/h when flashing” signs on streets where the prevailing speed limit is 40 km/h. Because of this, reducing the speed limit to 40 km/h in residential neighbourhoods has the potential to reduce the cost to implement the School Neighbourhood Policy significantly. With a 40 km/h speed limit on all local residential and Class 2 Collector roads, the estimated cost to implement the School Neighbourhood Policy would be \$320,000 (i.e. a reduction of \$1,986,000 from the current estimate of \$2,306,000).

If the School Neighbourhood Policy is modified, the impact of a 40 km/h speed limit reduction may vary. The School Neighbourhood Policy is due for its 5-year review in 2021; this review has not yet begun.

Next Steps

Should Council wish to implement 40 km/h speed limits on residential streets, the following next steps would be recommended:

- Develop specific criteria to identify which streets should be signed at 40 km/h.
- Identify a preferred option to implement the 40 km/h speed limit.
- Develop a speed reduction strategy, either as an element of the Vision Zero Action Plan or separately.
- Develop refined cost estimates and bring forward a proposal to Council for consideration as part of budget deliberations, including the recommendation to establish a reserve for sign maintenance.
- At key points in the above steps, carry out public consultation with affected residents.

Risk Analysis:

No critical or significant risks are associated with this informational report.

The following risks have been identified with the options presented:

- **Timing risks:** all three options, but especially Option 2, require careful coordination of several activities, including some that would be carried out by outside organizations (e.g. utility locates for the installation of new signage). Delays in any of these activities could make this coordination difficult or impossible. This risk is likely minimal for Option 1 & 3 and moderate for Option 2, and can be mitigated by the City's normal project management practices.
- **Community impact risks:** reducing the speed limit in residential neighbourhoods may not be supported by all residents. Speed limit reductions without other measures to encourage lower speeds may also cause an increase in speeding complaints and traffic calming requests. These impacts can be mitigated by:
 - Carrying out public consultation before implementing the speed limit reduction (available for all three options),
 - Implementing the speed limit reduction as part of an overall speed reduction strategy (available for all three options),
 - Implementing the speed limit reduction as a pilot program in a limited area before implementing it City-wide (not available for Option 2), or
 - Only implementing the speed limit reduction in neighbourhoods where resident support has been established (not available for Option 2).

The Windsor Police Service notes that any of the options identified in the report carry with them financial and operational risks associated with increased enforcement demand. The magnitude of these risks has not yet been identified. Should Council choose to move forward with any of the options presented, additional consultation with police to identify the magnitude of these risks as well as mitigating strategies is recommended.

Financial Matters:

The estimated cost to implement a 40 km/h speed limit in residential neighbourhoods is summarized in Table 3. Costs given are high-level estimates and should be confirmed with detailed cost estimates, should Council choose to move forward with any of these options.

Table 2: Cost Estimates (all amounts approximate)

Item	Option		
	1 – Sign 40 km/h residential streets individually	2 – Reduce the City-wide default speed limit to 40 km/h	3 – Implement speed areas in residential neighbourhoods
Initial cost	\$1,043,000	\$734,000	\$1,088,000
Ongoing annual maintenance cost	\$69,000	\$39,000	\$60,000

The Signs & Markings operational budget does not have sufficient funds for this expenditure. Should Council direct that a speed limit reduction in residential neighbourhoods be implemented, a submission to budget will be required to provide Council with an opportunity to approve the allocation of the required funding.

For the “phaseable” options (Options 1 & 3), costs could be spread out over multiple years to reduce the budget required in any given year.

Options 1 & 3 would also allow costs to be reduced by implementing the speed limit reduction only in portions of the City (e.g. where resident support is greatest) rather than City-wide, should Council so choose.

Impacts on School Neighbourhood Policy Implementation

A widespread speed limit reduction to 40 km/h would reduce the total capital cost to implement the School Neighbourhood Policy by \$1,986,000. If the speed limit reduction were applied to only certain portions of the City, the cost savings would be reduced.

In the 2020 Capital Budget, a total of \$797,800 is included in the forecast for the School Neighbourhood Implementation project (OPS-001-18), with \$307,800 forecast for 2028+ and the remainder forecast for 2022-2027.

The School Neighbourhood Policy is due for review in 2021. If this review results in significant changes to the Policy, then the cost reduction due to the speed limit reduction may vary.

Impacts on Police

Windsor Police Service notes that any of the options presented has the potential to increase their operating costs. The magnitude of these impacts is not currently known; should Council choose to move forward with any of these options, it is recommended that impacts on Windsor Police Service operations and budget be identified when a more refined proposal is brought forward for Council's consideration.

Consultations:

Dwayne Dawson, Operations

Shawna Boakes & Roberto Peticca, Traffic Operations

Terry Pearce, Provincial Offenses Office

Insp. Jill Lawrence, Sgt. Morgan Evans, Sgt. Craig Judson & Barry Horrobin, Windsor Police Service

Conclusion:

There are several methods available to reduce speed limits to 40 km/h in residential areas. The costs and minimum time to implement this speed limit reduction would depend on the method chosen; some options allow a phased approach so that the effort and budgetary impact could be spread out over multiple years, should Council so choose.

In and of itself, a speed limit reduction is not likely to have significant impacts on either overall operating speeds or safety. However, a speed limit reduction would be an important component of an overall speed reduction strategy that incorporates other measures to reduce vehicle speeds.

Planning Act Matters:

N/A

Approvals:

Name	Title
John Revell	Chief Building Official
Don Nantais	Financial Planning Administrator
Mark Winterton	City Engineer
Shelby Askin-Hager	City Solicitor
Joe Mancina	City Treasurer
Onorio Colucci	Chief Administrative Officer

Notifications:

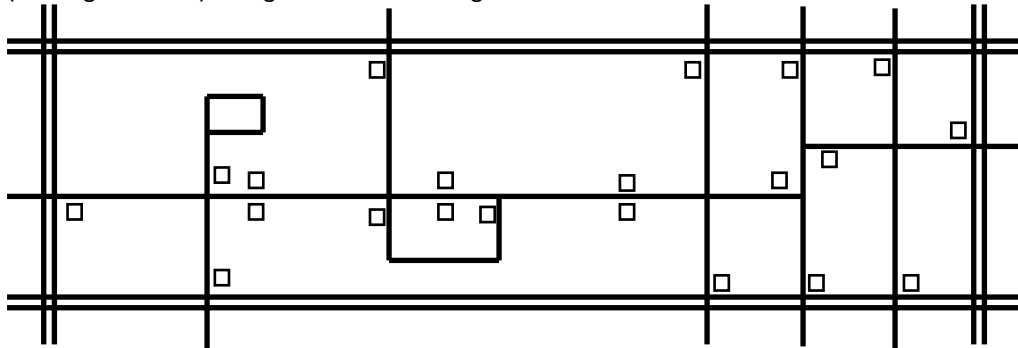
Name	Address	Email
Councillor Kaschak		

Appendices:

- 1 Options for Implementing a 40 km/h Speed Limit

Option 1: Sign residential streets at 40 km/h individually

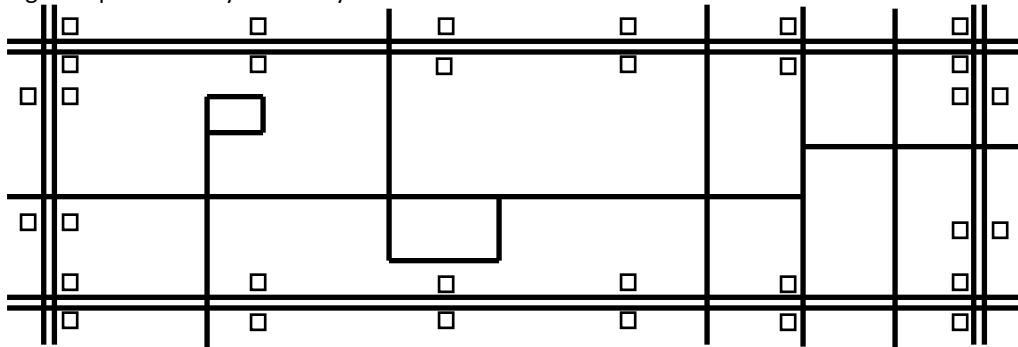
- All residential streets are signed 40 km/h at the turn off of the major street, the start of the street, and (on longer streets) at regular intervals along the street



Major Street (50 km/h)	====	
Residential Street (40 km/h)	----	Speed Limit Sign (40 km/h) □

Option 2: Reduce the City-wide default speed limit to 40 km/h

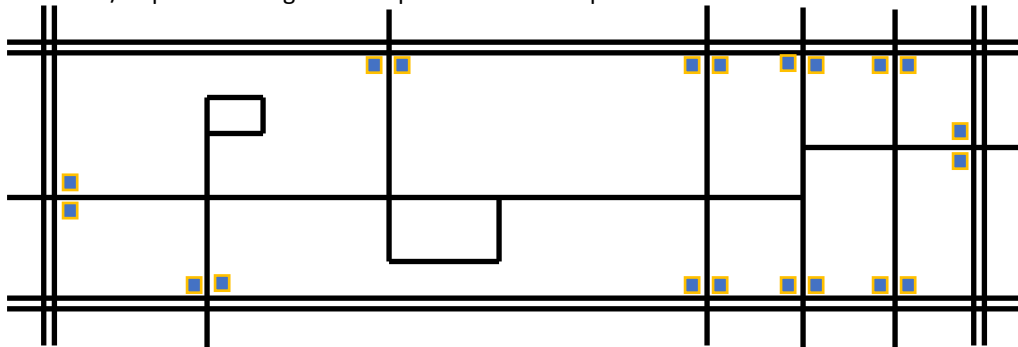
- 50 km/h major roads are signed
- No signs required on 40 km/h roads
- Signs required at City boundary



Major Street (50 km/h)	====	
Residential Street (40 km/h)	----	Speed Limit Sign (50 km/h) □

Option 3: Implement speed areas in residential neighbourhoods

- 40 km/h "speed area" signs required at the boundary of the speed area
- No 40 km/h speed limit signs are required inside the speed area



Major Street (50 km/h)	====	
Residential Street (40 km/h)	----	Speed Area Sign (40 km/h) ■

**Subject: CQ14-2018 Cabana Road East / Roseland Public School
Pedestrians - WARD 9**

Reference:

Date to Council: April 15, 2019
Author: Jeff Hagan
Policy Analyst
519-255-6247 ext 6003
jhagan@citywindsor.ca

Report Date: 9/12/2018
Clerk's File #: ST2018

To: Mayor and Members of City Council

Recommendation:

That report of the Policy Analyst dated September 12, 2018 entitled CQ14-2018 Cabana Road East / Roseland Public School Pedestrians **BE RECEIVED** for information.

Executive Summary:

N/A

Background:

At the August 27, 2018 meeting of Council, Councillor Payne asked the following Council Question:

CQ 14-2018

Asks for a report soon on the feasibility of installing a school crosswalk on Cabana Road East in the vicinity of Roseland Public School for the safety of children crossing in light of the recent widening of the street to four lanes.

This report provides the requested response.

Related Reports

Report *S 90/2018 Pedestrian Crossovers* was brought before the Environment, Transportation and Public Safety Standing Committee at its August 29, 2018 meeting. This report addressed a number of locations where pedestrian crossovers have been

requested, including Cabana Road in the vicinity of Roseland Public School. At the August 29, 2018 meeting, the Standing Committee deferred the report in order to allow consideration of it along with the response to CQ 14-2018 (addressed in this report) and CQ 17-2018 (addressed in a separate report), which also concerned pedestrian crossovers.

Discussion:

Existing Conditions

As shown in Figure 1, a school crossing is provided on Cabana Road East at Karen Street / Clara Avenue immediately east of Roseland Public School. In accordance with normal practice and the City of Windsor *Crossing Guard Procedure*, school crossing guards are provided for 30 minutes in the morning before the school's arrival bell time and for 30 minutes in the afternoon following the school's dismissal bell time. Beginning with the start of the 2018-2019 school year, two crossing guards are provided at this crossing.

This portion of Cabana Road East was recently reconstructed in accordance with the Cabana Road Environmental Assessment preferred design. As part of this reconstruction, the roadway was widened to provide 4 general purpose lanes and bicycle lanes.



Figure 1: Area Map (2017 Aerial Photo)

Pedestrian Crossing Evaluation

Based on service requests received, Administration reviewed the existing school crossing to determine whether converting the crossing to a pedestrian crossover would be warranted according to Ontario Traffic Manual guidelines. As noted previously in report S 90/2018, this location does not meet the requirements for a pedestrian crossover. The results of the review are summarized as follows:

- The width of Cabana Road East at the crossing location exceeds the maximum crossing width for a pedestrian crossover recommended by the Ontario Traffic Manual (for two-way roads: 4 lanes).
- Most pedestrians crossing at this location are children who are crossing at times when crossing guards are present.
- The number of pedestrians crossing at this location is too low to warrant a pedestrian crossover except for a location on a “pedestrian desire line” (i.e. the path that pedestrians would naturally choose, taking into account the locations of pedestrian attractors and generators, distance to nearby controlled crossings, and connections to the wider pedestrian network). However, the crossing is a pedestrian desire line primarily because a school crossing has been provided.

Where the protection of schoolchildren walking to and from school is the primary concern for a pedestrian crossing, the Ontario Traffic Manual generally recommends a school crossing rather than other controlled crossing types. Since a school crossing is currently provided, Administration does not recommend any changes to the pedestrian crossing type.

Administration received a resident petition (provided as an appendix to report S 90/2018) that raised concerns about pedestrians other than students crossing Cabana Road East at the school crossing at times when a guard was not present. In response, Administration carried out an additional pedestrian count while school was not in session (Friday, August 31, 2018). This additional count found that 11 pedestrians crossed Cabana Road at or near the school crossing in an 8-hour period (8:30 a.m. to 2:00 p.m. and 2:30 p.m. to 4:30 p.m.).

During the Cabana Road reconstruction, underground conduit was installed to facilitate pedestrian signals, should they become warranted. Currently, Cabana Road at Karen Street / Clara Avenue does not meet the warrant for traffic signals; Administration will continue to monitor the intersection periodically. If the warrant for traffic signals is met, Administration will bring forward a recommendation at that time.

Risk Analysis:

Risks were identified in report S 90/2018. No additional risks have been identified.

Financial Matters:

No financial expenditures are associated with the report recommendations.

Consultations:

John Wolf, Traffic Operations

Conclusion:

Administration has reviewed Cabana Road East at Karen Street / Clara Avenue. This review found that the existing school crossing continues to be the appropriate type of pedestrian crossing for this location. A pedestrian crossover is not recommended.

Planning Act Matters:

N/A

Approvals:

Name	Title
Josette Eugeni	Manager of Transportation Planning
Wira Vendrasco	Deputy City Solicitor
Shelby Askin-Hager	City Solicitor and Corporate Leader, Economic Development and Public Safety
Onorio Colucci	Chief Administrative Officer

Notifications:

Name	Address	Email
Councillor Payne		

Appendices:

N/A

**Subject: Additional Information - CQ14-2018 Cabana Road East
Roseland Public School Pedestrians - WARD 9**

Reference:

Date to Council: April 15, 2019
Author: Jeff Hagan
Policy Analyst
519-255-6247 ext 6003
jhagan@citywindsor.ca

Report Date: January 24, 2019
Clerk's File #: ST2019

To: Mayor and Members of City Council

Recommendation:

THAT report S 29/2019 "Additional Information - CQ14-2018 Cabana Road East Roseland Public School Pedestrians" **BE RECEIVED** for information.

Executive Summary:

N/A

Background:

At the August 27, 2018 meeting of Council, former Councillor Payne asked the following Council Question:

CQ 14-2018

Asks for a report soon on the feasibility of installing a school crosswalk on Cabana Road East in the vicinity of Roseland Public School for the safety of children crossing in light of the recent widening of the street to four lanes.

Report S 156/2018 CQ14-2018 Cabana Road East / Roseland Public School Pedestrians was brought before the Environment, Transportation and Public Safety Standing Committee at its October 17, 2018 meeting. That report, as well as related report S 90/2018 Pedestrian Crossovers, were deferred at that meeting to allow the opportunity for comment from the Windsor Police Service.

Report S 156/2018 noted the following key conclusions:

- The existing school crossing is consistent with provincial guidance and normal practice.
- The crossing was reviewed for conversion to a pedestrian crossover. The review found that this location does not meet the normal requirements for a pedestrian crossover.
- The crossing was reviewed for potential installation of traffic signals (either a full signal or a pedestrian signal). The warrants for a signal are not met currently. Administration will continue to periodically evaluate the intersection to assess whether the signal is warranted in the future.

Discussion:

In the time since report *S 156/2018 CQ14-2018 Cabana Road East / Roseland Public School Pedestrians* was prepared, the following activities have occurred in the vicinity of the school crossing on Cabana Road East at Karen/Clara:

- Additional signs and pavement markings were installed
- Speeds on Cabana Road East have been measured
- Additional observations of traffic behaviour at the school crossing have been carried out

These activities do not alter Administration's recommendations from what was recommended in reports S 90/2018 and S 156/2018. Additional details on each of these activities is given below.

Signs and Pavement Markings

The Ontario Traffic Manual identifies standard signs and pavement markings for school crossings. The remainder of these signs and markings were installed on November 19, 2018:

- **Additional crosswalk warning signs:** these signs make the crossing more conspicuous to approaching drivers and help to alert drivers to the potential need to stop.
- **"No passing here to crossing" signs:** these signs deter vehicles from pulling around vehicles that may be stopped to allow children to cross.
- **Solid line lane markings:** these lane markings reinforce the "no passing" signage and emphasize that changing lanes near the school crossing is not allowed.

Cabana Road East Speeds

Speed data was collected on Cabana Road East:

- Before the widening to 4 lanes plus bicycle lanes
- After the widening
- After the additional signage and pavement marking upgrades noted above.

The results of the speed surveys are summarized in Table 1. The speed limit on Cabana Road East is 50 km/h.

Date	Overall (24 hours)		During Crossing Guard Times	
	Average Speed	85 th Percentile Speed	Average Speed	85 th Percentile Speed
September 2016 (before widening)	55 km/h	65 km/h	54 km/h	65 km/h
September 2018 (after widening)	58 km/h	66 km/h	62 km/h	66 km/h
January 2019 (after upgrades)	61 km/h	69 km/h	60 km/h	67 km/h

The results from these speed surveys have been shared with Windsor Police Services for their action as they deem appropriate.

Additional Observations

Administration conducted additional field reviews in October, November, and December to observe traffic behaviour and operations at the school crossing. During these field reviews, drivers' compliance with the crossing guards' direction was generally good. The following feedback was received from the crossing guards:

- When a single guard was placed at the school crossing, visibility of the guard could be an issue if a large vehicle was stopped for the crossing. However, the placement of a second guard at the crossing has addressed this issue.
- Driver behaviour has improved with the installation of the additional signs and pavement markings.

Sightline reviews at the intersection of Karen Street and Cabana Road East were also conducted in consideration of the new private fence construction at 3809 Karen Street. This review did not find that this fence obstructed required sight triangles for vehicles turning onto Cabana Road East from Karen Street.

Risk Analysis:

Risks were identified in report S 90/2018. No additional risks have been identified.

Financial Matters:

This report does not recommend any financial expenditures.

Consultations:

Traffic Operations

Building By-law Enforcement

Risk Management

Windsor Police Service

Compliance and Enforcement

Conclusion:

Since the previous report (S 156/2018), Administration has installed additional signage and pavement markings at the school crossing on Cabana Road East at Karen Street / Clara Avenue. Field reviews and reports from the crossing guards indicate that these changes have caused driver behaviour to improve.

Recent speed data on Cabana Road East has been collected and shared with Windsor Police Services.

Planning Act Matters:

N/A

Approvals:

Name	Title
Josette Eugeni	Manager of Transportation Planning
Wira Vendrasco	Deputy City Solicitor
Shelby Askin-Hager	City Solicitor and Corporate Leader, Economic Development and Public Safety
Onorio Colucci	Chief Administrative Officer

Notifications:

Name	Address	Email
Councillor McKenzie		

Appendices:

N/A

Subject: Second Additional Information - S 156/2018 CQ14-2018 Cabana Road East Pedestrians - WARD 9

Reference:

Date to Council: April 15, 2019
Author: Jeff Hagan
Transportation Planning Engineer
519-255-6247 ext 6003
jhagan@citywindsor.ca

Report Date: March 7, 2019
Clerk's File #: ST2019

To: Mayor and Members of City Council

Recommendation:

That report C 45/2019 **BE RECEIVED** for information.

Executive Summary:

N/A

Background:

At its February 20, 2019 meeting, the Environment, Transportation and Public Safety Standing Committee adopted the following recommendation:

THAT the report of the Policy Analyst dated September 12, 2018 entitled "CQ14-2018 Cabana Road East/Roseland Public School Pedestrians" and the report of the Policy Analyst dated January 24, 2019 entitled "Additional Information - CQ14-2018 Cabana Road East Roseland Public School Pedestrians" BE RECEIVED for information; and further,

THAT the installation of a crosswalk on Cabana Road East on the west side of Karen Avenue BE APPROVED; and further,

THAT the funding for this initiative BE DERIVED from the allocated Ward 9 funds.

This report provides additional information and costs for options to implement the Committee's recommendation to provide a crosswalk at this location on Cabana Road East.

Related Reports

Other related reports are as follows:

- **S 90/2018 Pedestrian Crossovers** provided a list of locations City-wide where pedestrian crossovers had been requested and referred the list of warranted locations to 2019 budget deliberations. This report noted that a pedestrian crossover is not recommended for Cabana Road East at Karen Street/Clara Avenue.
- **S 156/2018 CQ14-2018 Cabana Road East / Roseland Public School Pedestrians** responded to a Council Question regarding pedestrians at this location. The report:
 - Confirmed that a pedestrian crossover is not recommended for Cabana Road East at Karen Street/Clara Avenue,
 - Confirmed that the existing school crossing meets provincial guidelines, and
 - Addressed resident concerns about pedestrians crossing Cabana Road East outside of the times when a crossing guard is on duty.
- **S 29/2019 Additional Information - CQ14-2018 Cabana Road East Roseland Public School Pedestrians** provided additional information on:
 - Performance of the school crossing after sign and pavement marking upgrades, and
 - Speeds on Cabana Road East before widening, after widening, and after the sign and pavement marking upgrades.

Discussion:

If Council elects to replace the existing school crossing on Cabana Road East with a different form of controlled pedestrian crossing, the following options are available:

1. Pedestrian Crossover
2. Intersection Pedestrian Signal (“half signal”)

Each of these options is discussed below.

Pedestrian Crossover

At a pedestrian crossover, vehicles are required to yield to pedestrians waiting to cross. For all but the lowest level of crossover, pushbutton-actuated flashing beacons are provided to alert drivers to pedestrians crossing or about to cross.

For locations that meet the warrant for a pedestrian crossover, the Ontario Traffic Manual gives guidelines for the appropriate level and type of pedestrian crossover based on:

- Roadway width
- Vehicle volume
- Roadway speed limit

Pedestrian crossover levels and types are summarized in Appendix 1.

For a 4-lane road without a raised refuge, normally a Level 2 Type B or a Level 1 Type A pedestrian crossover would be considered, depending on vehicle volume.

The existing width on Cabana Road East at Karen Street/Clara Avenue (4 lanes plus buffered bicycle lanes, for a total width of 16.4 m) exceeds the maximum recommended width for a pedestrian crossover (4 basic lanes, for a total maximum width of 15 m). For this reason, the Ontario Traffic Manual does not recommend any type of pedestrian crossover for this situation; however, volumes for the closest case (4 lanes without raised refuge) are provided in Table 2.

Table 1: Recommended Maximum Traffic Volumes for Pedestrian Crossovers

Pedestrian Crossover Type	Recommended Maximum 8-Hour Vehicle Volume [Note]
Level 2 Type B	6,000 vehicles
Level 1 Type A	7,500 vehicles
Observed 8-hour Volume Cabana Road East (Howard Avenue to Holburn Street)	8,506 vehicles

Note: Maximum volumes given are for 4 lanes without raised refuge, 50 km/h speed limit. Source: Ontario Traffic Manual

Research cited in the Ontario Traffic Manual found that when a pedestrian crossover is provided at locations where the vehicle volume is higher than the recommended maximum volume, poor compliance by drivers typically results, and that driver compliance decreases as vehicle volume increases.

For cases where the vehicle volume is higher than the recommended maximum for a pedestrian crossover, the Ontario Traffic Manual recommends considering a traffic signal.

Intersection Pedestrian Signal (“Half Signal”)

At an intersection pedestrian signal, a signal-protected crosswalk is provided across the major street. Traffic on the major street is controlled by signal heads and traffic on the minor street is controlled by stop signs.



Figure 1: Intersection Pedestrian Signal (source: MTO)

The Ontario Traffic Manual provides a warrant system to identify where traffic signals should and should not be provided. For pedestrian signals, the warrant has two parts; both parts of the warrant must be met for the warrant to be met overall. The warrant review results are summarized in Table 3.

Table 2: Pedestrian Signal Warrant Review Summary

Warrant Part	Result
1 – Minimum Pedestrian Crossing Volume	Not met
2 – Delay to Pedestrians	Not met
Overall	Warrant not met

Highway Traffic Act

While the Ontario Traffic Manual guidelines suggest that neither a pedestrian crossover nor a pedestrian signal be provided at this location, neither option would contravene the Highway Traffic Act.

Risk Analysis:

For Cabana Road East at Karen Street/Clara Avenue, neither a pedestrian crossover nor a pedestrian signal would be in keeping with provincial guidelines set out in the Ontario Traffic Manual.

Administration uses established guidelines as a risk management tool, since following these guidelines can help limit risk to the Corporation and to others. Departing from

established guidelines may result in higher safety risks to road users and higher risks of claims against the Corporation.

Financial Matters:

The estimated cost to replace the existing school crossing on Cabana Road East at Karen Street/Clara Avenue with a different type of controlled pedestrian crossing are summarized in Table 3. These costs include all signs, equipment, and pavement markings, as well as removing school crossing signs and pavement markings that would no longer be appropriate.

Table 3: Estimated Capital Costs

Option	Estimated Capital Cost (including non-recoverable HST)
Option 1: Level 1 Type A pedestrian crossover	\$60,000
Option 2: Intersection pedestrian signal	\$75,000

The Committee recommendation identifies Ward 9 ward funds as a source of funds for the capital cost. While the 2019 Capital Budget has not been approved as of the date of this report, the proposed amount of ward funds of \$50,000 per ward is not sufficient to complete this work.

Estimated annual maintenance and operating costs for both options are given in Table 4; actual amounts will vary based on fluctuations in power costs and actual maintenance experience.

Table 4: Estimated Operating Costs

Option	Estimated Annual Costs		
	Power	Maintenance	Total
Option 1: Level 1 Type A pedestrian crossover	\$480	\$2,000	\$2,480
Option 2: Intersection pedestrian signal	\$600	\$2,000	\$2,600

These ongoing costs are for electrical power and maintenance only. They do not include repairs or future replacement costs.

Cost Savings

Typically, school crossing guards are only provided at pedestrian crossovers or signalized pedestrian crossings in special circumstances. The existing school crossing is staffed by two guards for one hour per day (30 minutes in the morning, 30 minutes in the afternoon). Elimination of the school crossing will result in an annual savings in wages and fringe benefits. The amount of savings from the Crossing Guard Operating Budget item will be \$6,250 per year at current rates.

These savings will be reduced to \$3,125 per year if the crossing is staffed with a single guard after a pedestrian crossover or pedestrian signal is installed.

Consultations:

Dana Paladino, Risk Management

Shawna Boakes, Traffic Operations

Conclusion:

Information, including information on costs, has been provided for options to implement the Committee's recommendation of a pedestrian crosswalk on Cabana Road East at Karen Street.

Planning Act Matters:

N/A

Approvals:

Name	Title
Josette Eugeni	Manager of Transportation Planning
Don Nantais	Financial Planning Administrator
Shelby Askin Hager	City Solicitor and Corporate Leader, Public Safety and Economic Development
Joe Mancina	City Treasurer
Onorio Colucci	Chief Administrative Officer

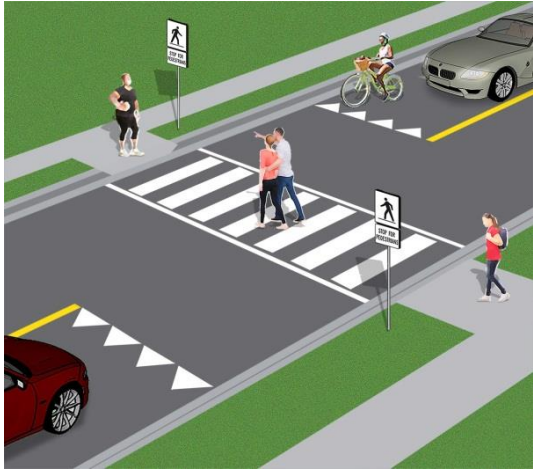
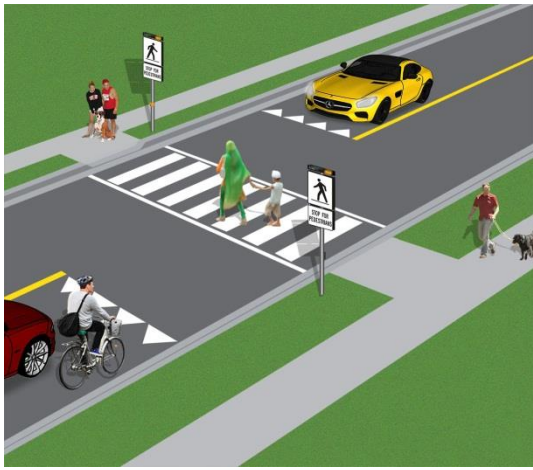
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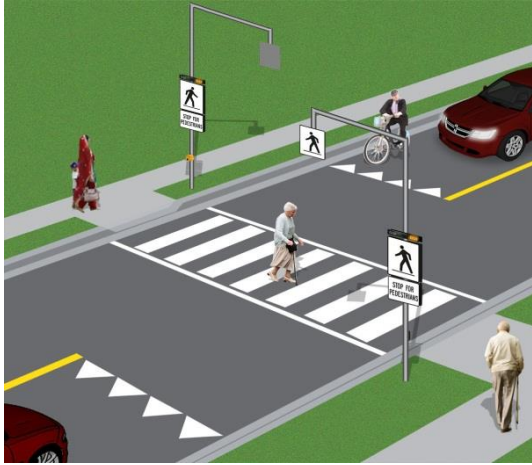

Name	Address	Email
Councillor McKenzie		
Ian Bawden Constituency Assistant Brian Masse, M.P. Windsor West		masseb1a@parl.gc.ca
Shelley Armstrong Superintendent of Business Greater Essex County District School Board		Shelley.Armstrong@publicboard.ca
Shawn Dufour, Principal Wendy Iatzko, Vice Principal Roseland Public School	620 Cabana Road East Windsor ON N9G 1A4	
Jessica Sartori Trustee & Chairperson of the Board Greater Essex County District School Board		jessica.sartori@publicboard.ca
Linda Qin Trustee Greater Essex County District School Board		linda.qin@publicboard.ca
Signatories to Cabana/Karen/Clara petition (Appendix to report S 90/2018) <i>(list provided to Clerks)</i>		

Appendices:

- 1 Pedestrian Crossover Levels and Types

Pedestrian Crossover Levels and Types

Level and Type	Description / Illustration (Illustration source: MTO)	Typical Use
Level 2 Type D	<p>Static roadside signs, no flashing beacons</p> 	Low-volume 1- and 2-lane roads
Level 2 Type C	<p>Roadside signs with flashing beacons</p> 	Low-volume 3-lane roads or higher volume roads 4-lane with a refuge median

Level and Type	Description / Illustration (Illustration source: MTO)	Typical Use
Level 2 Type B	Overhead and roadside signs with roadside flashing beacons 	Higher-volume 2- and 3- lane roads, or moderate-volume 4-lane roads
Level 1 Type A	Overhead flashing beacons and illuminated signs with roadside signs 	Higher-volume 4-lane roads

Subject: Response to CQ27-2021 - All-Way Stop Warrant - City Wide

Moved by: Councillor Kieran McKenzie
Seconded by: Councillor Gary Kaschak

Decision Number: **ETPS 950**

THAT the All-Way Stop policy **REMAIN** status quo for the time being; and,

THAT the report of the Senior Manager, Traffic Operations dated June 5, 2023, entitled “Response to CQ27-2021—All Way Stop Warrant-City Wide” as well as any changes to the All-Way Stop Policy **BE DEFERRED** to a future meeting of the Environment, Transportation & Public Safety Standing Committee to be considered in conjunction with the Vision Zero Report.

Carried.

Report Number: S 70/2023
Clerk’s File: SW2023 & ACOQ2023

Clerk’s Note:

1. The recommendation of the Environment, Transportation & Public Safety Standing Committee and Administration are **not** the same.
2. Please refer to Item 8.1 from the Environment, Transportation & Public Safety Standing Committee held on July 26, 2023.
3. To view the stream of this Standing Committee meeting, please refer to:
<http://csg001-harmony.sliq.net/00310/Harmony/en/PowerBrowser/PowerBrowserV2/20230726/-1/9420>

Subject: Response to CQ27-2021 - All-Way Stop Warrant - City Wide

Reference:

Date to Council: July 26, 2023

Author: Ian Day

Senior Manager, Traffic Operations & Parking (A)

519-255-6247 x6053

Public Works - Operations

Report Date: June 5, 2023

Clerk's File #: SW2023 & ACOQ2023

To: Mayor and Members of City Council

Recommendation:

THAT Council **APPROVE** the updated All-way Stop Policy as listed in Appendix B.

Executive Summary:

N/A

Background:

At the meeting of City Council on November 15, 2022, Councillor Costante asked CQ27-2021 as follows:

“Asks that Administration report back on opportunities to amend the warrant matrix and incorporate additional factors when determining the installation of 4-way stops in our residential neighbourhoods. This may include certain factors in the warrant threshold be lowered or amended, and may also include other factors such as petitions and school zones to be incorporated in the overall matrix.”

This report is provided in response to the Councillor's question.

During the preparation of this report, Administration conducted a review the current All-way Stop Policy. (Coincidentally, the current All-way Stop policy, approved in 2005, was identified by the Corporate Policy Coordinator as being among several policies in need of review).

The current policy approved by Council in 2005 (**Appendix A**) directed:

*That Council **APPROVE** the recommended updated All-way Stop warrants and policy as listed in Appendix A.*

*That Council **REFER** all requests for All-way Stops relating to speeding to the upcoming Traffic Calming Policy for evaluation and investigation of traffic calming alternatives.*

*That Council **APPROVE** Option B in Appendix B for hearing and reviewing All-way Stop Requests, commencing in late October 2005. (Option B does not include an All-way Stop Committee and all-way stop requests are brought directly to a special meeting of Council in either May or October for final decision)..*

Discussion:

The City's current All-way Stop policy does not reflect the latest criteria for all-way stops as outlined in the Ministry of Transportation's *Ontario Traffic Manual - Book 5, Regulatory Signs* which was (updated) in December 2021. For reasons which will be explained further in this report, Administration is recommending the city's current warrant matrix be amended to mirror the warrants identified in the *Ontario Traffic Manual – Book 5, Regulatory Signs* and that Council approve the attached updated All-way Stop Policy (**Appendix B**).

In the past, installing all-way stops were seen as the solution to many traffic problems.

However, *unwarranted* all-way stop controls often result in the following:

- **Reduced effectiveness.** The overuse and misuse of stop control devices lowers the effectiveness of other traffic control devices.
- **Poor stop sign compliance.** Motorists familiar with the intersection will not come to a complete stop, instead, reduce their travel speed, and accelerate through the intersection when no opposing traffic is observed.
- **False sense of security.** Disregard for the “Stop” signs may decrease safety. Pedestrians may be lured in to the false sense of security by the presence of a “Stop” sign by assuming motorists will stop.
- **Collisions** – an all-way stop can increase the number of rear-end and fixed object collisions, especially if there is a high volume of traffic being required to stop unnecessarily. (A quick analysis of all-way versus 2 way stop controls in the City of Windsor indicates that there is a higher ratio of incidents at all-way stops. An in-depth analysis would be required to determine the root cause, however a high level review was done for three areas in the City and in 2 of those areas, there was a higher ratio of incidents at the all-way stops).
- **Speeding** - the unnecessary delay from a stop sign results in motorists increasing their travel speed between intersections to make up for the perceived time lost. Average speeds actually increase between intersections with stop signs. Residents in the middle of the block could experience higher than previous speeds as studies indicate an increase in speeds mid-blocs on either side of the stop control.
- **Emergency Response** - response time for emergency services vehicles is negatively impacted because they are required to come to a complete stop at all

stop signs as per the Highway Traffic Act. Therefore, adding stop signs to residential areas in particular will increase the response of both Fire and Ambulance services to residential calls.

- **Noise and Air Pollution** – residents living nearest to the intersection experience an increase in traffic noise from vehicles stopping and accelerating (braking noise and engine noise). Stopping and accelerating also increases environmental emissions and fuel consumption.

In 2005, a review at that time of the City’s All-way Stop policy found that, by and large, the City of Windsor’s policy had the most generous warrants for meeting the requirements for an All-Way Stop in Ontario. (At that time, it was estimated that there were 135 unwarranted all-way stops in the City). Further, it noted that *“the policy was inconsistent with the trends and focus of other municipality’s policies and was deficient in many of the more progressive aspects of other policies relating to environmental responsibility, driver and pedestrian safety and maintaining sustainable and efficient transit services”*.

Based on the significant volume of all-way stops that were being installed in the City and calls from residents that drivers were not stopping on stop signs, Council approved a policy and warrant procedure with regard to all-way stops that was inline with other municipalities, industry standards and guideline recommendations at that time.

However, since then, other significant tools and practices to deal with speeding or pedestrian safety have been developed and effectively implemented. Such measures are outlined in various policies including the School Neighbourhood Policy, the Traffic Calming Policy, etc., and include:

• Speed humps or tables	• Lane narrowing
• Textured crosswalks	• Traffic circles
• Raised crosswalks	• Directional closures
• Raised intersections	• Speed feedback signs
• Raised median islands	• Lower speed limits
• Curb radius reductions	• Movement restrictions
• Curb or sidewalk extensions	

The items noted above, while addressing speeding and/or pedestrian safety, importantly also eliminate the installation of an otherwise unwarranted all-way stop.

In order to reduce the installation of additional unwarranted all-way stops, Administration recommends adopting the updated All-way Stop Policy as listed in Appendix B, which mirrors *Ontario Traffic Manual - Book 5, Regulatory Signs* as it pertains to all-way stops. The Ontario Traffic Manuals are developed using the Transportation Association of Canada’s, Manual on Uniform Traffic Control Devices Canada document, which is the Canadian version of the Manual on Uniform Traffic Control Devices as developed by the US Federal Highway Administration.

The purpose of the Ministry of Transportation's (MTO) Ontario Traffic Manual (OTM) is "to provide information and guidance to transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. The objective is safe driving behaviour, achieved by a predictable roadway environment through the consistent, appropriate application of traffic control devices."

By adopting *Ontario Traffic Manual - Book 5, Regulatory Signs* regarding All-way stop controls, a predictable roadway environment for drivers and pedestrians alike is supported.

It is in this context as well as the earlier identified concerns regarding unwarranted all-way stops that Administration does not recommend amending the warrant matrix to incorporate other factors such as petitions or school zones or lowering warrant threshold. As noted earlier in the report, there are now additional effective tools and practices to deal with speeding or pedestrian safety.

Ontario Traffic Manual - Book 5, Regulatory Signs – All-way Stops

Regarding the installation of all-way stops, the *Ontario Traffic Manual - Book 5, Regulatory Signs* states all way stops **MUST NOT** be used:

- As a speed control device.

With respect to all-way stops, the *Ontario Traffic Manual - Book 5, Regulatory Signs* states that all-way stop controls **should be considered only under the following situations:**

- As an interim measure, where traffic control signals are warranted but cannot be implemented immediately;
- At locations having a high collision frequency where less restrictive measures have been tried and found inadequate; or
- As a means of providing a transition period to accustom drivers to a change in intersection right-of-way control from one direction to another.

With respect to all-way stops, the *Ontario Traffic Manual - Book 5, Regulatory Signs* states that all-way stop controls **should not** be used under the following conditions:

- Where the protection of pedestrians, school children in particular, is a prime concern. This concern can usually be addressed by other means;
- On roads where progressive signal timing exists;
- On roads within urban areas having a posted speed limit in excess of 60 km/h;
- At intersections that are not roundabouts having less than three, or more than four, approaches;

- At intersections that are offset, poorly defined or geometrically substandard;
- On truck or bus routes, except in an industrial area or where two such routes cross;
- On multi-lane approaches where a parked or stopped vehicle on the right will obscure the STOP sign;
- Where traffic would be required to stop on grades;
- As a means of deterring the movement of through traffic in a residential area;
- Where visibility of the sign is hampered by curves or grades, and insufficient safe stopping distance exists; or
- Where any other traffic device controlling right-of-way is permanently in place within 250m, with the exception of a YIELD sign.

Under the *Ontario Traffic Manual - Book 5, Regulatory Signs*, the criteria for an all-way stop are as follows:

All-way Stop Minimum Volume Warrant (Arterial and Major Roads)

All-way stop control may be considered on major roads where the following conditions are met:

- *The total vehicle volume on all intersection approaches exceeds 500 vehicles per hour for each of any eight hours of the day;*
- *The combined vehicular and pedestrian volume on the minor street exceeds 200 units per hour (all vehicles plus pedestrians wishing to enter the intersection) for each of the same eight hours, with an average delay to traffic on the minor street (either vehicles or pedestrians wishing to enter the intersection) of greater than 30 seconds; and*
- *The volume split does not exceed 70/30. Volume on the major street is defined as vehicles only. Volume on the minor street includes all vehicles plus any pedestrians wishing to cross the major roadway.*

All-way Stop Minimum Volume Warrant (Minor Roads)

All-way stop control may be considered on minor roads where the following conditions are met:

- *Total vehicle volume on all intersection approaches exceeds 350 for the highest hour recorded; and*

- *Volume split does not exceed 75/25 for three-way control or 65/35 for four-way control. Volume is defined as vehicles only.*

All-way Stop Collision Warrant

For the purposes of this warrant, a high accident frequency is an average of four collisions per year over a three-year period. Only those accidents susceptible to relief through multi-way stop control must be considered (i.e., right angle and turning type collisions).

Included in this warrant are those locations where visibility problems exist which limit the safe approach speed to less than 15 km/h, thereby creating an unreasonable accident potential. Special advance warning or overhead flashing lights may be necessary to augment the control if vertical or horizontal alignment is a factor.

Appendix B contains the proposed All-way Stop policy.

Risk Analysis:

Unwarranted all-way stops often result in reduced effectiveness of other traffic control devices, result in overall poor stop sign compliance, create a false sense of security for pedestrians, increase the number of rear-end and fixed object collisions, increase instances of mid-block speeding, delay emergency vehicle response times and increase noise and air pollution

Climate Change Risks

Climate Change Mitigation:

All-way stops increase greenhouse emissions. As noted in Council Report 11541, the greenhouse gas emissions related to one all-way stop is;

657 kg of hydro carbons

8,760 kg of carbon monoxide

675 kg of nitrogen oxide

65,700 kg of carbon dioxide

(Source: Ministry of Municipal Affairs and Housing)

There are currently 230 all-way stops in the City, totalling the emissions at 17,432,160 kg (17,432.16 metric tonnes).

The addition of even one unwarranted all-way stop has a significant effect on greenhouse gas emissions in the City

Climate Change Adaptation:

N/A

Financial Matters:

There are no immediate financial implications with adopting the proposed All-way Stop policy (Appendix B) which will eliminate the installation of additional unwarranted all-way stops.

With respect to all-way stops, the cost per sign for installation can cost between \$250 and \$1,000 depending on the underground conflicts. Therefore, to upgrade a typical 2-way or 1-way stop to an all-way stop costs the City in the range of \$2,000 per location. On-going maintenance for the additional signs is \$500 per sign/year.

Stop signs are considered regulatory signs and under the Minimum Maintenance Standards, they require immediate attention when damaged. This means that after hour emergency call outs to staff will increase, hence further increasing overtime/maintenance costs. These costs are difficult to predict and are non-recoverable.

Ongoing sign maintenance is included in the Traffic Operations annual operating budget. Should there be a need for additional funding as a result of the implementation of this policy, a budget issue will be brought forward. At this time, the annual amount is considered reasonable and appropriate.

Consultations:

Jeff Hagan, Senior Transportation Planning Engineer

Cindy Becker, Financial Planning Administrator – Public Works

Barry Horrobin, Director of Planning & Physical Resources

Dana Paladino, Deputy City Solicitor – Purchasing, Risk Management and POA

Rob Slater, Executive Initiatives Coordinator

Conclusion:

Administration recommends adopting an updated All-way Stop Policy as listed in Appendix B, which mirrors the *Ontario Traffic Manual - Book 5, Regulatory Signs*. By adopting this policy, a predictable roadway environment for drivers and pedestrians is supported.

Amending the warrant matrix to incorporate other factors such as petitions or school zones or lowering the warrant threshold is not recommended as other effective tools and practices are available to deal with speeding or pedestrian safety

Planning Act Matters:

N/A

Approvals:

Name	Title
Cindy Becker	Financial Planning Administrator – Public Works - Operations
Shawna Boakes	Executive Director of Operations
Chris Nepskzy	Commissioner, Infrastructure Services, City Engineer
Janice Guthrie	Commissioner, Corporate Services, City CFO/ Treasurer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

- Appendix A – Previous All-Way Stop Warrant Policy/Report
- Appendix B – Proposed New All-Way Stop Policy & Warrant Checklist

Appendix A

Previous All-Way Stop Warrant Policy/Report

Proposed All Way Stop Warrants (2005)2
Additional Notes to be included with Policy3
Option 1: New All Way Stop Committee – Procedure4
Option 2: Special Meeting of Council Twice Per Year – Procedure5

Proposed All Way Stop Warrants

Warrant Group	Minimum Warrants	Information	Warrant Compliance Yes / No
Warrant Group 1	If location satisfies either a or b, then an all way stop is warranted.		
	a) Traffic Signals are warranted, all way stop used as a temporary measure.		
	b) Average of three accidents per year over a three year period of a type susceptible to correction by such an installation.		
Warrant Group 2	If location does not satisfy either c, d, and e then all way stop is not permitted.		
	c) If the proposed location is on a Transit Route (Proposed or Existing) or Truck Route, then no all way stop will be permitted.		
	d) If proposed location is within 250 metres of another right of way control measure (Traffic Signal, Other All Way Stop etc) than no additional all way stop will be permitted.		
	e) If the proposed location is not between two "like" classifications of roads, then an All Way Stop will not be permitted. (Example: Intersections between Arterial Roads and Collector Roads or Local Roads will not be permitted to have an All Way Stop.)		
Warrant Group 3	Proposed location must meet the following combination of Traffic Volume criteria to warrant an all way stop.		
	f) Total vehicular volume from all directions is 250 vehicles per hour or more. and satisfies either "i" or "ii"		
	i) Combined vehicular and pedestrian volume crossing the main street (direction with majority of traffic) is 150 units per hour or more.		
	Or		
	ii) The pedestrian volume crossing the main street exceeds 200 units over an 8 hour period. and satisfies condition g		
	g) The volume of traffic on all directions represents a direction split less than or equal to 65% on main road and 35% on the minor road.		

Explanation:

- a) If the proposed location meets the warrants in group 1, then the all way stop will be granted regardless of the remaining warrants.
- b) If the proposed location does not meet the warrants in group 1, and does not satisfy the conditions in group 2 then an all way stop will not be permitted regardless of the outcome of the remaining warrants.
- c) If the proposed location does satisfy the conditions in group 2, and does not meet the warrants in group 3, then an all way stop will not be permitted.
- d) If the proposed location does satisfy the conditions in group 2, and does meet the combination warrants in group 3, then an all way stop will be permitted.
- e) If the proposed location doesn't satisfy the conditions in group 2, and does not meet the combination warrants in group 3, but there are inadequate sight lines/visibility or poor road geometry, special consideration may be given for stop installation.

Additional Notes to be included with Policy:

a) All Way Stops are not be used as a method of speed control. All Way Stops have been proven to increase mid block speeds, and have been known to reduce overall compliance of All Way Stops. All Way Stop requests pertaining to speed control will be directed for potential evaluation for Traffic Calming following the Traffic Calming Policy.

b) All Way Stops will result in an increase in noise and air pollution in the general vicinity of the location and in the neighbourhood at large.

c) At a typical four way stop, the following emissions are released collectively, from all vehicles traveling through a stop each year:

657 kg of hydro carbons

8,760 kg of carbon monoxide

675 kg of nitrogen oxide

65,700 kg of carbon dioxide

(Data Provided by the Ministry of Municipal Affairs and Housing)

Option 1: New All Way Stop Committee – Procedure

A new committee of Council is created to hear All Way Stop requests. The proposed committee would be made up of 5 Council members, one from each ward and the remaining 5 Council members would trade every six months. The Committee would hear requests twice per year, once in May and once in October. The Committee can vote and make a decision but decisions not favorable to the resident may still be brought to Council as a whole.

- a) Resident makes formal request to administration to study the need for an all way stop.
- b) Resident obtains necessary petition signatures within prescribed area.
- c) Administration performs warrant study based on the warrants attached.
- d) Administration reports back to resident regarding results.
 - IF All Way Stop is warranted then report is brought to committee for approval of new all way stop.
 - IF All Way Stop is not warranted then requester is notified that the requested All Way Stop does not meet the prescribed warrants.
- e) Resident then has two choices:
 - i. Resident appears at All Way Stop Committee meeting noting the special circumstances why an All Way Stop should be approved. (Special circumstances cannot include speeding issues or short cutting traffic. Concerns such as those should be brought forward as a request for a review for traffic calming.)
 - ii. End pursuance of All Way Stop because the location did not meet the warrants.
- f) All Way Stop committee will convene to vote on All Way Stop requests
 - If Committee decides to approve the All Way Stop, a minor by-law amendment will be drafted for CAO Approval (Delegated Authority).
 - IF Committee decides not to approve All Way Stop resident has two choices:
 - i. Resident may request that the All Way Stop request be brought to Council for further consideration.
 - ii. Resident may end pursuance of an All Way Stop because committee did not approve of the All Way Stop.
- g) Resident brings All Way Stop request to Council.
- h) Council makes final decision.
 - i. IF Council approves the All Way Stop, a minor by-law amendment will be drafted for CAO Approval (Delegated Authority).
 - ii. IF Council does not approve All Way Stop, no all way stop will be erected.

Option 2: Special Meeting of Council Twice Per Year – Procedure

At a special meeting of Council or prior to a regular Council meeting all way stops will be heard twice per year. These special meetings would occur once in May and once in October.

- a) Resident makes formal request to administration to study the need for an all way stop.
- b) Resident obtains necessary petition signatures within prescribed area.
- c) Administration performs warrant study based on warrants attached.
- d) Administration reports back to resident regarding results.
 - i. IF All Way Stop is warranted then report is brought to Council for approval of new all way stop.
 - ii. IF All Way Stop is not warranted then requester is notified that the requested All Way Stop does not meet the prescribed warrants.
- e) Resident then has two choices:
 - i. Bring request to Council noting special circumstances why All Way Stop should be approved (Special circumstances cannot include speeding issues or short cutting traffic. Concerns such as those should be brought forward as a request for a review for traffic calming.)
 - ii. End pursuance of All Way Stop because the location did not meet the warrants.
- f) Resident brings All Way Stop request to special meeting of council either in the Spring or the Fall.
- g) Council makes final decision.
 - i. IF Council approves the All Way Stop, a minor by-law amendment will be drafted for CAO Approval (Delegated Authority).
 - ii. IF Council does not approve All Way Stop, no all way stop will be erected.

Appendix B

Proposed New Policy & Warrant Checklist

All-Way Stop Policy 2-4
Warrant Checklist 5-6

THE CORPORATION OF THE CITY OF WINDSOR POLICY

Service Area:	Public Works	Policy No.:	
Department:	Traffic Operations	Approval Date:	
Division:	Operations	Approved By:	
		Effective Date:	
Subject:	All Way Stop Policy	Procedure Ref.:	
Review Date:		Pages:	Replaces:
Prepared By:	Ian Day		Date:

1. POLICY

1.1. This policy establishes the all way stop review and approval or denial procedure.

2. PURPOSE

2.1. To define the process for the review, and approval or denial of an all way stop control in the City of Windsor.

2.2. To ensure public safety as it pertains to the use of stop controls.

2.3. To ensure adherence to Provincial and National standards and guidelines as it pertains to the use of stop controls.

3. SCOPE

3.1. This policy applies to any City of Windsor Department reviewing, approving and/or installing stop controls within the public right-of-way.

4. RESPONSIBILITY

4.1. City Council is responsible for:

4.1.1. The final approval and any amendments of the All Way Stop Policy.

4.1.2. To approve funding to install and maintain all ways stops.

4.2. Standing Committees are responsible for:

4.2.1. Reviewing and approving the All Way Stop Policy and any amendments and forwarding committee reports with recommendations to City Council for final approval.

4.3. The Chief Administrative Officer (CAO) is responsible for:

4.3.1. Providing approval of the Street Lighting Policy and any amendments to the Standing Committee Level.

4.3.2. Approving by-law amendments (Delegated Authority) to the Traffic By-Law after the installation of an all way stop.

4.4. Corporate Leadership Team (CLT) is responsible for:

- 4.4.1. Providing approval of the development of the All Way Stop Policy and any amendments prior to the CAO for their authorization.

4.5. Department Head, Senior Manager or Manager is responsible for:

- 4.5.1. Reviewing the All Way Stop Policy to determine whether updates are required.
- 4.5.2. Determine the need of the policy.
- 4.5.3. Consult with other relevant stakeholders.
- 4.5.4. Forward the proposed policy and accompanying report to the CLT for approval.
- 4.5.5. Oversee the all way stop reviews and warrant results.
- 4.5.6. Approving the installation of a new all way stop, removal of an existing all way stop and / or reversal of an existing two way stop when the location meets warrant.

4.6. Traffic Technician is responsible for:

- 4.6.1. Receiving resident request for new all way stop.
- 4.6.2. Completing necessary efforts to collect data for a warrant review and completing the warrant checklist.
- 4.6.3. Make recommendation to Department Head, Senior Manager or Manager with regards to the results of a warrant.
- 4.6.4. Reviewing existing stop controls on an on-going basis to assess the continued need for all way stops or to determine what changes are necessary for increased public safety (i.e. reversal of stop control).

4.7. Transportation Technologist I is responsible for:

- 4.7.1. Preparing report with required by-law amendments for new all way stop, or removal or reversal of an existing all way stop based on the warrant and All Way Stop Policy.

5. GOVERNING RULES AND REGULATIONS**5.1. NEW ALL WAY STOP REQUEST**

- 5.1.1. A resident makes a formal request to administration to study the need for an all way stop. OR Administration identifies the need for an all way stop review due to an internally driven safety review.
- 5.1.2. Administration collects data required and completes a warrant for the location requested. Traffic volumes within the past 3 years are acceptable for the review of this warrant, where existing data is older than 3 years, new data is to be collected.
- 5.1.3. Administration reports back to the resident through the 311 Service Request, with the results of the review
- 5.1.4. If the all way stop is warranted, a by-law update and associated report will be brought to the CAO and the all way stop is installed.

5.1.5. If the all way stop is unwarranted, end pursuance of the all way stop because the location does not meet the warrant.

5.2. ALL WAY STOP REMOVAL

5.2.1. A resident makes a formal request to administration to study to need to remove an all way stop. OR Administration performs a review of an all way stop and determines that significant changes have been made in the area to change the need for an all way stop.

5.2.2. If the all way stop is unwarranted, a by-law update and associated report will be brought to the CAO and the all way stop is removed, leaving the stop control on the lower volume roadway. Administration shall review all other safety factors at the intersection to ensure proper sightlines and parking removal is appropriate and make changes as needed prior to removal.

5.2.3. If the all way stop is warranted, end pursuance of the all way stop removal and the all way stop shall remain in place.

5.3. REVERSAL OF A STOP CONTROL

5.3.1. The reversal of a stop shall be reviewed using the All Way Stop Control Warrant Checklist, specifically reviewing the roadway traffic volumes and classifications.

5.3.2. A resident makes a formal request to administration to study to need to reverse a stop control. OR Administration performs a review of an all way stop and determines that significant changes have been made in the area to change the need for the direction of the stop control.

5.3.3. If the reversal of the two way stop is warranted, a by-law update and associated report will be brought to the CAO and the two way stop is reversed. Administration shall review all other safety factors at the intersection to ensure proper sightlines and parking removal is appropriate and make changes as needed prior to reversal.

5.3.4. If the all way stop is warranted, end pursuance of the all way stop removal and the all way stop shall remain in place.

6. RECORDS, FORMS AND ATTACHMENTS

6.1. All Way Stop Warrant Checklist attached.

Warrant Group	Minimum Warrants	Notes	Warrant Compliance Yes / No
Warrant Group 1	If location satisfies either a or b, then an all way stop is warranted.		
	a) Traffic Signals are warranted, all way stop used as a temporary measure.		
	b) Collision Ratio of either (highest classification of roadway applies): One approach is a local OR collector road – average of 3 accidents per year over a 3 year period of a type susceptible to correction by such an installation (9 in 36 months). One approach is an arterial road – average of 4 collisions per year over a 3 year period of a type susceptible to correction by such an installation (12 in 36 months). Note 1.		
Warrant Group 2	If location satisfies all conditions c, d, and e, then an all way stop is warranted.		
	c) If the proposed location is on a Transit Route (proposed or existing), has on-street bikeways (proposed or existing) on the currently uncontrolled road or Truck Route, then no all way stop should be permitted *Note 2.		
	d) If proposed location of the new traffic control device is within 250 metres of another right of way control measure (Traffic Signal, Other All Way Stop, etc.) than no additional all way stop should be permitted. *Note 2.		
Warrant Group 3	Proposed location must meet the following combination of Traffic Volume criteria to warrant an all way stop.		
	e) Total vehicular volume from all directions is either (highest classification of roadway applies): One approach is an Arterial Road - 500 (vehicles per hour, highest 8 hours) One approach is a Collector Road - 375 (vehicles per hour, highest 8 hours) Both approaches are Local Roads – 200 (vehicles per hour, highest 4 hours)		
	And		
	f) Combined vehicular and pedestrian volume crossing the main street (direction with majority of traffic) is either: One approach is an Arterial Road – 200 per hour OR 150 per hour with an average delay of >30 seconds, for the highest 8 hours One approach is a Collector Road – 150 per hour OR 120 per hour with an average delay of >30 seconds, for the highest 8 hours		

Both approaches are Local Roads – 75 per hour, for the highest 8 hours		
And		
g) The volume of traffic on all directions represents a direction split less than or equal to 70% on main road and 30% on the minor road. I.e. the minor street must not be less than 30% of the total volume entering the intersection.		

Notes:

1. Stop controls shall not be allowed on expressways and scenic parkways.
2. A supporting traffic operations study may be required to be assessed, along with sound engineering judgement and approval of the Commissionaire of Infrastructure Services.

Explanation:

- a) If the proposed location meets the warrants in group 1, then the all way stop will be permitted regardless of the remaining warrants.
- b) If the proposed location does not meet the warrants in group 1, and does not satisfy all the conditions in group 2 then an all way stop will not be permitted regardless of the outcome of the remaining warrants.
- c) If the proposed location does satisfy the conditions in group 2, and does not meet the warrants in group 3, then an all way stop will not be permitted.
- d) If the proposed location does satisfy the conditions in group 2, and does meet the combination of warrants in group 3, then an all way stop will be permitted.
- e) If the proposed location doesn't satisfy the conditions in group 2, and does not meet the combination warrants in group 3, but there are inadequate sight lines/visibility or poor road geometry, special consideration may be given for stop installation. Other sight line / visibility methods shall be exhausted prior to allowance of stop control devices (i.e. removing additional parking, removing objects in the ROW, obtaining larger easements, etc.).

Additional Notes to be included with Policy:

- a) All Way Stops are not be used as a method of speed control. All Way Stops have been proven to increase mid block speeds, and have been known to reduce overall compliance of All Way Stops. All Way Stop requests pertaining to speed control will be directed for potential evaluation for Traffic Calming following the Traffic Calming Policy.
- b) All Way Stops will result in an increase in noise and air pollution in the general vicinity of the location and in the neighbourhood at large.
- c) At a typical four way stop, the following emissions are released collectively, from all vehicles traveling through a stop each year:
 657 kg of hydro carbons 8,760 kg of carbon monoxide 675 kg of nitrogen oxide 65,700 kg of carbon dioxide
 (Data Provided by the Ministry of Municipal Affairs and Housing)

Subject: Truck Route Study Update Report

Reference:

Date to Council: November 29, 2023

Author: Chris Gerardi

Policy Analyst

cgerardi@citywindsor.ca

(519) 255-6100 ext. 6830

Public Works - Operations

Report Date: November 7, 2023

Clerk's File #: SW/14579

To: Mayor and Members of City Council

Recommendation:

THAT the report by the Policy Analyst on the current status and next steps of the City's Truck Route study **BE RECEIVED** for information.

Executive Summary:

N/A

Background:

The City of Windsor is conducting a Truck Route Study to modernize its truck route network to adapt to changing city requirements. (The City's current truck route network is governed by Traffic By-law 9148, last updated in January 2018.)

The Truck Route Study's main goals are to recommend an improved truck route network that serves residents, stakeholders, and the goods movement industry more effectively. The study aims to reduce the adverse effects of truck traffic on the community's quality of life and ensure that the network aligns with current and future conditions, considering recent changes and anticipated growth.

This update report provides Council with more information on the progress of the City's Truck Route Study as well as outlines the study's next steps.

Discussion:

The City of Windsor's Truck Route Study, led by Arcadis, an experienced company in goods movement and truck route studies in Ontario. The project commenced in July 2023 and is projected to conclude by Spring 2024.

The Truck Route Study is being undertaken across three phases. The three phases of the project are as follows:

1. **Phase 1 (Current Phase):** Identifying study needs and opportunities.
2. **Phase 2:** Drafting the development of the truck route network.
3. **Phase 3:** Recommending the final truck route network.

Truck Route Study Timeline:



Phase 1 is currently wrapping up. During **Phase 1**, Arcadis conducted a thorough review of existing policies, planning, and transportation plans at the city, provincial, and regional levels. The study encompassed an examination of various truck treatments used in Windsor and other Canadian municipalities. Key documents and policies from the City of Windsor, provincial, and regional entities were reviewed including:

City of Windsor Plans and Policies

- 20-Year Strategic Vision (2016)
- Official Plan (2012)
- Active Transportation Master Plan (2019)
- Vision Zero (2023)
- South Sandwich South Master Servicing Plan (2023)
- Banwell Road EA (2016)
- Central Box Study Area EA (2016)
- Provincial/Division Road EA (2007)

- Windsor Annexed Lands Master Planning Study (2006)

Provincial Plans and Policies

- Provincial Policy Statement (2020)
- Connecting the Southwest (2020)
- Long Combination Vehicle Program (2022)
- Province-Wide Cycling Network

Regional Plans and Policies

- Essex-Windsor Regional Transportation Master Plan (2005)
- Windsor Area Long Range Transportation Study (1999)
- Lauzon Parkway Improvements EA (2014)
- County Road 42 EA (2022)

Draft Study Principles

Draft study principles were also formulated to guide the development of the truck route network, emphasizing safety, connectivity, reliability, and environmental considerations, among other factors. These principles will guide the development of the truck route network and serve as the foundation of the Truck Route Study.

All truck route network outcomes will aim to follow these principles.

- Support Safety Outcomes
- Provide A Connected Truck
- Route Network
- Design for Reliability and Redundancy
- Simplify Enforcement Requirements
- Support Environmental and Public Health
- Plan for Consistency and Adaptability

Objectives and Criteria

In addition, the Objectives and related Criteria that will be used to assess candidate roadways for potential inclusion in the new truck route network during **Phase 2** of the study. They Objectives and Criteria are:

Objective 1: Optimize Goods Movement Efficiency and Connectivity

- Prioritize higher functional road classes – e.g. arterial vs. local roads
- Prioritize higher-capacity roads – roads with wider widths and more lanes
- Prioritize roads with higher current and forecasted truck volumes
- Provide connectivity between major truck origins and destinations
- Prioritize routes without load restrictions

Objective 2: Maintain Community Livability and Integrity

- Prioritize routes that run alongside appropriate adjacent land uses
- Prioritize routes with lower pedestrian and cyclist volumes
- Prioritize routes without dedicated cycling infrastructure

Furthermore, a Background and Technical Review was conducted, which examined functional road classes, total truck volumes, heavy truck volumes, cyclist volumes, pedestrian volumes, the trails network, number of lanes, speed limits, multi-modal freight, and land Use. This review also identified major employers and trucking activity generators.

Public Engagement

Multiple meetings and online engagement sessions gathered input from the public, business areas, adjacent municipalities, and other relevant parties during **Phase 1**. Stakeholders were asked to comment and give feedback on the information above and to share any other key contextual information that they would that they believe needs to inform the Truck Route Study. They were also asked to share any areas of concern, issues or opportunities with the current truck network.

The Round 1 Engagements have included the following:

- Public Information Centres (East side October 11th, West side October 12th)
- Goods Movement Meeting on October 12th. This was well attended by truck companies, construction companies, South west sales, Stellantis, the battery plant.
- Business Improvement Areas - BIAs meeting on October 27th. Contacts on the BIA advisory committee were invited.
- Adjacent Municipalities and Governments - Municipal/Governmental Information Sharing Meeting October 30th with Tecumseh, Essex Country and MTO. Windsor police and LaSalle were invited but did not attend
- Online engagement on letstalk.citywindsor.ca (from October 11 to November 9)

Next Steps in Developing the Truck Route Network

Upon completion of **Phase 1** of the study, the project team will have developed an understanding of truck route-related needs and opportunities based on public

and stakeholder input. **Phases 2 and 3** of the study will involve the following steps:

1. Select candidate road segments for assessment
2. Evaluate road segments
3. Create a draft truck route network
4. Address network issues and identify mitigations
5. Finalize recommended truck route network.

Risk Analysis:

No risks are associated with providing this update report to Council

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

N/A

Consultations:

N/A

Conclusion:

The City of Windsor's Truck Route Study has made significant progress in **Phase 1**, involving a comprehensive review of existing policies and transportation plans. This phase has laid the foundation for developing the truck route network by establishing guiding principles, objectives, and criteria.

Public engagement has played an important role in this study, gathering input from a diverse range of stakeholders, including the public, business sectors, adjacent municipalities, and other relevant parties. This feedback has yielded valuable insights into truck route-related needs and opportunities.

Looking forward, **Phases 2 and 3** will center on the selection of candidate road segments, their evaluation, the drafting of the truck route network, addressing network issues, and finalizing the recommended truck route network. The study's focus remains

on optimizing goods movement efficiency, preserving community livability, and prioritizing safety and environmental considerations in the decision-making process. The project remains on track for completion by Spring 2024.

Planning Act Matters:

N/A

Approvals:

Name	Title
Shawna Boakes	Executive Director of Operations
Chris Nepszy	Commissioner, Infrastructure Services
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:



Subject: Class Environmental Assessment for the Wyandotte Street East Extension and Jarvis Avenue - Ward 7

Reference:

Date to Council: November 29, 2023

Author: Paul Mourad

Engineer III

(519) 255-6100 Ext. 6119

pmourad@citywindsor.ca

Design - Engineering

Report Date: November 9, 2023

Clerk's File #: SW/14693

To: Mayor and Members of City Council

Recommendation:

- I. THAT Council **ENDORSE** the Project File Report for the Wyandotte Street East Extension and Jarvis Avenue Schedule 'B' Municipal Class Environmental Assessment as a planning document with recommendations supporting the Preferred Solution and Preferred Design as identified and prepared by the Engineering Department, City of Windsor, dated November 3, 2023; and,
- II. THAT Administration **BE DIRECTED** to finalize the Project File Report for the Wyandotte Street East Extension and Jarvis Avenue Municipal Class Environmental Assessment and issue the Notice of Study Completion in accordance with the Municipal Class Environmental Assessment planning process to commence the minimum of 30-day review period immediately following finalizing the Environmental Assessment.

Executive Summary:

N/A

Background:

The City of Windsor initiated a Schedule 'B', Municipal Class Environmental Assessment Study (MCEA) to evaluate the extension of Wyandotte Street East to Jarvis Avenue to serve neighbourhood transportation and infrastructure needs for a 20-year period. The Project was first identified as a funding priority by City Council in the 2011 Capital Budget.

The study area includes the area bounded by Riverside Drive East to the north, Jarvis Avenue to the east, Little River Road to the south and Banwell Road to the west. Jarvis Avenue was developed prior to construction of the surrounding neighbourhoods. It has remained isolated with reduced connectivity and public service access points relative to other areas.

The study considers the Wyandotte Street East extension for vehicular, pedestrian, transit, and bikeway connections, traffic calming, drainage, and sanitary sewage. In addition, the study evaluates the servicing needs required to improve neighbourhood infrastructure to current municipal standards on Jarvis Avenue.

A MCEA is a standardized approach that sets out a planning process for classes or groups of activities. It applies to projects that are carried out routinely and have predictable environmental impacts that can be readily managed. Projects defined within a MCEA require no further environmental approval under Section 5 of the *Environmental Assessment Act*, conditional upon being planned according to the procedures set out in the document. The draft Project File Report completed for this project identifies any impacts, both positive and negative, as a result of the proposed project, high level costing, conceptual drawings and identification of a preferred design.

Discussion:

The MCEA for the Wyandotte Street East Extension and Jarvis Avenue was carried out in accordance with the Schedule 'B' requirements as outlined under the MCEA. The MCEA study considered the potential transportation, social, natural and economic impacts of various methods of improving the connection between Banwell Road and Jarvis Avenue, including improvements to Jarvis Avenue.

Under the Schedule 'B' process for MCEAs, there are three (3) phases to be completed during the study as noted in **Figure 1**. Phases 1 through 3 were completed as part of the Wyandotte Street East Extension and Jarvis Avenue MCEA and presented to the public via two public Information Centres (PICs). The Study Team has completed a Project File Report, which documents the planning, decision making and consultation process completed to date.

Figure 1: Schedule 'B' Process for Class EAs

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
<u>Basic Process</u>	Problem OR Opportunity	Alternative Solutions	Alternative Design Concepts For Preferred Solution	Environmental Study Report	Implementation
<u>Consultation Requirements</u>	Optional	Mandatory	Mandatory	Mandatory	Optional
SCHEDULE 'A/A+' PROJECTS	✓				✓
SCHEDULE 'B' PROJECTS	✓	✓	✓		✓
SCHEDULE 'C' PROJECTS	✓	✓	✓	✓	✓
MASTER PLANS (See Section A.2.7)	✓	✓	✓	✓	✓

Public consultation is an important part of the MCEA process. Project related information and updates have been maintained on the Project Website (www.WindsorEAs.ca) throughout the study under the heading, "Wyandotte Street East Extension and Jarvis Avenue Environmental Assessment". Two (2) PICs were conducted for this study.

I. PIC #1

PIC #1 was held on October 24, 2019, between 4:00pm and 7:00pm at the Riverside Sportsmen's Club, with display information available on the City's website (www.WindsorEAs.ca). A Notice of this PIC was prepared and distributed to the Study's contact list and placed in the local newspaper. The purpose of the PIC #1 was to:

- Provide a summary of study background and the MCEA process;
- Provide an overview of technical studies completed and planned;
- Present the Problem and Opportunity Statements;
- Identify the alternative solutions;
- Present the evaluation criteria;
- Present the evaluation of alternative solutions and the preliminary preferred solution;
- Allow the public to provide input;
- Enable the use of public feedback in the next stage of developing and evaluating potential alternative designs; and,

- Identifying the next stage of the process.

Members of public were encouraged to provide feedback on the Study by submitting comment sheets in-person or via email or mail. During PIC #1 there were several comments received related to key aspects of the proposed alternative solutions. Specifically, the public expressed interest in the following items which were further considered during the development of the alternative designs (Phase 2 of the MCEA process):

- Concern for bringing cut-through traffic into the neighbourhood possibly destined for Tecumseh Road East, and resulting public safety impacts from increased motor vehicle use;
- Concern that updating the road to the municipal design standard will encourage speeding and higher traffic volumes;
- Concern that additional flood and sewer system capacity risk may be created due to new runoff created by new Wyandotte Street East and expanded Jarvis Avenue pavement;
- Natural environment protection.

II. PIC #2

PIC #2 was held on August 26, 2021, in a virtual format, with a 3:00pm to 4:30pm session and a 6:00pm to 7:30pm session, in order to discuss the proposed design considerations following the earlier stakeholder engagement. The purpose of the PIC #2 was to:

- Provide an overview of the study;
- Outline the study process (MCEA);
- Share feedback received at PIC #1;
- Discuss alternative design concepts;
- Present the evaluation criteria and the evaluation of alternative designs;
- Propose the preliminary preferred design;
- Review additional design considerations;
- Allow attendees to ask questions;
- Identify Next Steps;
- Request feedback.

The public expressed interest in the following items, which were further considered during the finalization of the alternative designs (Phase 3 of the MCEA process):

- Concern of when the section of Jarvis Avenue south of Castle Hill would be completed;
- Drainage concerns and how the swale would be connected to the storm sewer on Wyandotte;
- Impacts to trees on Jarvis Avenue due to road widening.

Preferred Solutions

The original intent of this MCEA study was to consider the extension of Wyandotte Street East between Banwell Road and Jarvis Avenue to address the limited access to Jarvis Avenue that limits the provision of emergency and municipal services. This MCEA also provides the opportunity to provide an upgraded cross-section on Jarvis Avenue, enhance limited drainage and provide better connectivity for all modes of transportation.

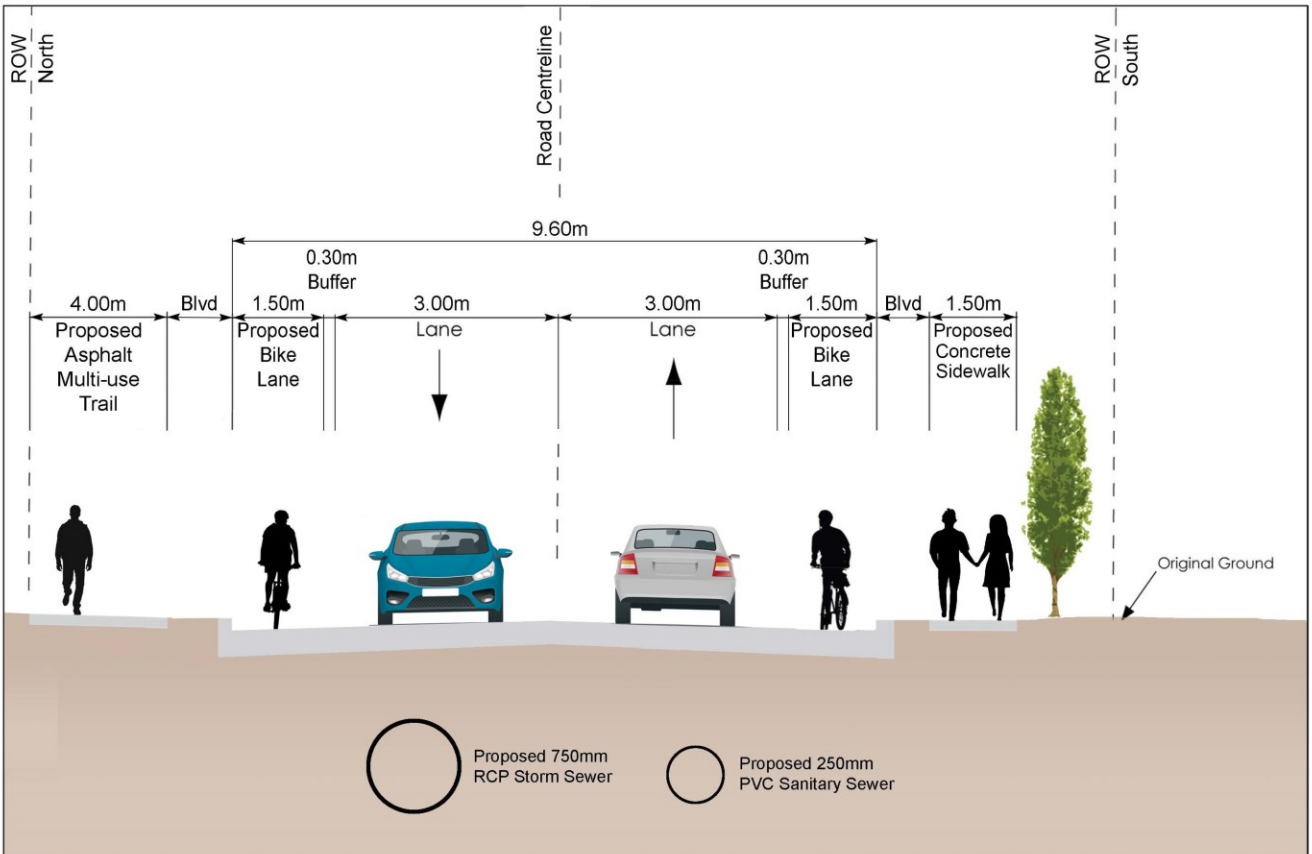
Preferred (recommended) solutions were formalized for both Wyandotte Street East and Jarvis Avenue.

I. Wyandotte Street West Extension

The preferred solution for Wyandotte Street East (**see Figure 2**) includes:

- Construct the Wyandotte Street East extension to a 9.6 m wide cross-section with full curb and gutter, including 1.50 m wide on-street bicycle lanes;
- a 1.50 m wide concrete sidewalk on the south side of the road;
- a 4.0 m wide asphalt multi-use trail on the north side of the road;
- Construct a traffic island on Wyandotte Street East at Jarvis Avenue;
- Construct a trunk storm sewer to service all neighbourhood drainage, including Wyandotte Street.

Figure 2: Preferred Design - Wyandotte Street East Extension

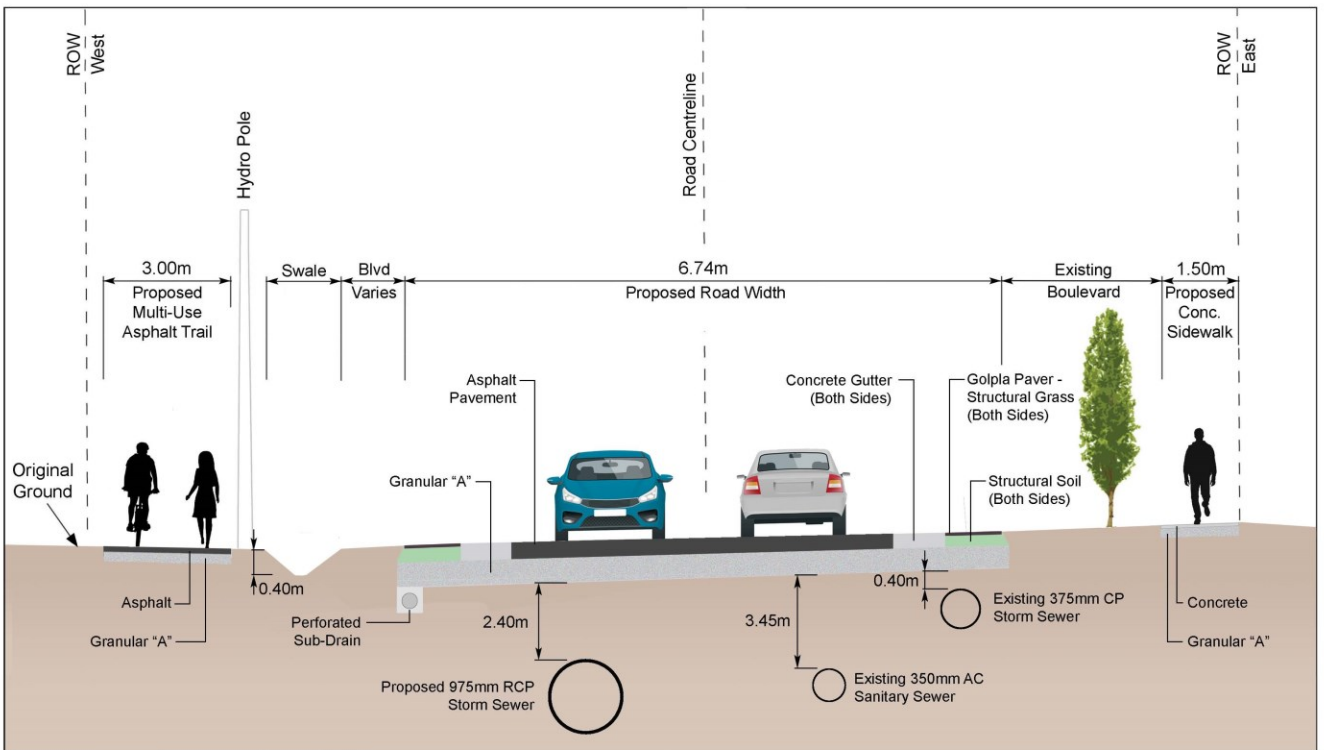


II. Jarvis Avenue from Wyandotte Street East to Dillon Drive

The preferred solution for this section of Jarvis Avenue (see Figure 3) includes:

- Reconstruct Jarvis Avenue to a 6.74 m wide cross-section with concrete gutters and no curbs to maintain a rural feel;
- a 1.50 m wide concrete sidewalk on the east side of the road;
- a 3.0 m wide multi-use asphalt trail on the west side of the road;
- Construct a traffic island on Dillon Drive at Jarvis Avenue.

Figure 3: Preferred Design - Jarvis Avenue from Wyandotte Street East to Dillon Drive



II. Jarvis Avenue from Riverside Drive East to Wyandotte Street East and from Dillon Drive to Little River Boulevard

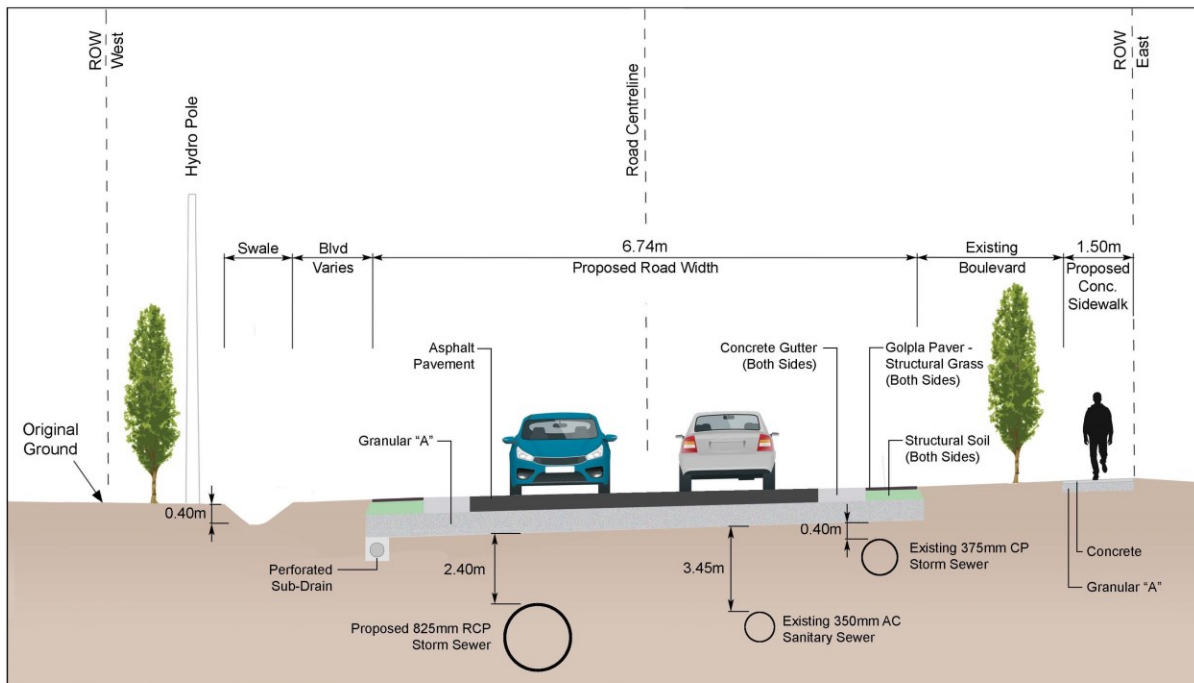
The preferred solution for this section of Jarvis Avenue (see Figure 4) includes:

- Reconstruct Jarvis Avenue to a 6.74 m wide cross-section with concrete gutters and no curbs to maintain a rural feel;
- a 1.50 m wide concrete sidewalk on the east side of the road;
- Rebuild the cul-de-sac on Jarvis Avenue to municipal standards at Little River Boulevard and remove the driveway approach.

Parking on Road and Boulevard (Jarvis Ave)

It is important to note that the current parking by-law (No. 9023) does not allow parking on Jarvis Avenue. Boulevard parking is also prohibited. The intention with the updated design is to maintain no parking on Jarvis Avenue. City Council would have to approve any amendment to the current no parking by-law to allow parking on Jarvis Avenue.

Figure 4: Preferred Design - Jarvis Ave from Riverside Drive East to Wyandotte Street East and from Dillon Drive to Little River Boulevard



Preliminary Cost Estimates

- The section of works including the Wyandotte Street East extension from Banwell Road to Jarvis Avenue and on Jarvis Avenue from Wyandotte Street to Beverly Glen is estimated at \$6,644,400;
- The works on Jarvis Avenue from Riverside Drive East to Wyandotte Street East and from Beverly Glen to Little River Boulevard is estimated at \$8,783,600.

The total costs of both phases is \$15,428,000 and includes a 20% contingency allowance and 20% for engineering and other internal costs.

The Executive Summary from the draft Project File Report for Wyandotte Street East Extension and Jarvis Avenue is provided in **Appendix A**.

Next Steps

Pending Council endorsement of the Project File Report as a planning document, the Notice of Study Completion will be published in the Windsor Star and on the Project Website (www.WindsorEAs.ca). The Notice will be provided by direct mail-out and email (as applicable) to those whom have requested to be included on the project contact list for the MCEA Study, and to Agencies and Stakeholders. A copy of the Notice of Study Completion will also be provided to the Mayor and Members of Council and included as a Communication Item at the next regularly scheduled meeting of

Council following publication. The Project File Report will be available for review on the Project Website (www.WindsorEAs.ca) during the 30-calendar day public review period.

Risk Analysis:

There are no significant or critical risks in endorsing this Project File Report. The recommendation will require, pursuant to the Environmental Assessment Act, a mandatory minimum of 30-day review period. Only First Nations groups can submit a Part II Order request on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. The Ministry of the Environment, Conservation and Parks will not consider requests on other grounds.

Climate Change Risks

Climate Change Mitigation:

The preferred solution for both Wyandotte Street East and Jarvis Avenue includes improved access to walking and cycling infrastructure. Enhanced access to active transportation infrastructure supports the implementation of the Active Transportation Master Plan, which is key strategy to the City's Community Energy Plan to reduce greenhouse gas emissions.

Climate Change Adaptation:

The detailed design of the Wyandotte Street East Extension and Jarvis Avenue will be completed following the latest municipal design standards and guidelines including considerations for low impact development, active transportation and climate resiliency. The detailed design will also consider coastal flooding solutions and mitigation.

Any loss of trees due to construction shall be replaced and where possible the number of trees improved. Trees provide many climate change resiliency benefits including: stormwater retention, reduction in urban heat island and protection of biodiversity

Financial Matters:

There are no direct financial implications with this information report. Detailed design and construction related to infrastructure works on Wyandotte Street East and Jarvis Avenue will be contingent upon future Capital Budget funding.

Operational funding needs relating to general infrastructure maintenance including, maintenance and monitoring will be identified and included for consideration in future budgets as the new works are designed and constructed and brought into operation.

Consultations:

Kathy Buis, Financial Planning Administrator

Karina Richters, Supervisor Environmental Sustainability & Climate Change

Kathleen Quenneville, Active Transportation Coordinator

Patrick Winters, Manager of Development

Conclusion:

Several criteria and factors were utilized in the assessment of the design alternatives including natural environment, socio-economic environment, cultural environment, transportation, costs and technical considerations.

Pending Council endorsement of the Project File Report as a planning document, Administration recommends that the Notice of Study Completion be published in the Windsor Star and on the Project Website (www.WindsorEAs.ca) and provided by direct mail-out to those whom have requested to be included on the project contact list for the Class EA report, and to Agencies and Stakeholders. A copy of the Notice of Study Completion will also be provided to the Mayor and Members of Council and included as a Communication Item at the next regularly scheduled meeting of Council following publication. The full MCEA report will be available for review on the Project Website (www.WindsorEAs.ca) during the 30-calendar day public review period.

Approvals:

Name	Title
Fahd Mikhael	Manager, Engineering Design
Fahd Mikhael	Acting Executive Director Engineering / Deputy City Engineer
Mark Nazarewich	Senior Legal Council
Janice Guthrie	Commissioner, Corporate Services CFO/City Treasurer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email
Angelo Marignani, Ward 7 Councillor	c/o 350 City Hall Square West, Suite 530 Windsor, ON N9A 6S1	amarignani@citywindsor.ca
Project Notification List <i>(List provided to Clerks)</i>		

Appendices:

- 1 Appendix A - Executive Summary of the draft Project File Report for Wyandotte Street East Extension and Jarvis Avenue



PROJECT FILE REPORT

**Wyandotte Street East Extension and Jarvis Avenue
Schedule 'B' Municipal Class Environmental Assessment
(Phases 1-3)
Windsor, Ontario**

**Corporation of the City of Windsor
350 City Hall Square West Windsor, Ontario, N9A 6S1**

November 2023

EXECUTIVE SUMMARY

Introduction

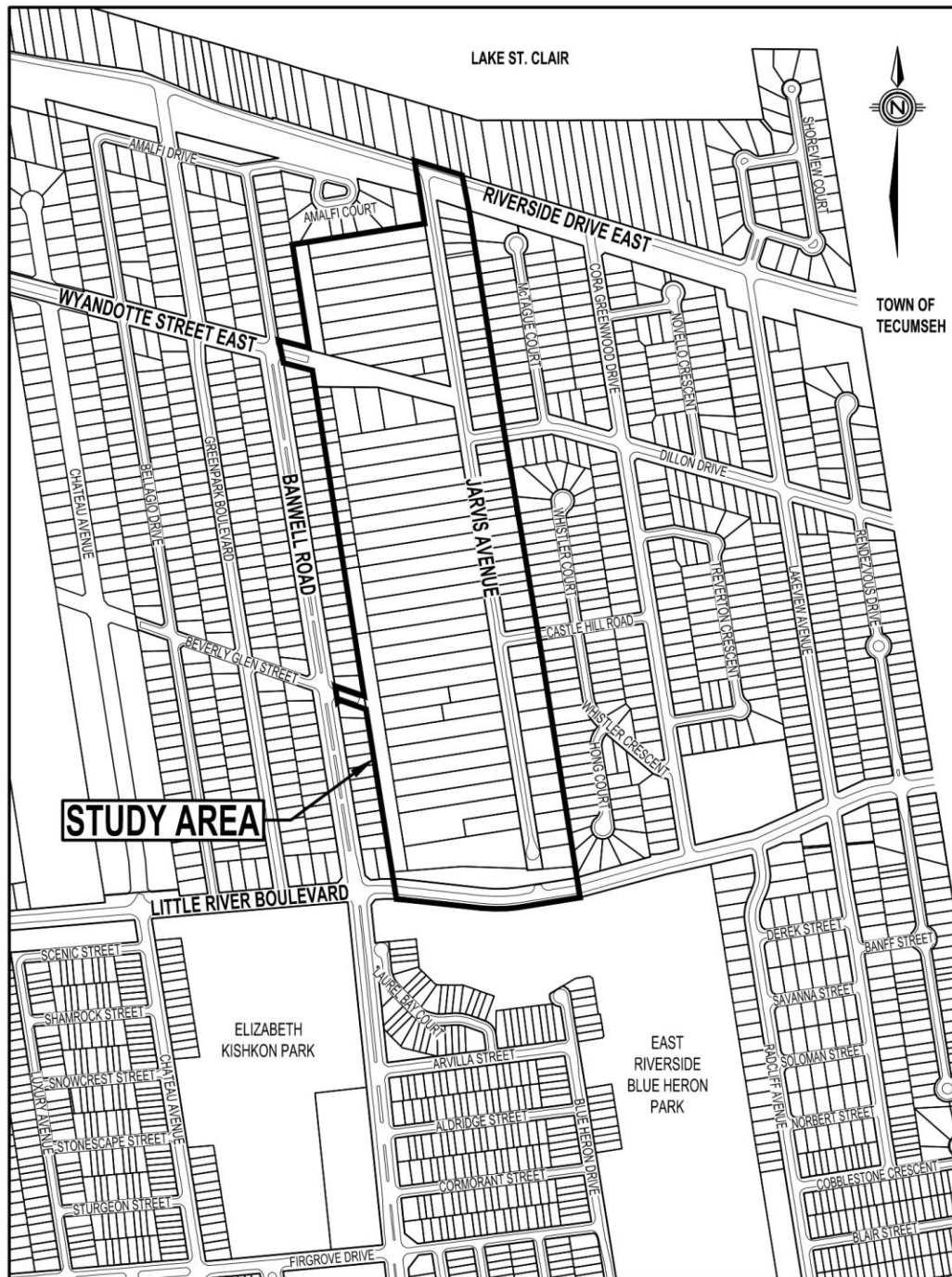
The City of Windsor initiated a Schedule 'B', Municipal Class Environmental Assessment Study (Class EA) to evaluate the extension of Wyandotte Street East to Jarvis Avenue to serve neighbourhood transportation and infrastructure needs for a 20-year period.

The study area included the area bounded by Riverside Drive East to the north, Jarvis Avenue to the east, Little River Road to the south and Banwell Road to the west, as shown in **Figure E-1** on the following page. Jarvis Avenue was developed prior to construction of the surrounding neighbourhoods. It has remained isolated with reduced connectivity and public service access points relative to other areas.

The study considers the Wyandotte Street East extension for vehicular, pedestrian, transit, and bikeway connections, traffic calming, drainage, and sanitary sewage. In addition, the study evaluates the servicing needs required to improve neighbourhood infrastructure to current municipal standards on Jarvis Avenue.

This Class EA study was undertaken in accordance with the planning and design process for Schedule 'B' projects outlined in the Municipal Engineering Association's document titled "Municipal Class Environmental Assessment" (October 2000, as amended in 2007, 2011 and 2015) under the Ontario Environmental Assessment Act.

Figure E-1: Study Area



Environmental Assessment Process

The Municipal Class EA process is an approved process under the EA Act. All municipalities in Ontario are required to follow this approved process for the planning of infrastructure projects. This project is classified as being subject to the Class EA process.

A description of the Class EA planning phases is provided below:

Phase 1 – Identify the problem (deficiency) and/or opportunities.

Phase 2 – Identify and evaluate alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution considering public and review agency input.

Phase 3 – Identify Alternative Design Concepts for the preferred solution implementation by taking into consideration the existing environment and establish the preferred design concept by considering public and review agency input.

Phase 4 – Document the Environmental Assessment including the design and consultation process in an ESR for public review.

Phase 5 – Complete contract drawings and documents and proceed to construction and operation. Monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, also monitor the operation of the completed facility.

Since this project is proceeding as a “Schedule B” activity under the Municipal Class Environmental Assessment, the City of Windsor is required to maintain an official Project File that will be made available to the public for review and comment. This Class EA addressed Phases 1 through 3 of the Class EA process.

Existing Conditions

In order to understand the existing conditions and to identify potential constraints, and opportunities within the study area, the following assessments were completed:

- Traffic Impacts of Potential Road Network Changes
- Socio-economic Review
- Stage 1 Archeological Assessment
- Cultural Heritage Review
- Natural Environment Assessment
- Stormwater Management Assessment
- Geotechnical Review
- Review of Existing Utilities

Problems and Opportunities

Problems

Based on the planned easterly connection of Wyandotte Street East from Banwell Road to Jarvis Avenue, the problems for the Study Area include:

- A need to address limited access to Jarvis Avenue that limits the provision of emergency and municipal services. The extension of Wyandotte Street East from Banwell Road to Jarvis Avenue is proposed to be funded by the City through the capital budget process.
- There is a need to define any infrastructure, operational and safety improvements required in association with the project as part of this study.
- This study will need to identify how to complete Wyandotte Street East to meet safety and operational needs within a 20 year planning horizon, including for emergency services, transportation needs and land use planning. During the last 5 inter-census

periods, this district has experienced a positive population growth and an increased number of occupied dwellings.

Issues Identified for Wyandotte Street East

- The Official Plan designated Wyandotte Street East as a Class II Arterial, which requires sidewalks on both sides of the road. The City's Official Plan, Schedule "X", recommends a Class II Arterial designation with a right-of-way width of 30.0 metres. Currently, Wyandotte Street East, east of Banwell Road, is designated as a Collector Road in the City of Windsor's Official Plan with a 24.0 metre right-of-way road allowance.
- Wyandotte Street East was proposed to be constructed to the current municipal standard road width for collector roads of 10.4 metres, with sidewalks on both sides of the road.
- The City's Active Transportation Master Plan (ATMP), Walk Wheel Windsor, dated May 2019, (available on the City website) recommends an active transportation facility for Wyandotte Street East.. The Plan indicates that Wyandotte Street should have an off-street, multi-use trail along its north side which would take the place of the north sidewalk.
- Several mature trees exist within the municipal right-of-way.
- There is noted Species at Risk habitat on the site and known occurrences of Species at Risk on adjacent property.

Issues Identified for Jarvis Avenue

- Jarvis Avenue is a local residential road that has been constructed below current municipal standards of the standard 8.60 metre pavement width.

- As a local road, improvements to Jarvis Avenue are subject to the City's Local Improvement policies. Funding to update Jarvis Avenue would be a cost-share between the property owners and the municipality.
- Storm sewer service in the area is of insufficient design and capacity.
- The cul-de-sac of Jarvis Avenue at Little River Road requires an upgrade to meet municipal standards.
- The pavement structure of Jarvis Avenue is rated as "Now Deficient" under the City of Windsor's asset rating system. The current roadway is subject to poor drainage and deteriorated conditions.

Issues Identified for Remaining Areas

- Beverly Glen Street has not been completed, however most of the required property to complete the street is owned by the City with some acquisitions required.
- Operational deficiencies at Banwell Road and Little River Boulevard would be expected within the 10-year and 20-year horizons. A signalized intersection or a roundabout can be considered to improve the intersection operations in the future.

Opportunities

The full connection of Wyandotte Street West will present the following opportunities for the Study Area:

Opportunities for Wyandotte Street East

- There is an opportunity to employ the Complete Streets approach for Wyandotte Street East in order to accommodate the existing and future traffic

demand (including active transportation) and provide better connectivity to adjacent neighbourhoods.

- The proposed Wyandotte Street East Extension would complete the final portion of the road that was planned to be constructed since the right-of-way was established by the former Town of Riverside, terminating at Jarvis Avenue. The Project was first identified as a funding priority by City Council in the 2011 Capital Budget.
- The proposed connection will provide a link between the East Riverside and Lakeview Planning Areas.

Opportunities for Jarvis Avenue

- There is an opportunity to provide an upgraded road cross-section with new pavement and storm sewers to provide enhanced drainage on Jarvis Avenue.
- An opportunity to enhance access to Jarvis Avenue for the provision of emergency and municipal services.
- Provide better connectivity for all modes of transportation.

Opportunities for Beverly Glen Avenue

- Consideration of this road corridor provides a means to facilitate infill development, as well as enhance access for public service delivery.

Consultation

In accordance with the Class EA process, consultation with various stakeholders, including the public, agencies, utilities and First Nations, was undertaken during the study.

Public Information Centre (PIC) #1 was held on October 24, 2019, between 4:00pm and 7:00pm at the Riverside Sportsmen's Club, with display information available on the City's website (www.WindsorEAs.ca). A Notice of this PIC was prepared and distributed to the Study's contact list and placed in the local newspaper.

Listed below is key feedback that was gathered from residents since PIC #1:

- Concern for bringing cut-through traffic into the neighbourhood possibly destined for Tecumseh Road East, and resulting public safety impacts from increased motor vehicle use.
- Concern that updating the road to the municipal design standard will encourage speeding and higher traffic volumes.
- Concern that additional flood and sewer system capacity risk may be created due to new runoff created by new Wyandotte Street East and expanded Jarvis Avenue pavement.
- Natural environment protection.

Public Information Centre (PIC) #2 was held on August 26, 2021, in a virtual format, with a 3:00pm to 4:30pm session and a 6:00pm to 7:30pm session, in order to discuss the proposed design considerations following the earlier stakeholder engagement.

Listed below is key feedback that was gathered from residents since PIC #2:

1. Concern of when the section of Jarvis Avenue south of Castle Hill would be completed.
2. Drainage concerns and how the swale would be connected to the storm sewer on Wyandotte.

3. Impacts to trees on Jarvis Avenue due to road widening.

Alternative Solutions

Phase 2 of the Municipal Class EA process consists of taking into consideration the existing environment in order to evaluate alternative solutions to address the problems/opportunities identified during Phase 1. The potential alternative solutions are evaluated against natural environment, social environment, economic environment and technical factors.

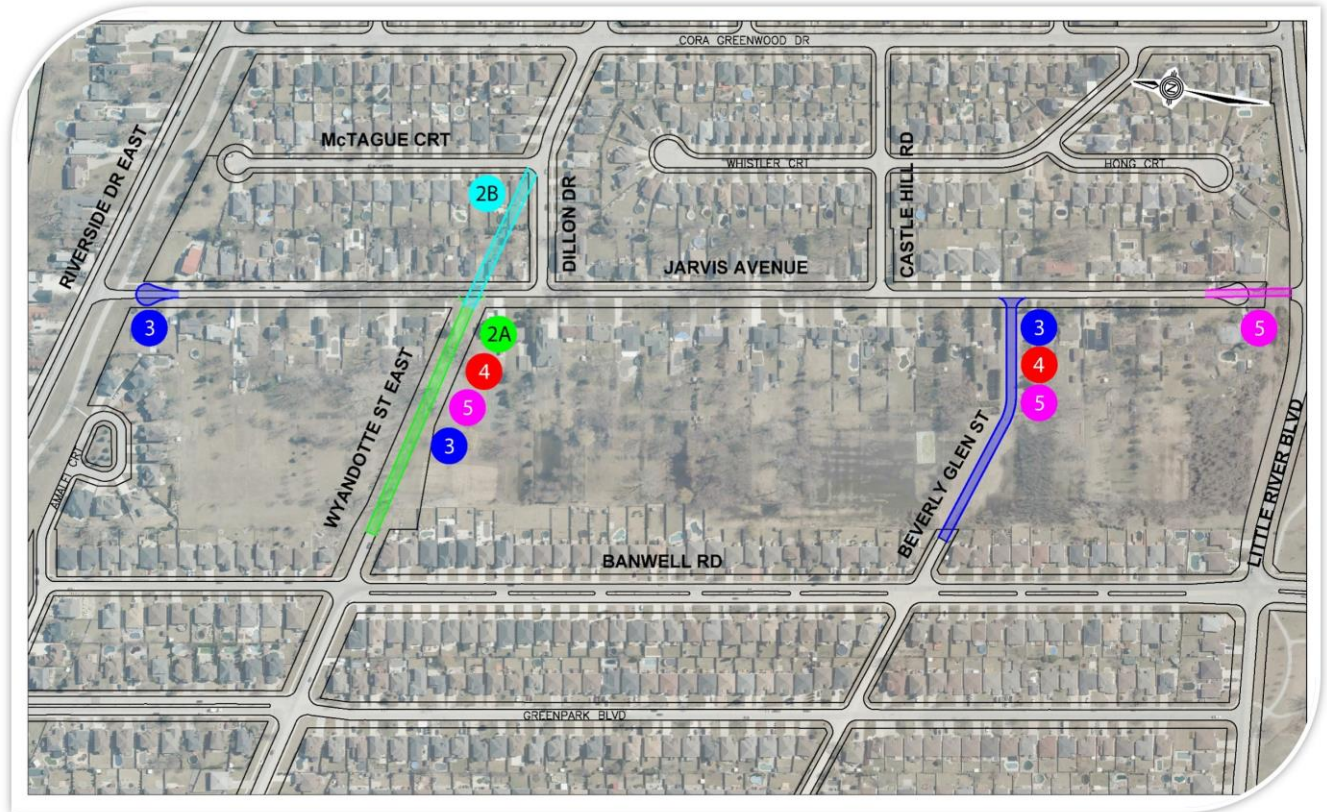
To determine the best approach for the Study Area, the following alternative solutions were evaluated. For all scenarios except for #1, the improvement of Jarvis Avenue to current municipal standards is proposed as part of a cost-shared Local Improvement.

- SCENARIO 1: Base scenario, do-nothing;
- SCENARIO 2A: Extension of Wyandotte Street East as an offset intersection at Jarvis Avenue;
- SCENARIO 2B: Extension of Wyandotte Street East as a continuous alignment connecting to Dillon Drive;
- SCENARIO 3: Extension of Wyandotte Street East with an offset intersection at Jarvis Avenue, extension of Beverly Glen Street to Jarvis Avenue, and closure of Jarvis Avenue at Riverside Drive East;
- SCENARIO 4: Extension of Wyandotte Street East with an offset intersection at Jarvis Avenue, and extension of Beverly Glen Street to Jarvis Avenue; and

- SCENARIO 5: Extension of Wyandotte Street East with an offset intersection at Jarvis Avenue, extension of Beverly Glen Street to Jarvis Avenue, and extension of Jarvis Avenue to Little River Boulevard.

The assessment of alternative solutions for Wyandotte Street East Extension and Jarvis Avenue is summarized in **Section 3.0** of this Report. Figure E-2 shows the alternative solution scenarios.

Figure E-2: Alternative Solution Scenarios



Preferred Design Alternative

The preferred design for Wyandotte Street East Extension and Jarvis Avenue comprises the following and is discussed in detail in **Section 4.0** of this Report:

1. Construct Wyandotte Street East to a 9.6m cross-section including bicycle lanes.
2. Reconstruct Jarvis Avenue to a 6.74m cross-section.
3. Implement traffic islands at Wyandotte Street East and Dillon Drive intersections with Jarvis Avenue.
4. Construct a trunk storm sewer to service all neighbourhood drainage.

5. Rebuild the south cul-de-sac on Jarvis Avenue at Little River Boulevard and remove the driveway approach.
6. Construction of Beverly Glen Avenue will no longer be carried forward for consideration.
7. Closure of Riverside Drive East intersection with Jarvis Avenue will no longer be carried forward for consideration.

Figure E-3: Preferred Design - Wyandotte Street East Extension

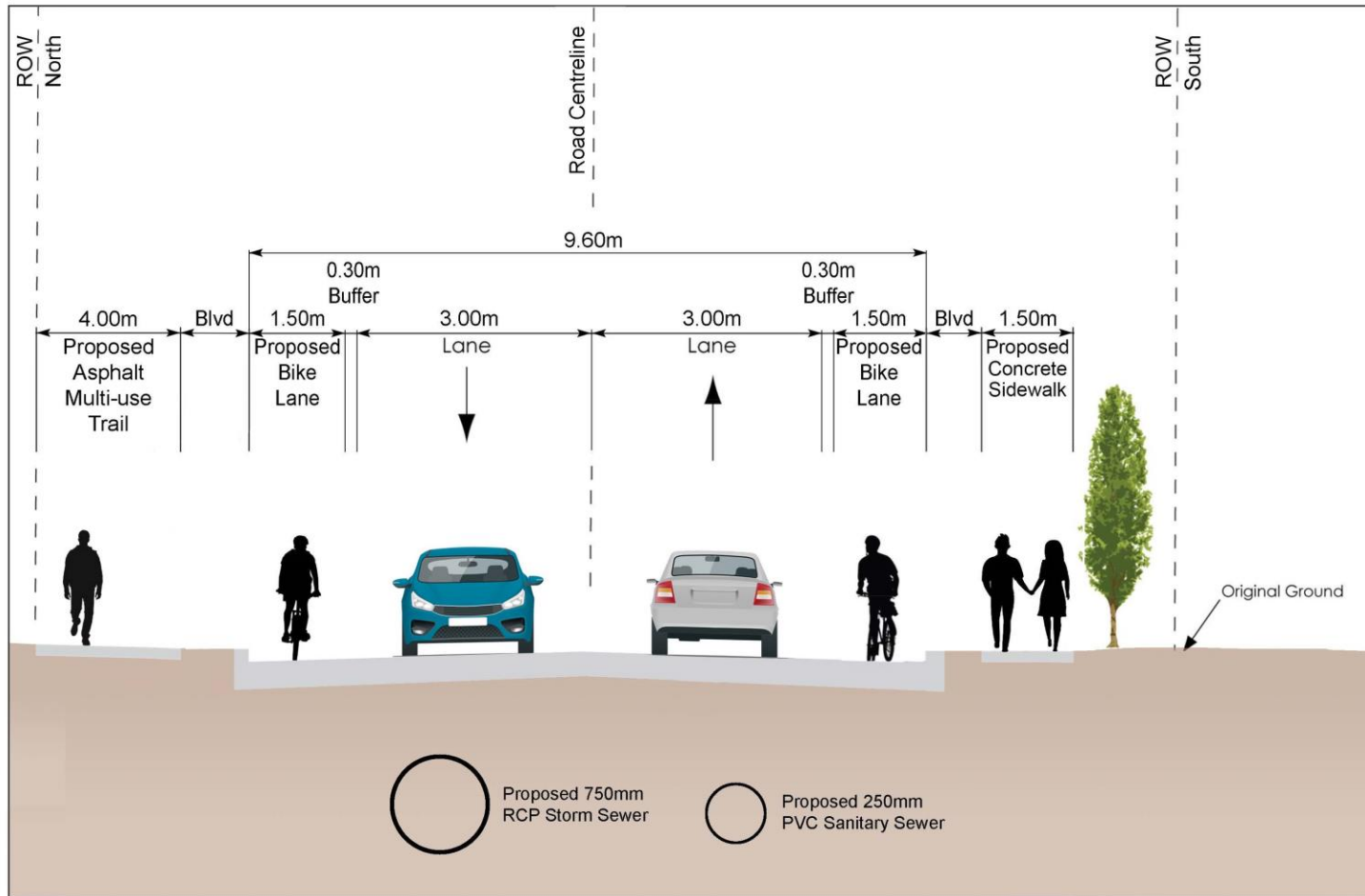


Figure E-4: Preferred Design - Jarvis Avenue from Wyandotte Street East to Dillon Drive

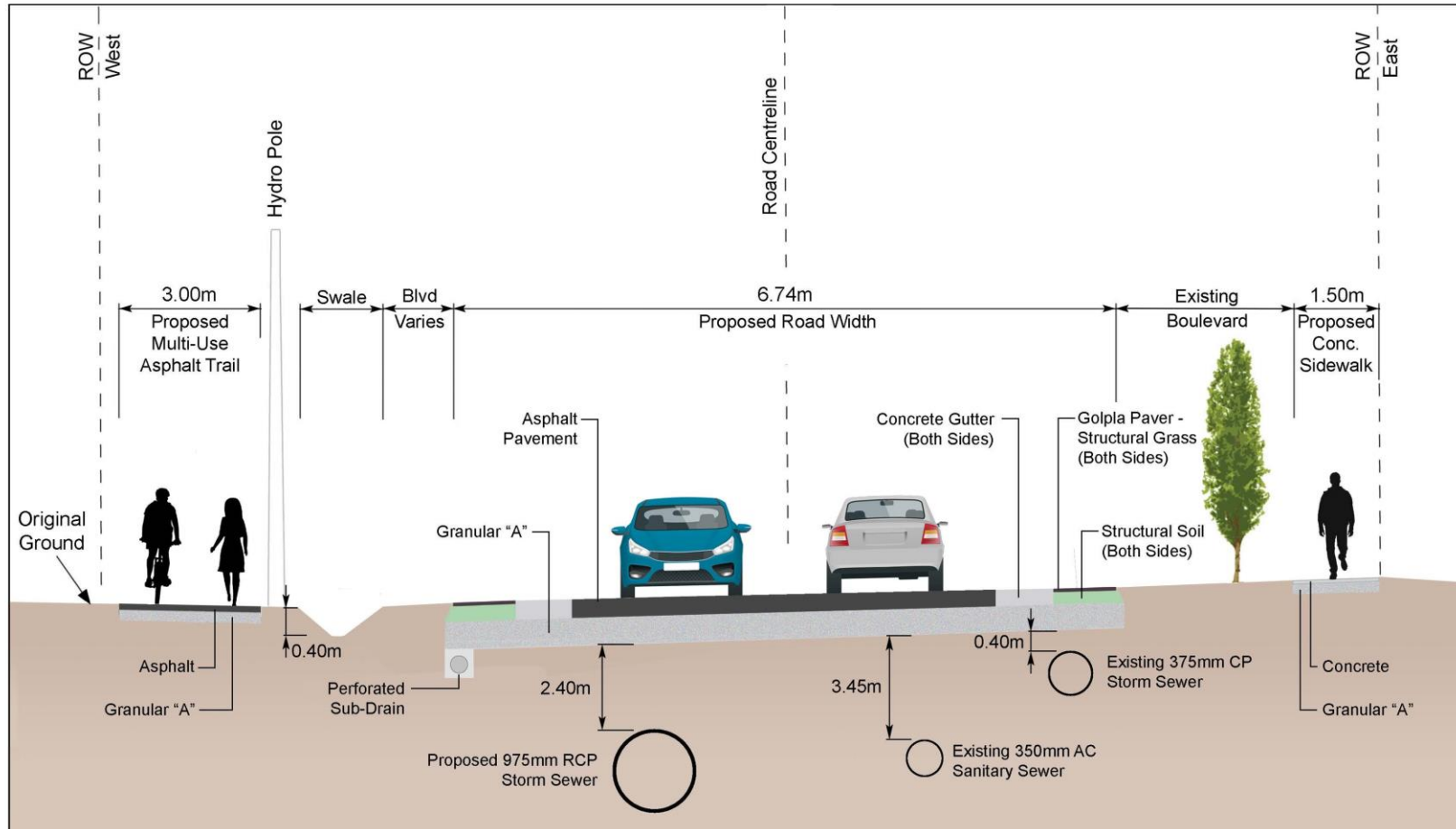
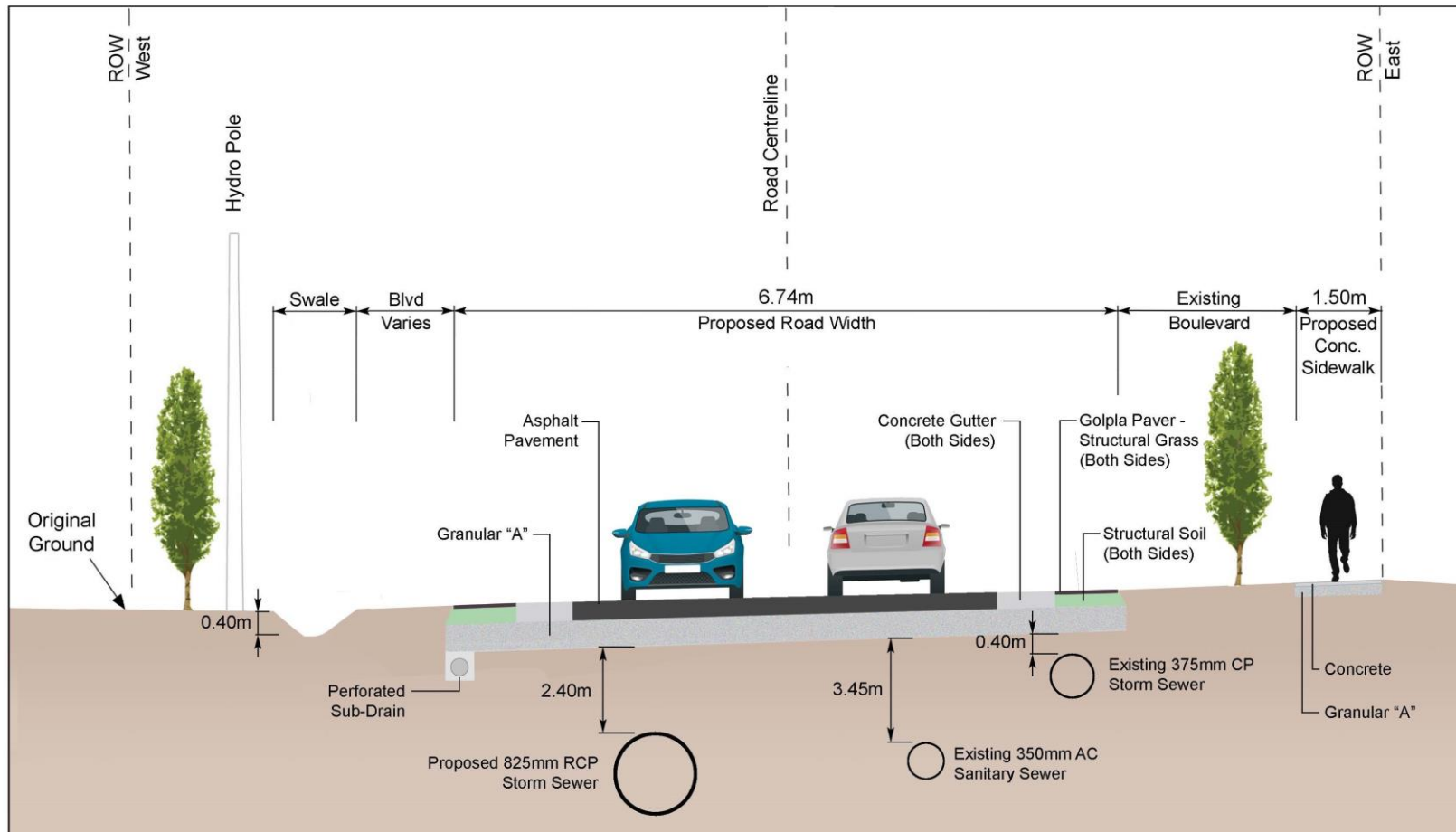


Figure E-5: Preferred Design - Jarvis Avenue from Riverside Drive East to Wyandotte Street East and from Dillon Drive to Little River Boulevard



Preliminary Cost Estimate for Preferred Design

Based on preliminary cost estimates,

- The section of works from the Wyandotte Street East extension from Banwell Road to Jarvis Avenue and on Jarvis Avenue from Wyandotte Street to Beverly Glen is estimated at \$6,644,400;
- The works on Jarvis Avenue from Riverside Drive East to Wyandotte Street East and from Beverly Glen to Little River Boulevard is estimated at \$8,783,600.

The total costs of both phases is \$15,428,000 and includes a 20% contingency allowance and 20% for engineering and other internal costs. A detailed cost estimate is included in Section 4.5.8 – Preliminary Construction Cost Estimate.

Subject: Selection Criteria for Candidate Roads under the Local Residential Road Repair Program - City Wide

Reference:

Date to Council: November 29, 2023
Author: Chris Nepszy
Commissioner, Infrastructure Services
(519) 255-6247 ext. 6356
cnepszy@citywindsor.ca

Public Works - Operations
Report Date: November 9, 2023
Clerk's File #: SW2023

To: Mayor and Members of City Council

Recommendation:

That Council **RECEIVE** this report as directed by C39/2023 and **FURTHER** that Council **APPROVE** the strategies and rationale for selecting and prioritizing local residential road rehabilitation under the Local Residential Road Rehabilitation Program, as outlined in this report.

Executive Summary:

N/A

Background:

At its February 14, 2022 meeting of Council, Councillor Gignac asked the following question:

CQ 3-2022

"Asks Administration for a report outlining how deficient residential roads not in the 10 year Capital Budget will be addressed".

At its March 21, 2022 meeting of Council, Councillor Costante asked that the cost differential between repaving both Brock Street and Watkins Street, between Sandwich and Peter Street during the reconstruction phase of Sandwich Street instead of a stand alone project after the reconstruction be included in the response to CQ 3-2022.

In response, report C 39/2023 was prepared and presented to Council for consideration as part of the 2023 City Budget. Council approved the following recommendations:

*That Council **APPROVE** the implementation of an annual AMP levy increase of 0.25% to achieve the desired service level improvements for Local Residential Roads for each of the next four years, beginning in 2023 and ending in 2026; and*

*That Council **DIRECT** Administration to prepare a report for the Environment, Transportation & Public Safety Committee outlining specific strategies and rationale for local road rehabilitation selection and prioritization*

This report outlines specific strategies and rationale for local road rehabilitation selection and prioritization.

Discussion:

The City's Infrastructure Maintenance System (IMS) has used common road rating categories of NOW, 1-5, 6-10, Deficient, and Adequate. The first 3 categories have varying levels of deficiency/time frames. Deficient Local Residential roads continue to perform notwithstanding that they are rated as being deficient.

The proposed Local Road Rehabilitation Program will target roads currently rated 6-10 and 1-5, as they are typically suitable for mill and pave work, which can extend their lifespan. Roads falling within these categories that are also part of planned engineering, operations, or utilities projects will not be considered for improvement under this program.

The City Engineer will meet one-on-one with Councillors, typically in the Fall, to select candidates from the remaining roads in the 6-10 and 1-5 categories. Estimates of the work achievable with the available funding will be provided when the Councillor selects the road(s). It is not advisable to defer annual funding to perform more work in subsequent years, as this approach risks causing candidate roads to slip into lower rating categories, which this program aims to prevent.

The selection of the most suitable candidate roads will be streamlined thanks to the joint efforts and coordination between the Geomatics and IMS department. Through coordination with the IMS department, the Geomatics department was able to intake important information on the City of Windsor's road network in regards to the condition ratings of each road in the City. After working with the IMS department to obtain road condition data, the Geomatics department was able to produce a data driven GIS application, utilizing this data from the City. The creation of this application introduced the ability to geographically visualize and analyze the road information. The value-added combination of visualization and analysis that is achieved through this GIS application will allow the City's road information to be leveraged in the decision-making process to identify candidate roads that meet the program's requirements.

With respect to determining which roads are rehabilitated or reconstructed under the Local Road Rehabilitation Program, the following strategies and rationale will be used for local road rehabilitation selection and prioritization.

1. Road Condition Rating:

The first criteria for selecting residential roads for repair is their current condition. Roads that are in poor condition and likely to deteriorate (1-5 Deficient Roads) further should be given priority for repair. The City assigns a ranking to its roads based on visual inspection of the pavement. These inspections are performed each year from spring to mid-summer on a scheduled basis.

2. Planned Sewer or Water Work:

The second criteria consideration for selecting roads for repair is whether they have sewer or water work planned. Roads which already have sewer or water work scheduled to be completed within the next 5 years will be excluded from consideration under the residential road repair program.

3. Local Improvement:

The third recommended consideration for selecting residential roads for repair is whether they are part of a local improvement project. Local improvement projects typically involve upgrades to infrastructure, such as adding curbs, sidewalks or street lighting. Repairing the road as part of a larger project can help to ensure that all aspects of the infrastructure are upgraded and that the road is in good condition for the long-term. Road work as part of a Local Improvement Project may be considered under the residential road repair program.

4. Other Considerations:

Additionally, there are other considerations for roadways that will be taken into account. Such considerations include roads impacted by legislation, regulations, environmental studies, transportation policies or traffic studies.

Additionally, mill and pave work will only be done on roads where it will yield 10-15 years of added life.

Risk Analysis:

The implementation of an annual AMP levy increase of 0.25% for Local Residential Roads for each of the next four years (2023 – 2026) is dedicated to the maintenance and rehabilitation of Local Residential Roads. The increased funding dedicated for Local Residential Road maintenance and repair will improve the City's over all road network.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

Roads, as with other City infrastructure, are expected to be negatively impacted by climate change. Increasing temperatures, precipitation, incoming percent of sunshine,

humidity, and ground water levels are climate factors that may alter pavement performance, design and service life. The Canadian Journal of Civil Engineering, July 2022 report “*Climate Change impact and adaptation for highway asphalt pavements: a literature review*” acknowledges that Canada’s changing climate will trigger early maintenance of pavements.

In addition, the region's frequent freeze/thaw cycles have a significant negative impact on the City's road infrastructure.

Financial Matters:

As part of the 2023 10-year Capital Plan, Council approved the implementation of an annual AMP levy increase of 0.25% to achieve the desired service level improvements for Local Residential Roads for each of the next four years, beginning in 2023 and ending in 2026.

The levy will generate incremental funds of approximately \$1.1 million in the first year and grow to approximately \$4.4 million annually after 4 years. Once fully implemented, this will generate in excess of \$44 million in funding over a 10-year capital planning cycle, with these funds being devoted solely to residential road rehabilitation.

These funds are administered separately from the City’s existing Road Rehabilitation programs.

Consultations:

Eric Bailey, Manager Technical Support

Cindy Becker, Financial Planning Administrator – Public Works

Mike Dennis, Manager, Strategic Capital Budget Development and Control

Natasha Gabbana, Senior Manager of Asset Planning

Phong Nguy, Manager, Contracts, Field Services & Maintenance

Rob Slater, Executive Initiatives Coordinator

Conclusion:

Over time, the incremental 0.25% annual AMP levy for 4 years dedicated to the maintenance and rehabilitation of Local Residential Roads, utilizing the Asset Management Plan, and applying strategies outlined in this report will result in lower costs for the life of the assets, which in turn should generate expanded funding to address other assets.

Planning Act Matters:

N/A

Approvals:

Name	Title
Mark Spizzirri	Manager, Performance Measurement & Business Case Development
Cindy Becker	Financial Planning Administrator – Public Works
Shawna Boakes	Executive Director, Operations
Chris Nepszy	Commissioner, Infrastructure Services
Janice Guthrie	Commissioner, Corporate Services, Chief Financial Officer
Joe Mancina	Chief Administrative Officer

Notifications:

N/A

Appendices:

**Subject: Howard Avenue / South Cameron Intersection Project,
Abandonment of Gravel Road Drain - Ward 9**

Reference:

Date to Council: November 29, 2023

Author: Patrick Muzyka

Engineer II

(519) 255-6257 Ext. 6472

pmuzyka@citywindsor.ca

Design - Engineering

Report Date: November 9, 2023

Clerk's File #: SW/13959

To: Mayor and Members of City Council

Recommendation:

- I. THAT Council **ACCEPT** the recommendation of the City Engineer to abandon the Gravel Road Drain, as shown on attached Drawing C-3767 to be addressed under Section 84 of the Drainage Act; and further,
- II. THAT Council **DIRECT** Administration to send a notice to all owners of land assessed for the drainage works stating intention to abandon the Gravel Road Drain; and further,
- III. THAT Council **DIRECT** the City Solicitor to prepare a By-law to abandon the Gravel Road Drain under Section 84 of The Drainage Act, provided that no owner of land assessed for drainage works submits a notice requesting that the report of an engineer be made on the proposed abandonment.

Executive Summary:

N/A

Background:

The Gravel Road Drain is a municipal drain and is located along the northeast side of Howard Avenue from Cabana Road East to South Cameron Boulevard and along the southwest side of South Cameron Boulevard from Howard Avenue to the Grand Marais Drain where it outlets.

Over the years, a majority of the Gravel Road Drain has been enclosed. The entire length of the Gravel Road Drain which runs along Howard Avenue was enclosed in the 1960's when the present-day storm sewer was constructed. The last approximate 200 meters along South Cameron Boulevard at the downstream end from Kenilworth Drive to the Grand Marais Drain was enclosed in 1986 when the present-day storm sewer was constructed.

Section 84(1) of the Drainage Act allows the abandonment of all or part of drainage works if the owners of land assessed for benefit in respect of a drainage works send a request for the abandonment. Section 84(2) allows the council of a municipality to initiate the abandonment of a municipal drain. The Council of the municipality may send a notice to all of the owners of the land assessed for the drainage works stating its intention to abandon the drainage works specified in the notice, even if a request has not been submitted to the municipality as per Section 84 subsection (1) of the Drainage Act. If no owner submits a notice to the municipality, requesting that the report of an engineer be made on the proposed abandonment, within ten days of the notice being sent, the council may by by-law abandon the drainage works, as per Section 84(5) of the Drainage Act.

Council has committed, in the Capital Budget under ECP-003-08, to long-term infrastructure upgrades on Howard Avenue from South Cameron Boulevard to Herb Gray Parkway.

The following two related Class Environmental Assessment Studies were completed:

- Howard Avenue Environmental Study Report (ESR) was adopted by City Council in 2003. The limits of the study are from South Cameron Boulevard to Herb Gray Parkway.
- Central Box Study Area Environmental Study Report (EST) was adopted by City Council in 2017. The study area contained within the Central Box ESR was bound by Eugenie Street to the north, Howard Avenue to the east, West Grand Boulevard/South Cameron Boulevard to the south and Dominion Boulevard to the west.

More recently, under CR542/2020, Council approved the award of RFP 88-20 to Dillon Consulting Limited for the Howard Avenue/South Cameron Intersection Project detailed engineering design, preparation and issuance of contract documents, as well as contract administration and construction inspection.

Discussion:

As per the recommendations identified in the Central Box ESR, Howard Avenue ESR, and subsequently the consultant's design, it was determined that improvements would be required to the existing drainage works along Howard Avenue between Cabana Road East and South Cameron Boulevard to meet current storm sewer design standards and to accommodate the ongoing and future development on the east and west sides of Howard Avenue.

Furthermore, the open portion of the Gravel Road Drain along South Cameron Boulevard is becoming increasingly more difficult to maintain as there are privacy fences along the top of bank which have receded due to erosion of the banks of the drain. Additionally, there is interest and desire to enclose the open portion of the drain in order to provide a sidewalk or paved multi-use pathway along the southwest side of South Cameron Boulevard to connect existing and future active transportation infrastructure recommended in previously completed Environmental Assessments and the Active Transportation Master Plan.

Once the Gravel Road Drain is abandoned, it will no longer be regulated under the Drainage Act. The municipality will continue to maintain and repair the drainage system, however the process for managing the drain will be streamlined and permits from the conservation authority or other agencies may not be required.

Risk Analysis:

Abandoning the Gravel Road Drain relieves the City of the obligation to maintain it as a municipal drain.

Since the majority of the drain has previously been enclosed and maintained as sewer infrastructure, and there are no private properties fronting the open portion of the drain, the abandonment of the Gravel Road Drains poses minimal risks to the Corporation.

There are no significant or critical risks associated with the recommendations of this report. Delays in the overall project timelines may be realized should the abandonment of the Gravel Road Municipal Drain be delayed.

At this time, it is anticipated that sufficient funds will be made available under the existing Howard Avenue / South Cameron Corridor Infrastructure project (ECP-003-08) budget, in order to complete the Gravel Road Drain abandonment, as well as tender and construct the Howard Avenue and South Cameron Intersection Improvement project. Inflationary risks continue to be of concern across all facets of the economy, including the heavy civil construction sector. During engineering design, detailed construction cost estimates will be developed & refined and Administration will report back if there are any budgetary shortfalls identified.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

In accordance with the City of Windsor Act, 1968, the City of Windsor has used the general tax levy or the sewer surcharge levy, depending on location, for drain maintenance costs when drains are blocked and no longer functioning correctly. Abandoning the Gravel Road Drain will relieve the City of the financial obligation to respond to maintenance of a municipal drain under the Drainage Act. Any financial savings is expected to be minimal as the majority of the Gravel Road Drain is enclosed and has been maintained as storm sewer. The portion which remains open drain will continue to be maintained to minimize risk of adversely affecting the capacity and conveyance of storm water and against property damage.

Consultations:

Tom Graziano – Engineer III - Drainage Superintendent – Engineering Development

Roberta Harrison – Maintenance Coordinator – Operations

Phong Nguy – Manager of Contracts, Field Services and Maintenance – Operations

Kathy Buis – Financial Planning Administrator – Engineering

Michael Dennis – Financial Manager – Asset Planning

Aaron Farough – Senior Legal Counsel

Conclusion:

Administration recommends that City Council approve Administration to proceed with sending notice to all owners of land assessed for the drainage works stating intention to abandon the Gravel Road Drain and subsequently prepare a By-law, for Council's consideration, to abandon the Gravel Road Drain provided that no owner submits a notice requesting that the report of an engineer be made on the proposed abandonment, in accordance with Section 84 of the Ontario Drainage Act.

Section 84 of the Drainage Act allows for the abandonment of all or part of drainage works. The majority of the drain has previously been enclosed and is treated as municipal storm sewer which will be replaced with new sewer as portions of the Howard Avenue right-of-way are reconstructed. Administration recommends that the Gravel Road Drain, as shown on attached drawing C-3767, be abandoned.

Planning Act Matters:

N/A

Approvals:

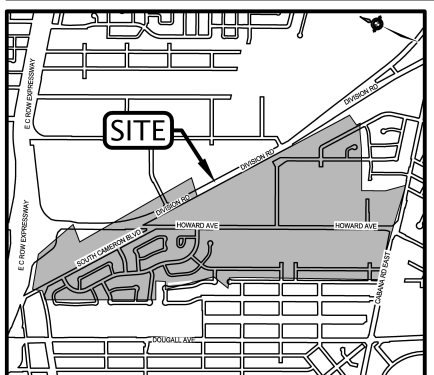
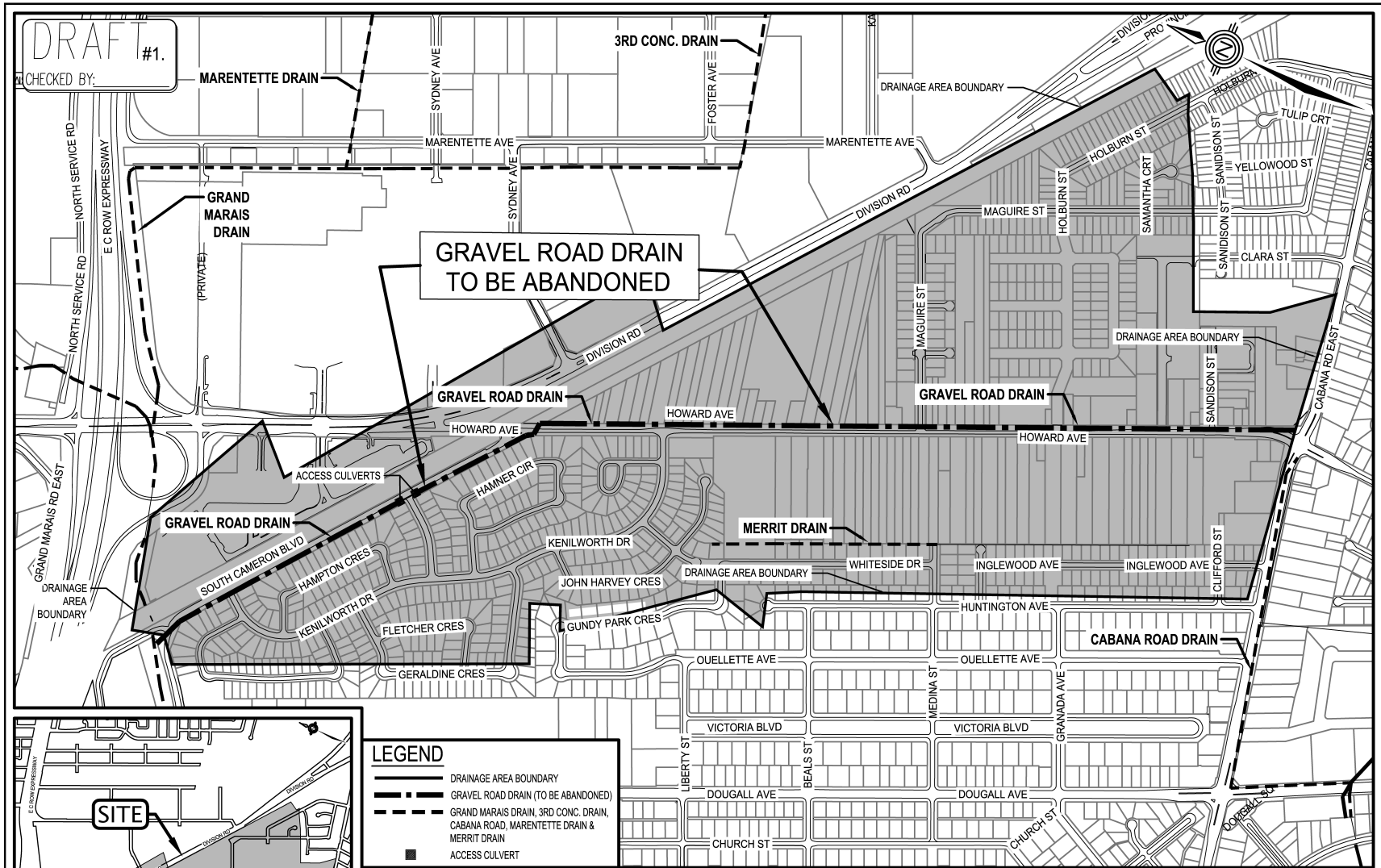
Name	Title
Fahd Mikhael	Manager of Design – Engineering
Fahd Mikhael	Acting Executive Director of Engineering / Deputy City Engineer
Chris Nepszy	Commissioner, Infrastructure Services
Mark Nazarewich for	Commissioner, Legal and Legislative Services
Janice Guthrie	Commissioner, Corporate Services CFO, City Treasurer
Joe Mancina	Chief Administrative Officer

Notifications:

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Appendices:

- 1 Drawing C-3767



LEGEND

- DRAINAGE AREA BOUNDARY
- GRAVEL ROAD DRAIN (TO BE ABANDONED)
- GRAND MARAIS DRAIN, 3RD CONC. DRAIN, CABANA ROAD, MARENTETTE DRAIN & MERRIT DRAIN
- ACCESS CULVERT

THE CORPORATION OF THE CITY OF WINDSOR - ENGINEERING DEPARTMENT
Gravel Drain to be Abandoned from South of Grand Marais Road West
Along South Cameron Boulevard and Howard Avenue to Cabana Road East

SCALE: 1:10000	DATE: OCT 2023	REVISED: ---	DWG. NO. C-3767
DWN BY: UT	CHKD BY: PJU / PM	REVISION NO.: ---	

Kirk Tamm, Manager of Geomatics



Subject: Response to CQ 24-2023 Regarding Minimum Standards, Vendor Warranties, and Construction Policies for Road Repair, Sewer Infrastructure, and Road Rehab Projects

Reference:

Date to Council: November 29, 2023
Author: Chris Nepszy
Commissioner of Infrastructure Services
cnepszy@citywindsor.ca
(519) 255-6247 ext. 6415
Public Works - Operations
City Engineer

Report Date: November 10, 2023
Clerk's File #: SW2023

To: Mayor and Members of City Council

Recommendation:

THAT the report of the Commissioner of Infrastructure Services dated November 10, 2023 in response to CQ 24-2023 which asked Administration to provide a report to Council regarding construction projects specific to road repair, sewer infrastructure and road rehab, including policies and procedures, minimum standards and vendor warranties **BE RECEIVED** for information and discussion.

Executive Summary:

N/A

Background:

At its August 8th, 2023 meeting of Council, Councillor Mark Mckenzie asked the following question:

CQ 24-2023

"Asks that administration provide a report to Council regarding construction projects, specific to road repair, sewer infrastructure and road rehab, including policies and procedures, minimum standards and vendor warranties for review."

This report provides an overview of the primary reference documents and specifications available on the City's website related to construction projects specific to road repair, sewer infrastructure and road rehab.

Discussion:

The City of Windsor, throughout years of construction practice, has developed a comprehensive set of reference documents and specifications to guide the planning, design, and construction of municipal linear infrastructure in the city. These documents are crucial resources for various stakeholders, including City staff, engineers, consultants, contractors, developers, and the general public. They undergo regular reviews and updates to ensure they remain aligned with evolving construction standards, best practices, and regulatory requirements.

To maintain the quality and consistency of the City of Windsor's construction projects, a Standard Specification Review Committee is in place. This committee comprises internal staff members from various divisions within the Operations Department and Engineering Department, including Corporate Projects, Design, Development, Contracts, Maintenance, and Field Services. The Committee has been convening since January 2010 and plays a critical role in reviewing and updating the City's Standard Specifications and introducing new specifications and drawings.

Adhering to industry best practices, the City collaborates with organizations like the Windsor Heavy Construction Association before releasing new or updated Standard Specifications. This collaborative approach enables Administration to gather valuable insights and recommendations from industry experts who may be aware of first-hand recent innovative construction methods, materials and specification changes. These insights are then presented to the City's Standard Specification Review Committee for further evaluation and discussion.

The City of Windsor Standard Specification is primarily based on the Ontario Provincial Standard Specifications (OPSS) with minor adjustments to suit localized situations. The Ontario Provincial Standards (OPS) are a unified set of standards for roads and public works infrastructure in Ontario. Windsor's modifications allow these standards to be effectively applied to the city's urban and rural road network, ensuring consistency and uniformity in roadwork practices.

Originally developed in the 1970s by the Ministry of Transportation Ontario (MTO) and the Municipal Engineers Association (MEA) with input from other partner organizations, the OPS has undergone continuous updates, refinements, and expansions since its inception. These updates are driven by the efforts of more than one hundred engineering, government, and construction industry experts who participate in the OPS's nine specialty and three management committees. They base their updates on research into the real-world performance of infrastructure-building materials and techniques, advances in infrastructure science and education, and on-the-job experience from the OPS's various partners, particularly the Ministry of Transportation Ontario (MTO), the Municipal Engineer Association (MEA) and its construction industry committee members. These ongoing efforts result in biannual updates, published every April and November, offering a science-based, detailed guide for municipalities to design, specify, and build safe, durable infrastructure, either directly or through third-party suppliers.

In addition to the City's Standard Specifications, the Standard Specification Review Committee has created an internal document known as "Supplemental Specifications

and Mandatory Procedures and Practices (SSMPP)." This document addresses any gaps or missing updates in the Standard Specifications and is periodically reviewed alongside new or updated Standard Specifications to maintain its relevance.

All construction projects, including roads, boulevards, sidewalks, sanitary and storm sewers, are required to conform to City of Windsor Standard Specifications and Drawings. The Project Engineer, the Field Supervisor and the Construction Inspector are deployed to ensure that all construction activities comply with the established contract terms and City of Windsor Standards Specifications and Drawings.

Maintaining a focus on Quality Assurance (QA) is a priority at every stage of a construction project, from sub-base inspections to granular placement and surface course installation. This ensures the project is delivered as per the design and the standard specification requirements. Materials undergo rigorous testing as outlined in the City of Windsor standard specifications and according to various applicable standards, including but not limited to the standards set by the Canadian Standards Association (CSA), the American Society for Testing and Materials (ASTM) and the MTO. Administration ensures that testing is performed at industry-accepted frequencies and timing throughout the construction of different pavements, upholding the highest standards of quality and safety.

Period of Maintenance:

The "Period of Maintenance" is the maintenance period or warranty specified in the Contract for the Work. It starts from the date of the Engineer's Notice of Substantial Performance of the Work or the completion of the Work if no substantial performance is involved in the contract. The condition of the Work completed under the Contract must be in good and perfect condition, except for fair wear and tear during the maintenance period. Unless otherwise specified, the Period of Maintenance is minimum one year.

The Contractor is responsible for delivering the Work to the Corporation in a condition as defined in the Contract at the end of the Period of Maintenance, to the satisfaction of the Engineer. The Contractor must carry out repair, amendment, reconstruction, rectification, and defect correction work as required by the Engineer in writing during the maintenance.

If the Contractor fails to promptly execute the required maintenance work after receiving notice from the representative of the Corporation, the Corporation can perform the work using its own workers or other Contractors. The cost of such work, if the Contractor was responsible for it, can be recovered from the Contractor or deducted from any amounts owed to the Contractor.

The contract is not considered complete until the Engineer signs a Letter of Assuming the Work, stating that the Work has been completed and maintained to their satisfaction.

Listed below are the City's various reference documents and specifications – all which are available on the City's website at:

<https://www.citywindsor.ca/business/buildersanddevelopers/Pages/Builders-and-Developers.aspx>

Reference Documents and Specifications

1. Stormwater Management Requirements (December 6, 2018):

- Specific to the Windsor/Essex Region.
- Defines stormwater management standards.

2. Engineering Best Practices (BP):

- Includes guidelines for various aspects, such as sewers, driveways, right-of-way, and miscellaneous items.
- Ensures high-quality and efficient projects.

3. Supplementary Specifications and Mandatory Procedures and Practices (January 2023):

- Mandatory for all City contracts, taking precedence over other specifications.
- Require explicit approval from the City Engineer for any changes.

4. Standard Specifications (as of January 19, 2023):

- Covers various aspects of construction, such as sewers, concrete work, pavement, and more.
- Provides detailed standards for materials and workmanship.

5. Standard Engineering Drawings Index:

- Contains a comprehensive list of standard engineering drawings for various infrastructure components.
- Ensures consistency in design and construction.

6. Construction Technologist Inspection Manual (Updated 2023):

- Outlines roles and responsibilities for field services construction technologist staff inspection.

7. General Conditions:

- Defines key terms and provisions related to contract administration.
- Covers matters such as contract documents, administration, responsibilities, and payment.

Indexes or links to these documents are attached as Appendices to this report.

Risk Analysis:

The City of Windsor's reference documents and specifications are essential criteria and tools for all stakeholders involved in municipal linear infrastructure projects. They provide guidance, are enforceable, ensure quality, and uphold safety and environmental standards. Regular reviews and updates ensure that these documents remain current and effective, facilitating the continued development, upgrading and maintenance of the City's infrastructure.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

There are no financial impacts identified with receiving this information report.

Consultations:

Jane He, Engineer III – Construction Standards Lead

Rob Slater, Executive Initiatives Coordinator

Conclusion:

The City of Windsor's reference documents and specifications play a vital role in guiding, enforcing, maintaining quality, and upholding safety and environmental standards in municipal linear infrastructure projects. The regular review and updates of these documents are crucial for ensuring their ongoing relevance and effectiveness in supporting the City's infrastructure development, upgrading and maintenance efforts.

Planning Act Matters:

N/A

Approvals:

Name	Title
Shawna Boakes	Executive Direction of Operations
Chris Nepszy	Commissioner, Infrastructure Services, City Engineer

Name	Title
Joe Mancina	Chief Administrative Officer

Notifications:

N/A

Appendices:

Appendix 1 - Engineering Best Practices

Appendix 2 - Supplementary Specifications and Mandatory Procedures and Practices (January 2023)

Appendix 3 - Standard Specifications (as of January 19, 2023)

Appendix 4 - Standard Engineering Drawings Index

Appendix 5 - Construction Technologist Inspection Manual

Appendix 6 – General Conditions

Appendix 1 - Engineering Best Practices

BP1 - Sewers

BP2 - Driveways & Access

BP3 - Right-of-Way

BP4 – Miscellaneous such as:

- Oil and Grit Separator
- Development Securities
- Pavement Widening on Local Roads
- Servicing Charges and Sewerage Fees
- Environmental Pollution Liability
- Canada Post Community Mailboxes

Appendix 2 - Supplementary Specifications and Mandatory Procedures and Practices (January 2023)

These specifications, procedures, and practices are mandatory for all City contracts, taking precedence over City of Windsor General Specifications and Ontario Provincial Standard Specifications. Any changes or revisions to these specifications require explicit approval from the City Engineer.

<https://www.citywindsor.ca/business/buildersanddevelopers/Documents/SSMPP%20REVISED%20-%20January%202023.pdf>

Appendix 3 - Standard Specifications (as of January 19, 2023)

Index to Standard Specifications (January, 2023)

1. S-1 - Sewers (January, 1999)
2. S-2 - Maintenance Holes and Catchbasins (March, 2018)
3. S-3 - Earth Excavation (Grading) and Structural Removal (January, 1976)
4. S-4 - Granular Base & Aggregates (February, 2022)
5. S-5 - Concrete Curbs and Gutter Systems (April, 2022)
6. S-6 - Concrete Sidewalk and Driveway Approaches (April, 2022)
7. S-7 - Concrete Pavement and Concrete Base (April, 2022)
8. S-8 - Sewer Pipeline and Culvert Rehabilitation by Cured-In-Place Pipe (February, 2022)
9. S-9 - Concrete (February, 2022)
10. S-10 - Hot Mix Asphalt (February, 2022)
11. S-11 - Culverts, Headwalls, and Roadside Drainage (May, 2017)
12. S-12 - Borehole Investigations (January, 2023)
13. S-13 - Weighing of Materials (July, 2012)
14. S-14 - Sodding (February, 2022)
15. S-15 - Seeding (February, 2022)
16. S-16 - Perforated Corrugated Pipe Sub-Drains (January, 2015)
17. S-17 - Reinforcing Steel (May, 2017)
18. S-18 - Routing and Sealing (July, 2012)
19. S-19 - Cleaning of Gravity Sewers, Manholes, and Catchbasins (January, 2015)
20. S-20 - Vacant
21. S-21 - Vacant
22. S-22 - Vacant
23. S-23 - Maintenance Painting of Structural Steel (January, 2015)
24. S-24 - Unshrinkable Backfill (July, 2012)
25. S-25 - Vacant

- 26. S-26 - Vacant
- 27. S-27 - Vacant
- 28. S-28 - Full and Partial Depth Reclamation with Expanded Asphalt Stabilization (July, 2012)
- 29. S-29 - Utility Cuts Restoration (August, 2012)
- 30. S-30 - Bridges (February, 2022)
- 31. S-31 - Keyhole Excavation (July, 2012)
- 32. S-32 - CCTV Sewer Inspection (February, 2022)
- 33. S-33 - Winter Control Snow Plowing, Salting and Snow Removal Activities (January, 2015)
- 34. S-34 - Topsoil (June, 2022)
- 35. S-35 - Replacement of Private Drain Connections (May, 2022)
- 36. S-36 - Preservation of Trees (May, 2017)
- 37. S-37 - Dust Control (July, 2012)
- 38. S-38 - Prevention of Debris from Entering Existing Sewer Systems (July, 2012)
- 39. S-39 - Backfill and Utilities (January, 2015)
- 40. S-40 - Installation Method of Traffic Signage Disturbed by Construction (July, 2012)
- 41. S-41 - Open Graded Drainage Layer (January, 2015)
- 42. S-42 - Cold Milling of Asphalt Pavement (January, 2015)

Appendix 4 - Standard Engineering Drawings Index

AS-101A	Standard Legend Symbols (September 1973)
AS-101B	Standard Legend Symbols (September 1973)
AS-102	Project Sign (January 2016)
AS-103	Detail of Stamp (January 1976)
AS-104	Bench Mark (January 1976)
AS-105	Rainfall Intensity Curve (June 1975)
AS-106	Barrier Post (January 1976)
AS-106A	Removable Barrier Post (December 1975)
AS-106B	Barrier Post (with Steel Reinforcement) (March 1977)
AS-201	Concrete Alley Pavement (March 1973)
AS-203	Commercial Drive - Asphalt (October 2015)
AS-204	Commercial Drive - Concrete (December 2021)
AS-205	Sodding of Side Slopes (May 1975)
AS-206A	Standard Utility Cross-Section (17m Right-of-Way) (January 1980)
AS-206B	Standard Utility Cross-Section (22m Right-of-Way) (January 1980)
AS-206C	Standard Utility Cross-Section (15m Right-of-Way) (October 2015)
AS-206D	Standard Utility Cross-Section (20m Right-of-Way) (July 2013)
AS-207A	Utility Restoration for Concrete Pavement (August 2012)
AS-207B	Utility Restoration for Flexible Base Pavement (August 2012)
AS-207C	Utility Restoration for Concrete Pavement Asphalt Surface (August 2012)
AS-208	Standard & Superelevated Curb & Gutter for Residential Roads (February 2018)
AS-208A	Standard & Superelevated Curb & Gutter for Collector & Arterial Roads (March 2017)
AS-209A	Backfill of Ditch/Swale/Trench (June 2018)
AS-210	Standard Concrete Details for Heavy Duty Pavements (December 2021)
AS-211	Concrete Details for Residential Pavements (December 2021)
AS-212	Details for Load Transfer Device (January 1976)
AS-213	Pavement Widening Details (November 2015)
AS-214	28' Wide Asphalt Pavement (July 2013)

AS-215	Steel Beam Guide Rail (May 1975)
AS-216	Curb Cut Requirements for Various Pavements (January 1976)
AS-217	Standard Corner Commercial Access - Type I (June 1975)
AS-218	Standard Corner Commercial Access - Type II (June 1975)
AS-219	Standard Corner Commercial Access - Type III (June 1975)
AS-220	Interior Commercial Access (November 1975)
AS-221	Residential Drive - Asphalt (December 2019)
AS-222	Residential Drive - Concrete (December 2021)
AS-223	Fenced Pedestrian Walkway (May 1972)
AS-224	Tree Relocation (January 1976)
AS-225	Local Industrial Concrete Pavement (March 1975)
AS-226	Rural Arterial Concrete Pavement (March 1975)
AS-227	Rural Residential Concrete Pavement (December 2021)
AS-228	Various Street Alignments Permitting the Usage of 24' Wide Pavements (January 1975)
AS-229	Emergency Vehicular Accesses (January 2007)
AS-230	Standard Corner Cut-off and Land Conveyance (January 2009)
AS-301	Standard Catch Basin - Frame and Cover (March 1975)
AS-302	Double Catch Basin - Frame and Cover (March 1975)
AS-303	4' x 4' Catch Basin-Manhole for Sewer Less than 48" (May 1975)
AS-304A	Manhole Frame and Cover - Type II (May 1974)
AS-305	Detail of Typical Manhole Step (June 1975)
AS-307	Standard Goss Gully Trap (August, 2014)
AS-309	2' x 2' Pre-Cast Concrete Catch Basin (with Goss Gully Trap) (August 2014)
AS-309A	2' x 2' Pre-Cast Concrete Catch Basin (August 2014)
AS-310A	Bedding Detail for Sewer Pipe - Class "A" (March 1979)
AS-310B	Class "B" Bedding Detail Various Cases (August 2014)
AS-310C	Bedding Detail for Sewer Pipe - Class "B-2" (November 1975)
AS-311	Spacing for Pipes and Pipe-Arches (May 1975)
AS-312	Beam Supports for Pipes Crossing Trench (July 1975)
AS-313	Private Drain Connection Details (Single) (December 2015)

AS-314A	Precast Maintenance Hole 1200mm Diameter (March 2017)
AS-314B	Precast Maintenance Hole 1500mm Diameter (March 2017)
AS-314C	Precast Maintenance Hole 1800mm Diameter (March 2017)
AS-314D	Precast Maintenance Hole 2400mm Diameter (March 2017)
AS-314E	Precast Maintenance Hole 3000mm Diameter (October 2005)
AS-315	Replaced with AS-309A
AS-318	Removed
AS-319	Compaction of Sewer and Utility Trenches in Subdivisions (November 1975)
AS-320	Manhole Safety Platform (August 1977)
AS-321	Catch Basin Box-Out for Asphalt Pavement (August 1978)
AS-325	Private Drain Connection Cleanout at Property Line as required by By-law 4921 (July 2013)
AS-401	Residential Concrete Sidewalk (December 2021)
AS-402	Residential Sidewalk - Wheel Chair Ramp (February 2016)
AS-403	Commercial Concrete Sidewalk (December 2021)
AS-404	Commercial Sidewalk - Wheel Chair Ramp (December 2015)
AS-501	Manhole for Dual Sewers (January 1976)
AS-502	"V" Type Catch Basin Frame and Grate (January 1976)
AS-503	Sanitary Sewer Inspection Plate (January 1976)
AS-504	Typical Residential Combined Connections (December 1974)
AS-505A	Typical Parallel Street Furniture Layouts (April 2015)
AS-505B	Typical Skewed Street Furniture Layouts (April 2015)
AS-506	Reconstruction of Integral Sidewalk, Curb and Gutter (August 1976)
AS-507	Guidelines for Tunneling Lengths Near or at Trees (August 1998)
AS-508	Ornamental Residential Street Light - Type III (May 1980)
AS-509	Standard Residential Street Light - Type I (May 1980)
AS-510	Post Top Residential Street Light - Type II (August 1980)
AS-511	Contemporary Luminaire Standard (July 1982)
AS-514	Stone Pit (December 1986)
AS-515	Sub Drain at Catch Basin (July 1987)
AS-516	Median End Treatment (November, 1987)

AS-519	Granular Backfill: Entire Trench Granular "B" Type I (April 2004)
AS-521	Ornamental Street Light Single Luminaire - Type II (April 1994)
AS-522	Ornamental Street Light Double Luminaire - Type III (April 1994)
AS-524	Guidelines for Replacement of Existing Connections (November 1999)
AS-525	Catch Basin Flow Restrictor Plate-for R.O.W. only (February 2017)
AS-526	Standard Clay / Bentonite Plug Detail for Mainline (May 2003)
AS-526A	Standard Clay / Bentonite Plug Detail (Service Connection) (May 2003)
AS-527	Inside Drop System Open Bowl in Manhole (November 2014)
AS-534A	Access Area & Minimum Clearance for Above Ground Utilities (September 2012)
AS-534B	Access Area & Minimum Clearance for Above Ground Utilities (November 2015)
AS-535	Temporary Asphalt Catchbasin Box-Out (June 2002)
AS-536	Standard Trench Backfill Details (October 2002)
AS-538	Installation Method of Traffic Signage Disturbed by Construction (January 2011)
AS-539	Sidewalk Cafe Railing Anchor Detail (June 2010)
AS-540	Typical Concrete Bus Bay Detail (March 2011)
AS-542A	Maximum Curb Cut for Residential Driveways with Single Double Car Garages (November 2013)
AS-542B	Maximum Curb Cut for Residential Driveways on Corner Lots (November 2013)
AS-542C	Front Yard Parking for Residential Driveways (December 2013)
AS-542D	Exceptions to Curb Cuts and Driveway Locations (November 2013)
AS-542E	Maximum Curb Cut for Residential Driveways on Cul-de-Sacs (February 2017)
AS-544	Vending Box Standard (June 2011)
AS-545-A	Temporary Cul-de-Sac for 20-metre Minimum Right-of-Way (August 2011)
AS-545-B	Temporary Cul-de-Sac for 15-metre Minimum Right-of-Way (August 2011)
AS-546	Inlet Catch Basin Box-Out for Asphalt Pavement (October 2011)
AS-547	Channelized Traffic Island (Porkchop Island) (September 2019)
AS-548	Replaced with AS-404
AS-549	Truncated Dome Tactile Surface Indicators (August 2013)
AS-550	Temporary Lot Drainage (August 2013)
AS-552	Sidewalk Jointing Detail (Repairs & New Installs) (July 2023)

AS-553	Self Leveling Maintenance Hole Frame & Cover in Concrete Pavement (March 2014)
AS-554A	Concrete Pavement Approach Treatment to Hot Mix and Composite Pavements (February 2015)
AS-554B	Composite Pavement Approach Treatment to Hot Mix and Concrete Pavements (February 2015)
AS-555	Canada Post Community Mailbox (Residential) (September 2015)
AS-557	Sub-drain detail for Asphalt and Concrete Pavement (June 2015)
AS-558	Manhole Support Plate for Brick Manhole Levelling (January 2016)
AS-559	Doghouse Manhole (April 2016)
AS-560	Brick Pavers in the Right of Way (May 2017)
AS-562	Downspout Discharge Adjacent to Hard Surfacing (July 2021)
AS-566	Wye Connections to Combined Sewers (May 2021)

Appendix 5 - Construction Technologist Inspection Manual

ROLES & RESPONSIBILITIES FOR FIELD SERVICES CONSTRUCTION
TECHNOLOGIST STAFF INSPECTION

Updated 2023

<https://www.citywindsor.ca/business/buildersanddevelopers/Documents/Construction-Technologist-Inspection-Manual.pdf>

Appendix 6 – General Conditions

Index to General Conditions

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- GC 1.01 CAPTIONS
- GC 1.02 GENDER AND SINGULAR REFERENCES
- GC 1.03 DEFINITIONS

GC 2 CONTRACT DOCUMENTS

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- GC 2.02 ACCURACY OF DRAWINGS AS TO LOCATIONS OF STRUCTURES AND UTILITIES
- GC 2.03 SOUNDINGS, BORINGS & INSPECTION OF SITE
- GC 2.04 DOCUMENTS MUTUALLY EXPLANATORY
- GC 2.05 CUSTODY OF DRAWINGS
- GC 2.06 ORDER OF PRECEDENCE

GC 3 ADMINISTRATION OF CONTRACT

- GC 3.01 ENGINEERS AUTHORITY
- GC 3.02 DUTIES AND POWERS OF ENGINEER'S REPRESENTATIVES
- GC 3.03 WORKING DRAWINGS
- GC 3.04 RIGHT OF THE ENGINEER TO MODIFY METHODS AND EQUIPMENT
- GC 3.05 ASSIGNMENT AND SUB-LETTING
- GC 3.06 WORKING AREA
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- GC 3.12 QUALITY OF MATERIALS, WORKMANSHIP AND TESTS
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- GC 3.15 SUSPENSION OF WORK
- GC 3.16 EXTENSION OF TIME FOR COMPLETION
- GC 3.17 DELAYS
- GC 3.18 VARIATIONS
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- GC 3.23 NOTICE OF COMPLETION OF WORKS
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- GC 4.02 LAYOUT
- GC 4.03 TRAFFIC CONTROL REQUIREMENTS
- GC 4.04 MAINTAINING ROADWAYS AND DETOURS
- GC 4.05 ACCESS TO PROPERTIES ADJOINING THE WORK AND INTERRUPTION OF UTILITY SERVICES
- GC 4.06 APPROVALS AND PERMITS
- GC 4.07 EXCESS MATERIALS AND DISPOSAL
- GC 4.08 TRAFFIC AND PARKING SIGNS
- GC 4.09 SIDE CASTING
- GC 4.10 NOTICE TO OWNERS
- GC 4.11 ARTIFACTS
- GC 4.12 PATENT RIGHTS AND ROYALTIES

- GC 4.13 FACILITIES FOR OTHER CONTRACTORS
- GC 4.14 PRESERVATION OF TREES
- GC 4.15 SHRUBBERY
- GC 4.16 LABOUR CLASSIFICATION AND RATES
- GC 4.17 DUST CONTROL
- GC 4.18 EMPLOYMENT
- GC 4.19 LIMITATIONS OF OPERATIONS
- GC 4.20 CLEARANCE OF SITE ON COMPLETION
- GC 4.21 PERIOD OF MAINTENANCE

GC 5 MATERIAL

- GC 5.01 SUPPLY OF MATERIAL
- GC 5.02 QUALITY OF MATERIAL
- GC 5.03 REJECTED MATERIAL

GC 6 INSURANCE, PROTECTION AND DAMAGE

- GC 6.01 PROTECTION OF WORK, PERSONS AND PROPERTY
- GC 6.02 LIABILITY INSURANCE

GC 7 MEASUREMENT AND PAYMENT

- GC 7.01 QUANTITIES
- GC 7.02 WEIGHING GRANULAR MATERIALS
- GC 7.03 VALUATION OF VARIATIONS
- GC 7.04 VARIATIONS IN TENDER QUANTITIES
- GC 7.05 USE OF CONTINGENCY ITEMS
- GC 7.06 CLAIMS
- GC 7.07 SUPPLY OF PLANT AND MATERIAL
- GC 7.08 CERTIFICATES AND PAYMENTS
- GC 7.09 EXTRA WORK
- GC 7.10 PAYMENT FOR EXTRA WORK



Subject: Transit Windsor 2024 Operating Budget (To Maintain Current Service Levels) - City Wide

Reference:

Date to Council: November 29, 2023
Author: Tyson Cragg
Executive Director, Transit Windsor
519-944-4141 ext 2232
tcragg@citywindsor.ca

Report Date: November 8, 2023
Clerk's File #: AFB/14256

To: Mayor and Members of City Council

Recommendation:

THAT the Environment, Transportation and Public Safety Standing Committee, sitting as the Transit Windsor Board of Directors **RECOMMEND** Transit Windsor's 2024 Operating Budget submission of \$21,513,716, which is a \$3,932,250 increase over the 2023 Budget to maintain current service levels; and,

THAT Transit Windsor's 2024 Operating Budget Submission **BE REFERRED** to Administration for consideration as part of the City's 2024 Operating Budget deliberations; and further,

THAT City Council **RECEIVE** the 2024 Operating Budget submission for information.

Executive Summary:

N/A.

Background:

On June 26th, 2023, City Administration received the guidelines for the 2024 Budget Development. All City Departments, including Transit Windsor, were requested to submit the following for consideration by the Corporate Leadership Team & City Council:

- Develop a status quo budget to maintain existing service levels for the 2024 budget year.
- Develop budget options that could allow a 5% reduction of the 2023 net property tax levy supported operating budget.

- Identify recommended service enhancements and related budget increases. 2024 Service Enhancements are being presented in a separate accompanying report.

The 2024 Operating Budget for Transit Windsor has been developed in accordance with these guidelines.

As part of the Transit Windsor and City of Windsor operating agreement, the Environment, Transportation and Public Safety Standing Committee, who act as the Transit Windsor Board of Directors, have the responsibility to “*review and recommend Transit Windsor’s operating budget prior to submission to the City*”.

Discussion:

In 2024, Transit Windsor will be facing \$5,563,726 in budget levy pressures requiring the addition of 12 FTE’s related to the following:

- **\$79,306** 2024 Salary Budget Increase
- **\$1,052,275** 12 Additional FTE's - Mandated Federal Regulation Change - 10 Day Sick Leave
- **\$651,645** Additional Costs- Mandated New Federal Regulation Change - 10 Day Sick Leave
- **\$25,000** Increase to AVL computer system and additional software licenses Budget
- **\$0** One-Time Funding for East End Terminal Lease Increase (One-time funding previously approved from Budget Stabilization Reserve (BSR): \$88,284)
- **\$1,152,600** Transit Windsor Fuel Market Rate
- **\$1,462,000** Ontario Works (OW) Bus Pass Revenue Loss - Change in Funding Policy
- **\$1,140,900** Transfer to Fleet Reserve

Transit Windsor estimates that \$1,631,476 in additional revenues and/or savings will be generated from the following sources, which would partially offset the property tax levy pressures noted above:

- **\$613,000** Annual Fare Increase
- **\$125,900** Saints Pass Revenue
- **\$622,000** U Pass Tuition-Based Pass Revenue
- **\$12,500** Increase to Advertising Revenue
- **\$108,076** Aligning Revenue as per Provincial Gas Tax Program
- **\$50,000** New Revenue - Trailways - Use of Bus Bay at the Windsor International Transit Terminal (WITT)
- **\$100,000** Transit Pension

As a result of the net budget changes noted above, Transit Windsor’s submitted budget will require additional funding of \$3,932,250, as compared to the 2023 Approved Operating Budget.

Transit Windsor also examined scenarios that would achieve a 5% reduction of the 2023 net operating budget, to provide options to meet 2024 financial targets. The option to reduce transit service levels is presented below however, **is not recommended** by Transit Administration:

\$4,811,323: Reduce Transit Service

Transit has put forward a service reduction of approximately 55,515 service hours to reduce operating expenses by reducing current service as outlined in the Transit Windsor route schedule. Although not recommended by administration, if accepted, Transit would review the current routes and determine which routes would have minimal impact on service if reduced or eliminated. This reduction can be scaled based on the required amount needed for a budget reduction.

Full details on each of these budget issues will be prepared as part of the 2024 Operating Budget documents. It should be noted that all budget issues noted above are accurate as of the time of writing this report. Any new information that arises after this report is approved will be brought forward by Administration during the 2024 budget deliberations.

Risk Analysis:

The 2024 budget was developed using estimates that may differ from actual results. Administration has used its best judgment preparing these estimates, based on a number of assumptions. As with any preliminary estimates, significant fluctuations may occur.

The most notable risk areas are as follows:

- Fuel costs for diesel consumption are volatile and may not be consistent with the budget estimates of \$1.367 per litre.
- Ridership revenue assumptions may continue to be a risk going forward. Best estimates based on recent trends have been used, with revenue budgets being kept the same for 2024. While overall ridership has recovered largely due to increased student ridership, revenue trends have not yet recovered to pre-pandemic levels.

Climate Change Risks

N/A

Climate Change Mitigation:

N/A.

Climate Change Adaptation:

N/A.

Financial Matters:

As noted above, Transit Administration is bringing forward net budget requests totalling \$3,932,250, increasing the existing 2023 operating budget of \$17,581,466 to \$21,513,716 for 2024.

Consultations:

Tony Ardovini – Deputy Treasurer, City of Windsor
Mark Spizzirri – Manager of Performance Management and Business Case Development, City of Windsor
Poorvangi Raval – Financial Planning Administrator for Transit Windsor, City of Windsor

Conclusion:

Transit Windsor’s 2024 submitted budget reflects a net increase of \$3,932,250, along with the addition of 12 FTEs. Options are provided to reduce this increase, but are not recommended by Transit Windsor Administration. While Transit Administration recognizes the challenges of funding Transit Windsor’s operating budget, unprecedented ridership pressures as well as population growth illustrate that it is important that an appropriate level of service be provided for Windsor’s residents.

Planning Act Matters:

N/A.

Approvals:

Name	Title
Tyson Cragg	Executive Director, Transit Windsor
Mark Spizzirri	Manager of Performance Management and Business Case Development
Shawna Boakes for	Commissioner, Infrastructure Services
Janice Guthrie	Commissioner, Corporate Services /Chief Financial Officer
Joseph Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

Subject: Transit Windsor 2024 Operating Budget with Service Enhancements - City Wide

Reference:

Date to Council: November 29, 2023
Author: Tyson Cragg
Executive Director, Transit Windsor
519-944-4141 ext 2232
tcragg@citywindsor.ca

Report Date: November 14, 2023
Clerk's File #: AFB/14256

To: Mayor and Members of City Council

Recommendation:

THAT the Environment, Transportation and Public Safety Standing Committee, sitting as the Transit Windsor Board of Directors **RECOMMEND** Transit Windsor's 2024 Operating Budget submission totalling \$978,820 to fund the budget increase required for the proposed service enhancements; and,

THAT Transit Windsor's 2024 Operating Budget submission for the proposed service enhancements **BE REFERRED** to Administration for consideration as part of the City's 2024 Operating Budget deliberations; and further,

THAT City Council **RECEIVE** the 2024 Operating Budget service enhancement submission for information.

Executive Summary:

N/A.

Background:

On June 26th, 2023, City Administration received the guidelines for the 2024 Budget Development. All City Departments, including Transit Windsor, were requested to submit the following for consideration by the Corporate Leadership Team & City Council:

- Develop a status quo budget to maintain existing service levels for the 2024 budget year.
- Develop budget options that could allow a 5% reduction of the 2023 net property tax levy supported operating budget.
- Identify recommended service enhancements and related budget increases.

The 2024 Operating Budget for Transit Windsor has been developed in accordance with these guidelines. The status quo budget, along with 5% reduction options are included in a separate accompanying report (S 145/2023). This report focuses on the proposed service enhancements.

As part of the Transit Windsor and City of Windsor operating agreement, the Environment, Transportation and Public Safety Standing Committee, who act as the Transit Windsor Board of Directors, have the responsibility to *“review and recommend Transit Windsor’s operating budget prior to submission to the City”*.

Discussion:

In 2024, Transit Windsor is bringing forward \$978,820 (12 FTEs) in additional budget and staffing requirements to fund the following proposed service enhancements:

\$665,150 (9 FTEs) - 2024 Transit Windsor Service Plan (See Appendix A and B)

The 2024 Service Plan identifies the following as priorities:

- Redistribution of service hours from the current school extra routes to improve service in South Windsor, including Southwood Lakes and Devonshire Heights.
- In response to ridership increases, improvement of frequencies on north-south corridor routes
- Implementation of new or enhanced local routes which will provide improved service in residential neighbourhoods
- In response to rider demand, improvement in Saturday and Sunday services, with virtually all routes now operating weekend schedules
- Extension of express service from St. Clair College to the West End (HDGH) terminal, improving travel times and improving connections with other routes

Capital Requirements

The 2024 Transit Service Plan will require the purchase of two diesel-electric hybrid buses estimated to cost \$2.7M and new bus stop signs estimated at \$60,000.

\$313,670 (3 FTEs) New Service: Route 250 (Rhodes/Twin Oaks/NextStar Industrial) (See Appendix A and B)

Transit Windsor is proposing the introduction of a new Secondary route (Rt. 250) to service growing industrial areas south of E.C. Row Expressway. The route would operate from 07:00-23:00, Monday to Friday on either a 30-minute or a 60-minute frequency. The route would provide two-way service, and would interchange at Devonshire Mall, the Transit Centre, and Tecumseh Mall, while providing service to the major employment areas adjacent to the E.C. Row Expressway from Howard to Banwell.

Capital Requirements

The new Route 250 will require the purchase of one diesel-electric hybrid buses estimated to cost \$1.3M and new bus stop signs estimated at \$23,100.

This request is over and above the proposed net increase of \$3,932,250 requested in report S 145/2023 to maintain the current levels of service.

Full details on each of these budget issues will be prepared as part of the 2024 Operating Budget documents. It should be noted that all budget issues noted above are accurate as of the time of writing this report. Any new information that arises after this report is approved will be brought forward by Administration during the 2024 budget deliberations.

Risk Analysis:

The 2024 budget was developed using estimates that may differ from actual results. Administration has used its best judgment preparing these estimates, based on a number of assumptions. As with any preliminary estimates, significant fluctuations may occur.

The most notable risk areas are as follows:

- Fuel costs for diesel consumption are volatile and may not be consistent with the budget estimates of \$1.367 per litre.
- Ridership revenue assumptions may continue to be a risk going forward. Best estimates based on recent trends have been used, with revenue budgets being kept the same for 2024. While overall ridership has recovered largely due to increased student ridership, revenue trends have not yet recovered to pre-pandemic levels.

Climate Change Risks

N/A

Climate Change Mitigation:

N/A.

Climate Change Adaptation:

N/A.

Financial Matters:

As noted above, Transit Administration is bringing forward proposed Service Enhancements totalling \$978,820.

This is over and above the proposed net increase of \$3,932,250 requested in report S145/2023.

Consultations:

Tony Ardovini – Deputy Treasurer, City of Windsor
Mark Spizzirri – Manager of Performance Management and Business Case Development, City of Windsor
Poorvangi Raval – Financial Planning Administrator for Transit Windsor, City of Windsor

Conclusion:

Transit Windsor’s 2024 submitted budget reflects an increase of \$978,820, along with 12 additional FTEs to fund the proposed service enhancements.

While Transit Administration recognizes the challenges of funding Transit Windsor’s operating budget, unprecedented ridership pressures as well as population growth illustrate that it is important that an appropriate level of service be provided for Windsor’s residents

Planning Act Matters:

N/A.

Approvals:

Name	Title
Tyson Cragg	Executive Director, Transit Windsor
Mark Spizzirri	Manager of Performance Management and Business Case Development
Shawna Boakes for	Commissioner, Infrastructure Services
Janice Guthrie	Commissioner, Corporate Services /Chief Financial Officer
Joseph Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

- 1 Appendix A - 2024 Transit Windsor Service Plan
- 2 Appendix B - 2024 Transit Windsor Service Plan Route Maps

Appendix A

Transit Windsor 2024 Service Plan

The Transit Windsor Master Plan serves as the foundation for Transit Windsor's annual Service Plans, and identified significant changes in the transit network to streamline routes, reduce travel time and increase operational efficiency. The Transit Windsor Master Plan was presented to Council on January 27, 2020. This plan was approved via B7/2020/CR40/2020 and acts as the guiding document for the improvement of transit services and transit growth management in Windsor and Essex County. The City currently has a variety of master plans (sewers, parks, etc.) to address the many portfolios of the municipality. Strategically balancing the growth and needs of all facets of the municipality, including Transit is considered when reviewing the proposed and future Service Plans.

Since the approval of the Master Plan in 2020, several notable milestones have been completed:

1. Implementation of Route 518X in 2021 (Year 1 of the Transit Master Plan)
2. Implementation of Route 418X in June 2023 (Year 2 of the Transit Master Plan) and part of the 2023 Service Plan
3. Introduction of service to Amherstburg in 2022 via Route 605
4. Preparation and future implementation in early 2024 of the remaining 2023 Service Plan including Routes 100, 110, 200, 305 (identified as Route 330 in the 2023 service plan), 325, 335 (identified as Route 310 in the 2023 service plan), and 345 (identified as Route 335 in the 2023 service plan). These changes accomplish majority of the route changes laid out in years 3 & 5 in the Transit Master Plan.
5. Implementation of new scheduling software

Transit Windsor's proposed 2024 Service Plan continues to address the service improvements as outlined in the Transit Master Plan, while also recognizing the need for fiscal responsibility. The 2024 Service Plan builds upon the changes from the approved 2023 Service Plan. The changes outlined below are a measured approach to achieve many of the Year 4 and Year 6 goals under the Transit Master Plan, while utilizing fleet and human resources as effectively and efficiently as possible. Of the nearly 26,000 hours of planned changes, approximately 35% are reallocations of existing service hours to ensure that service is deployed most effectively, and that the service is focused on areas of highest demand, and highest ridership potential. The additional hours focus primarily on route and frequency improvements during base service periods, which allows for the Service Plan to be implemented with only a small increase in the current fleet size, thus minimizing capital expenditures. The additional service hours represent an approximate increase of 5.2% over 2023 service hours.

The 2024 service plan identifies the following as priorities:

- A redistribution of service hours through the elimination of secondary school extras to improve service in South Windsor, including Southwood Lakes and Devonshire Heights
- In response to significant ridership increases, improvement of frequencies on strained north-south corridor routes
- Implementation of new or enhanced local routes that will provide improved service in residential neighbourhoods, connecting these areas to employment, education, and commercial areas
- In response to ridership demand and following the Transit Master Plan, improvement in Saturday & Sunday services, with virtually all routes now operating on Sundays/Holidays
- Extension of express service from St Clair College to the Hotel Dieu Grace Healthcare (HDGH) terminal in the west end, improving travel times and improving connections with other routes

The changes outlined below are in line with industry principles and best practices with respect to transit service delivery:

- Primary routes should provide rapid, high-frequency service that connect main terminals
- Neighbourhood feeder routes connect lower-density areas to main nodes (transfer points)
- Route frequencies should be no less than 30 minutes to ensure service quality, reliability, and ease of transfers
- One-way service should be avoided whenever possible, with the preference for two-way service on all routes

Background:

With the declaration of a Global Pandemic in March 2020, the transit industry has seen unprecedented changes. Ridership decreases, service reductions, staffing shortages, global supply chain pressures, inflation and fuel price increases have all had a negative effect on transit services. However, since the pandemic has eased, Transit Windsor has seen a strong ridership rebound in 2023. As of October, 2023, ridership was at 120% of the three-year average of 2017-2019, with it often running as high as 130% of pre-pandemic levels. This has placed severe strain on the overall system, resulting in overloaded buses, missed passengers, and customer complaints on most routes. The resumption of the University of Windsor's U-Pass program and the new St. Clair College Saints Pass (tuition-based pass) has had a significant contribution to the rebound in ridership. With that in mind, continuous improvement of the service that Transit Windsor provides to residents is the goal of the department. The recommended changes as set out below represent a total of 16,908 new service hours and a redistribution of 9,269 service hours.

Note: new route numbers to make navigation of the system easier for passengers have been developed according to the following naming conventions:

- *Primary routes: 100s*
- *Secondary routes: 200s*
- *Local routes: 300s*
- *Main corridor semi-express routes: 400s*
- *Limited-stop, express routes: 500s*
- *Regional service routes: 600s*

Generally, routes with a primarily east-west alignment will have even numbers, and those that run primarily north-south have odd numbers. Numbers are assigned in increments of 5.

1. Dougall 6: This route will be renamed **Route 205** (identified in the Transit Master Plan as Secondary Route 53). Routing between the Windsor International Transit Terminal and St. Clair College will remain the same and is consistent with the Transit Master Plan.

The major issue for this route currently is insufficient frequency to meet demand, resulting in overloaded buses. The monthly passenger boardings per hour for 2023 have averaged at 50. The Transit Master Plan and industry standards state that a primary or secondary route should have a minimum target of 25 passenger boardings per service hour (BSH) and a goal of 35 BSH for a sustainable route. Routes that have passenger boardings per hour consistently over 35 will lead to overcrowding on buses and passengers being bypassed. Frequency improvements will help to address these issues.

The following are the proposed service improvements for Route 205 (formerly Dougall 6):

- a. Weekday – increase frequency from 40 minutes to 25-30 minutes between 6:00 am and 6:00 pm
 - b. Weekday – increase frequency from 70 minutes to 40 minutes between 6:00 pm and 11:00 pm
 - c. Saturday – increase frequency from 70 minutes to 40 minutes between 6:00 am to 10:00 am
 - d. Saturday – increase frequency from 40 minutes to 25-30 minutes between 10:00 am to 6:00 pm
 - e. Saturday – increase frequency from 70 minutes to 40 minutes between 6:00 pm to 11:00 pm
2. South Windsor 7: This route will be renamed **Route 240** (identified as Secondary Route 200 in the Transit Master Plan). The route will be altered to end at

Devonshire Mall and no longer provide service to the Provincial/Walker Road areas. These areas will be covered by the expanded Walkerville 8 route. Once the construction of the new Hospital is completed on County Road 42, this route would continue from the Devonshire Mall terminal to the New Hospital. This is consistent with the Transit Master Plan.

The following are the proposed service improvements for Route 240 (formerly South Windsor 7):

- a. Weekday – expand service hours from 7:00 am to 8:00 pm to 6:00 am to 11:00 pm
 - b. Saturday – increase frequency from 50 minutes to 30 minutes all day
 - c. Saturday – extend the service day from 8:00 pm to 11:00 pm
 - d. Sunday – New service as no Sunday service currently exists for this route and frequency will be 30 minutes from 8:00 am to 8:00 pm
3. Walkerville 8: This route will be renamed **Route 135** (identified as Primary Route 17 in the Transit Master Plan). The route will be altered to end at Devonshire Mall via Provincial from Walker Road instead of continuing to the Town of Tecumseh along Walker Road and ending on North Talbot. The area along Ducharme and North Talbot will be serviced by a new local route, Route 310. Route 135 will cover the area along Provincial left by the South Windsor 7 change enhancing service by providing bi-directional rather than the existing one-way travel. Service will also be improved to the Windsor International Airport by providing all-day bi-directional service every day of the week compared to the existing one-way service and only limited hours on weekdays.

The following are the proposed service improvements for Route 135 (formerly Walkerville 8):

- a. Weekday – increase frequency from 30-40 minutes to 30 minutes between 6:00 am and 8:00 pm
- b. Weekday – increase frequency from 70 minutes to 45 minutes between 8:00 pm and 12:00 am
- c. Saturday – increase frequency from 70 minutes to 45 minutes between 7:00 am and 10:00 am
- d. Saturday – increase frequency from 40 minutes to 30 minutes between 10:00 am and 6:00 pm
- e. Saturday – increase frequency from 70 minutes to 45 minutes between 6:00 pm and 11:00 pm
- f. Sunday – increase frequency from 40 minutes to 30 minutes between 11:00 am to 8:00 pm

4. Parent 14: This route will be renamed **Route 315** (identified as Local Route 121 in the Transit Master Plan). This route has been altered to no longer service Howard between Tecumseh and Eugenie. That section will continue to be serviced by the existing Transway 1A route. It will instead run on Hall from Tecumseh to Ypres and Ypres from Howard to Hall to bring service to that area and to the Optimist Community Centre where there is no existing service, as well as the Devonshire Heights subdivision, also not currently serviced by transit.

The following are the proposed service improvements for Route 315 (formerly Parent 14):

- a. Weekday – increase frequency from 40-60 minutes to 45 minutes between 7:00 am to 7:00 pm
 - b. Saturday – increase frequency from 60 minutes to 45 minutes between 8:00 am to 6:00 pm
 - c. Sunday – new service as no Sunday service currently exists for this route and frequency will be 45 minutes from 9:00 am to 6:00 pm
5. **Route 310** (identified as Local Route 122 in the Transit Master Plan). This route will service the Ducharme and North Talbot areas where route segments of the Walkerville 8 have been altered. It will also provide new service to the Southwood Lakes subdivision where there is no existing service. It also provides an express connection between the Hotel Dieu Grace Healthcare Terminal and St Clair College, forming an interlined westerly extension of Route 518X, allowing passengers improved connections to other TW services. This will run as two-way service, which is an improvement, since most of the existing route segments only receive one-way service. There is also new service being provided to the area of Maguire and Holburn, further expanding Transit Windsor's service coverage.

The following are the proposed service improvements for Route 310:

- a. Weekday – service frequency of 20-30 minutes between 7:00 am and 10:00 pm
 - b. Saturday – service frequency of 40 minutes between 8:00 am and 9:00 pm
 - c. Sunday – service frequency of 40 minutes between 8:00 am and 8:00 pm
6. Transway 1A: This route will be renamed **Route 125** (identified in the Transit Master Plan as Primary Route 15). The existing routing and frequencies will remain the same for now.

7. Route 518X: A minor route adjustment is being made in overall service hours to redistribute some of the hours that are not being utilized to the minimum boardings per service hour at certain times of service days.

The following service changes/enhancements are listed as a separate budget item, but would be part of the overall 2024 service plan if approved. They will allow for the provision of new service to the NextStar Energy Battery Plant and the Rhodes Drive and Twin Oaks industrial areas. The changes are noted below.

8. Central 3: This route will be renamed **Route 210** (identified in the Transit Master Plan as Secondary Route 54). This route is proposed to no longer provide service to the industrial areas of Rhodes and Deziel. The new proposed Route 250 will provide service to this area. Existing service to that area runs only on weekdays. The remaining segment of the route and existing frequencies will remain the same for now.
9. **Route 250**: This route can be identified in the Transit Master Plan as Secondary Route 550 and as part of a proposed on-demand transit area. In the Transit Master Plan, on-demand service was originally envisioned for this area due to projected boardings per service hour being below industry minimums. With the advent of the new NextStar battery plant and its large employment base and ridership potential, this service is now proposed to operate as a fixed route. This route will provide new service to the NextStar Energy Battery Plant, Twin Oaks industrial, and North Service Road between Conservation and Walker. It will also service the route segments which were removed from the former Central 3 along Rhodes, North Service, Jefferson, and Deziel. This will provide improved two-way service compared to much of the existing route segments only receiving one-way service. This route would be dependent upon the completion of a bus turn-around along Twin Oaks by the City of Windsor. This route would operate on weekdays only, which is consistent with the existing portion of the Central 3.

The following are the proposed service improvements for Route 250:

- a. Weekday – service frequency of 60 minutes between 6:00 am to 12:00 am

Note: proposed route names above are subject to change based on final route alignments and other factors.

As mentioned above, the proposed 2024 Service Plan is a re-deployment of approximately 9,269 hours, and an addition of approximately 16,908 new hours. The Twin Oaks and Central 3 route options are an additional re-deployment of approximately 2,805 hours, and an introduction of approximately 3,060 hours. Combined, the proposed changes represent a reallocation of 12,074 hours and an addition of 19,968 new service hours. Better utilization of existing resources is a critical component of the Service Plan.

The proposed 2024 service changes will utilize scarce fleet resources more efficiently with the elimination of secondary school extras. Rather than reserving those 11 buses (9% of the current fleet) on short segments during peak periods only, it will allow those vehicles to be used on regular routes at all times. The changes to existing routes and

introduction of new service areas will allow all residents to take advantage of improved transit services at all times rather than only acting as school transportation.

Providing consistent two-way service to the Ducharme and the Rhodes Drive areas are notable service improvements. Currently, these areas are serviced with one-way loops on various routes. One-way loops are typically not attractive service models for passengers, since it forces riders to travel the entire length of the loop to reach their stop, thus increasing trip times.

With Sunday ridership now exceeding system capacity during most hours of the service day, new Sunday service will also be a major improvement for the existing South Windsor 7 and Parent 14 routes, where there is no existing Sunday service. This has been a long-standing demand from passengers and another goal of the Master Plan.

Extensive public feedback was considered and incorporated in the development of the Transit Master Plan and in the preparation of the proposed 2024 Service Plan. If approved in the 2024 Budget process, public outreach will continue to occur to educate those in affected areas on the changes being implemented, including both in-person open house events, and a dedicated website which will show the upcoming changes. The website will provide information to assist those whose routes have changed, for those who now have easier access to transit services, and on the changes that have occurred since the Transit Master Plan was approved.

The table below outlines service hour requirements for the 2024 proposed changes (excluding the Central 3 and Route 250 changes):

Route	Existing Annual Hours	New Annual Hours	Annual Hour Difference
Dougall 6 to 205	10,335	16,435	6,100
South Windsor 7 to 240	14,053	14,208	155
Walkerville 8 to 135	14,003	17,695	3,692
Parent 14 to 315	6,215	8,310	2,095
Route 310	0	14,135	14,135
Route 518X Adjustment	10,680	9,485	(1,195)
School Extras Eliminated	8,074	0	(8,074)
Total Hours Required			26,177
Hours Redistributed			(9,269)
New Annual Hours			16,908

The table below outlines service hour requirements for the Central 3 and Route 250 changes alone:

Route	Existing Annual Hours	New Annual Hours	Annual Hour Difference
Central 3 to 210	24,890	22,085	2,805
Route 250	0	8,670	8,670
		Total Hours Required	5,865
		Hours Redistributed	(2,805)
		New Annual Hours	3,060

Should the 2024 Service Plan be approved, the next steps associated with the implementation of the service changes include:

- Creation of an estimated 200 bus stop signs to replace existing signs along with new signs along new corridors. This has been put forward as a Capital budget item at an estimated cost of \$83,100.
- Purchase of three new diesel-electric hybrid buses. The additional fleet needs are a result of the accommodation of the last three years' service plans (2021-2023) within the existing fleet complement. These requests are included in the 2024 Capital Budget Plan. Without the approval of these capital expenditures, the implementation of the 2024 Service Plan will be impossible.
- Preparation/production of new schedules (run cut), layovers/time points, public timetables and Operator sign-up;
- Updating the CAD/AVL system and fare box systems
- Updating schedule information for Google Maps and real-time trip planner
- Undertaking a marketing program including printed Ride Guide maps, on-board and stop level notices, open house session, website updates and social media, as well as internal info screen postings, Operator information sessions and an internal newsletter.

Should this issue (Budget Issue# 2024-0056) go forward, expected operating net costs after revenue to implement this plan outside of the Central 3 route change and new Twin Oaks route are as follows:

Employee related costs (Wages, benefits, uniforms, computers, etc.)	\$815,903
Fleet Costs (Fuel, parts, maintenance, insurance, etc.)	\$514,400
Less: Estimated Revenue at 50% of costs	<u>(\$665,150)</u>
Total Net Levy Cost	\$665,153

Nine (9) FTEs (Bus Operators) are required to implement this service enhancement.

Capital Impact:

This budget issue also requires purchase of two diesel-electric hybrid buses (TRN# 001-24) estimated at \$2.7M and new bus stop signs estimated at \$60,000 (TRN#002-2024). These requests are included in the 2024 Capital Budget Plan. Without the approval of these capital dollars, the implementation of the Service Plan will be impossible.

The expected operating net costs after revenue to implement the Central 3 change and new Twin Oaks route (Budget Issue # 2024-0280) are as follows:

Employee related costs (Wages, benefits, uniforms, computers, etc.)	\$272,389
Fleet Costs (Fuel, parts, maintenance, insurance, etc.)	\$175,711
Less: Estimated Revenue at 50% of costs	(\$134,430)
Total Net Levy Cost	(\$313,670)

This budget issue also requires purchase of one diesel-electric hybrid buses (TRN-004-24) estimated at \$1.3M and new bus stop signs estimated at \$23,100 (TRN-003-24). This request is included in the 2024 Capital Budget Plan. Without the approval of these capital expenditures, the implementation of this route will be impossible.

Three (3) FTEs are required to implement this service enhancement.

The total combined operating net costs after revenue to implement the complete 2024 service plan are as follows:

Employee related costs (Wages, benefits, uniforms, computers, etc.)	\$1,088,292
Fleet Costs (Fuel, parts, maintenance, insurance, etc.)	\$690,111
Estimated Revenue at 50% of costs	<u>(\$799,580)</u>
Total Net Levy Cost	\$978,823

A total of 12 FTEs are required to implement these service enhancements. A total gross capital investment of approximately \$4.0 M for three diesel electric buses and \$83,100 for bus stop signs is required to implement these enhancements.

Transit Windsor Routes After Proposed 2024 Service Plan

Michigan, U.S.A.





Scale 1:65,000

Proposed Route 135 (Walkerville 8)

Transit Windsor
2024 Service Plan

Legend

-  Transit Terminal
-  Proposed Route 135 (Walkerville 8)

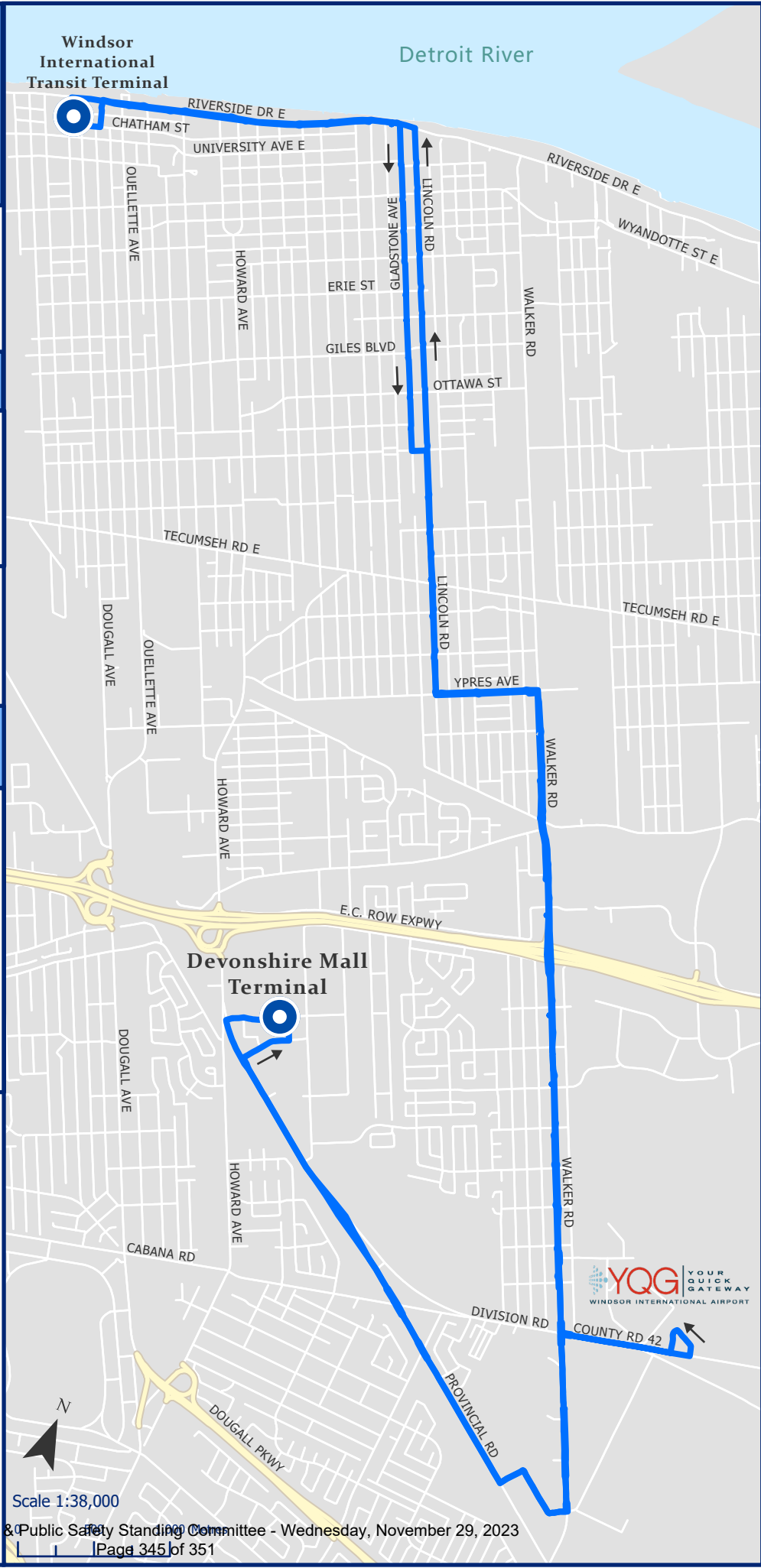
Proposed Route 135 (Walkerville 8) Monday to Sunday

Southbound

Windsor International Transit Terminal to Windsor International Airport to Devonshire Mall Terminal

Northbound



Devonshire Mall Terminal to Windsor International Airport to Windsor International Transit Terminal



Proposed Route 205 (Dougall 6)

Transit Windsor
2024 Service Plan

Legend

-  Transit Terminal
-  Proposed Route 205 (Dougall 6)

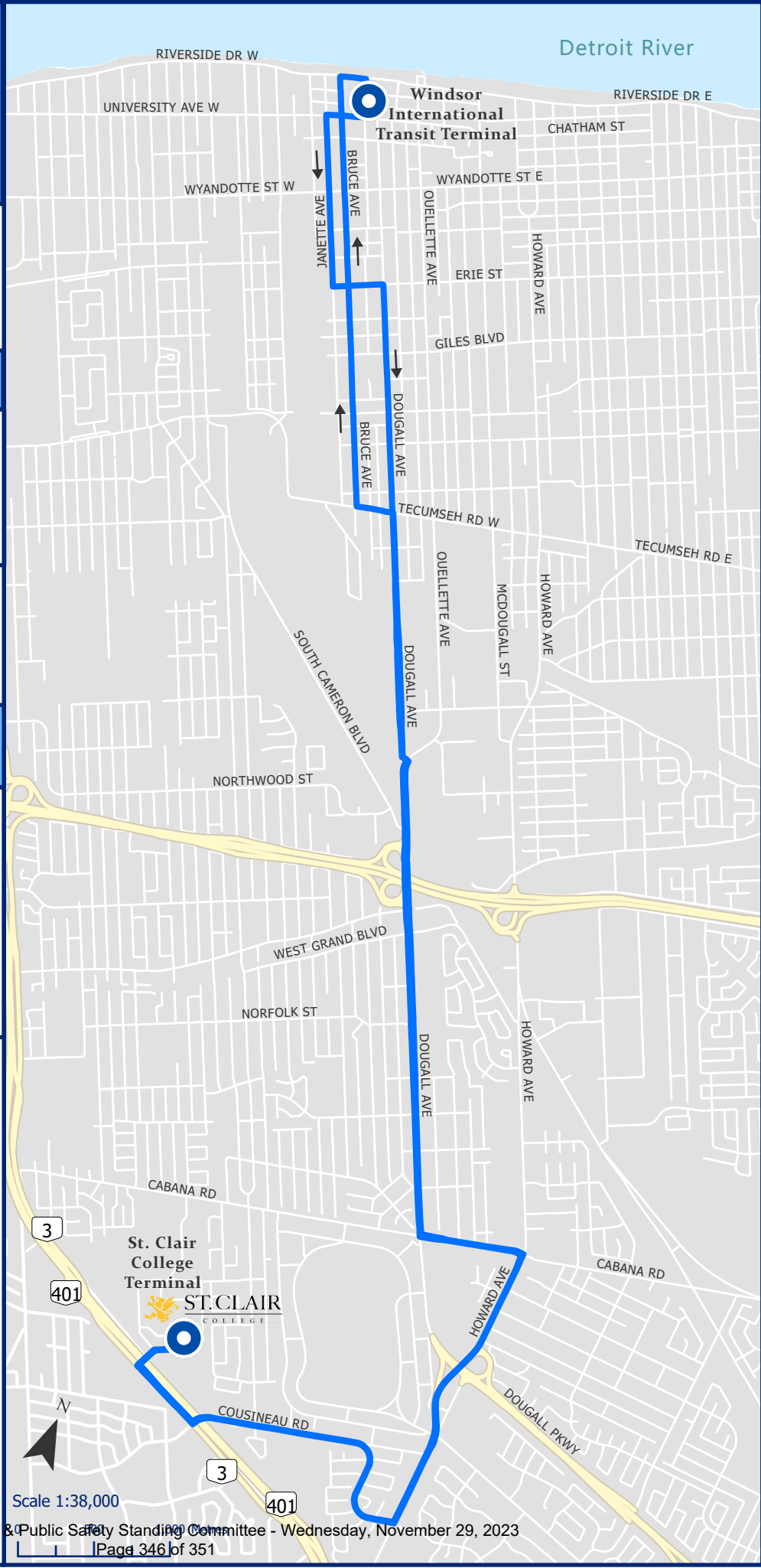
Proposed Route 205 (Dougall 6) - Monday to Sunday

Southbound

Windsor International Transit Terminal to St. Clair College Terminal

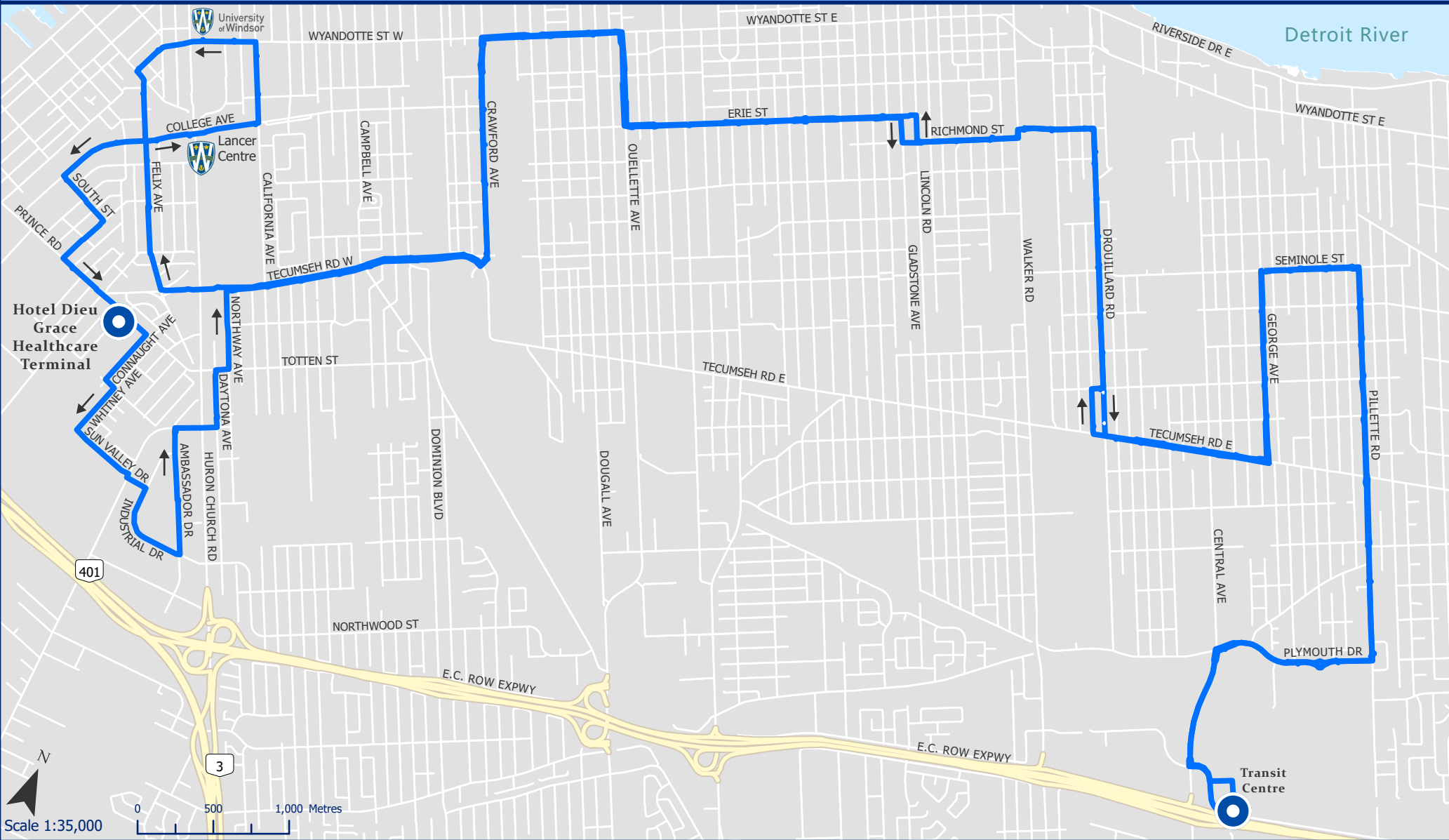
Northbound

St. Clair College Terminal to Windsor International Transit Terminal



Proposed Route 210

Detroit River



Legend

- Transit Terminal
- Route 210

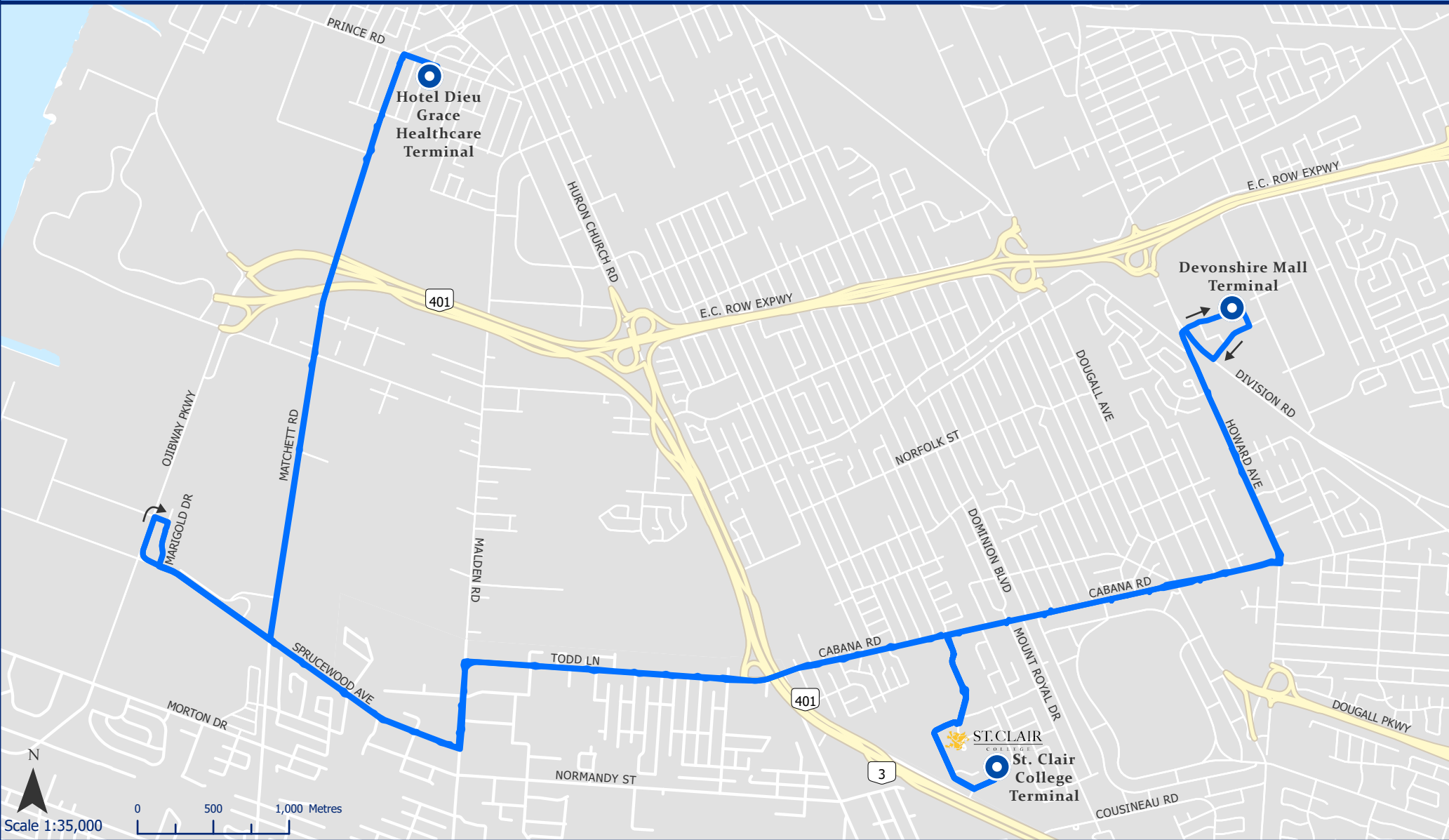
Proposed Route 210 - Monday to Sunday

Eastbound - Hotel Dieu Grace Healthcare Terminal to Transit Centre

Westbound - Transit Centre to Hotel Dieu Grace Healthcare Terminal



Proposed Route 240 (South Windsor 7)



Legend

- Transit Terminal
- Proposed Route 240 (South Windsor 7)

Proposed Route 240 (South Windsor 7) - Monday to Sunday

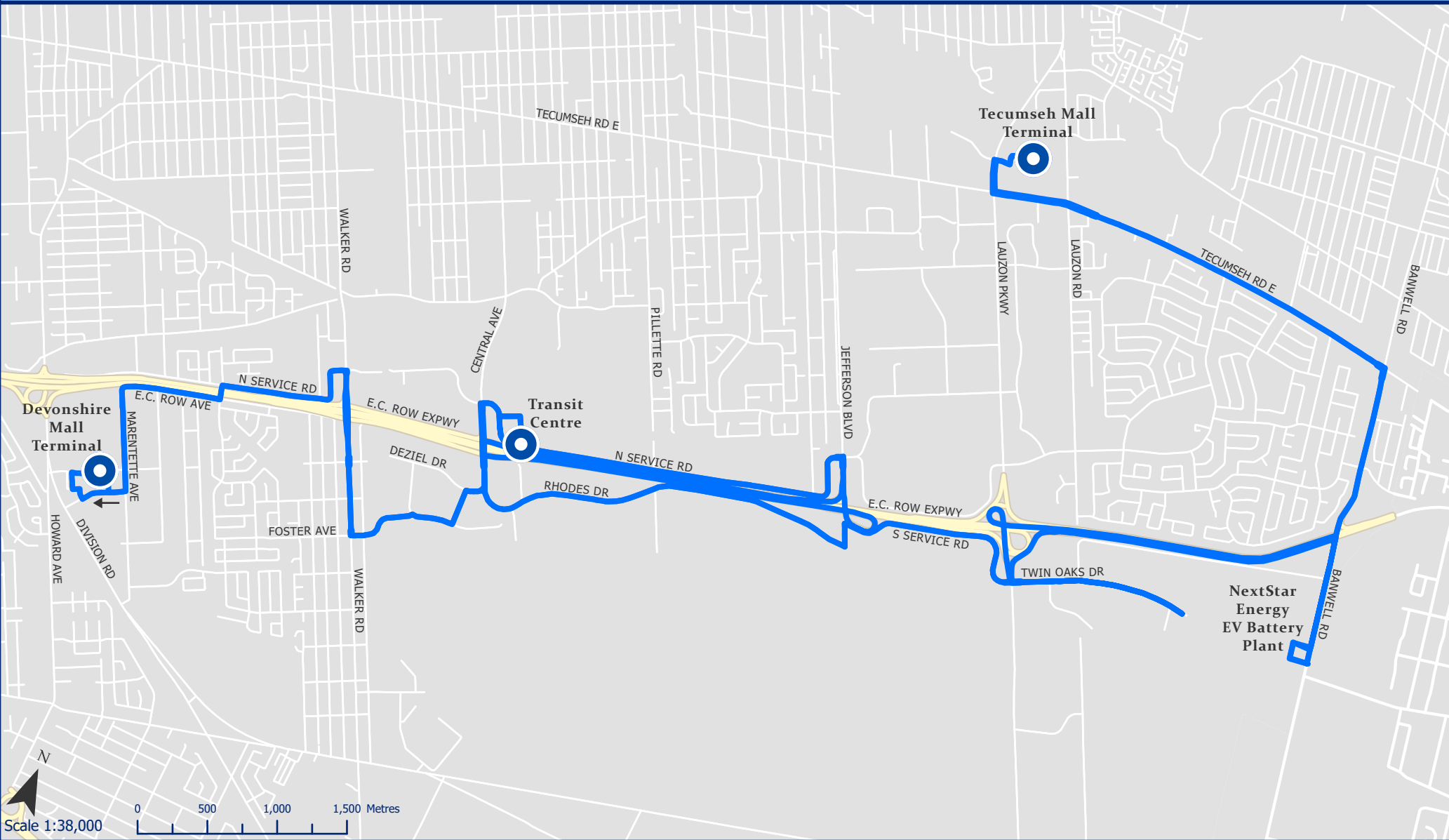
Eastbound - Hotel Dieu Grace Healthcare Terminal to St. Clair College Terminal to Devonshire Mall Terminal

Westbound - Devonshire Mall Terminal to St. Clair College Terminal to Hotel Dieu Grace Healthcare Terminal



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Legend

-  Transit Terminal
-  Proposed Route 250

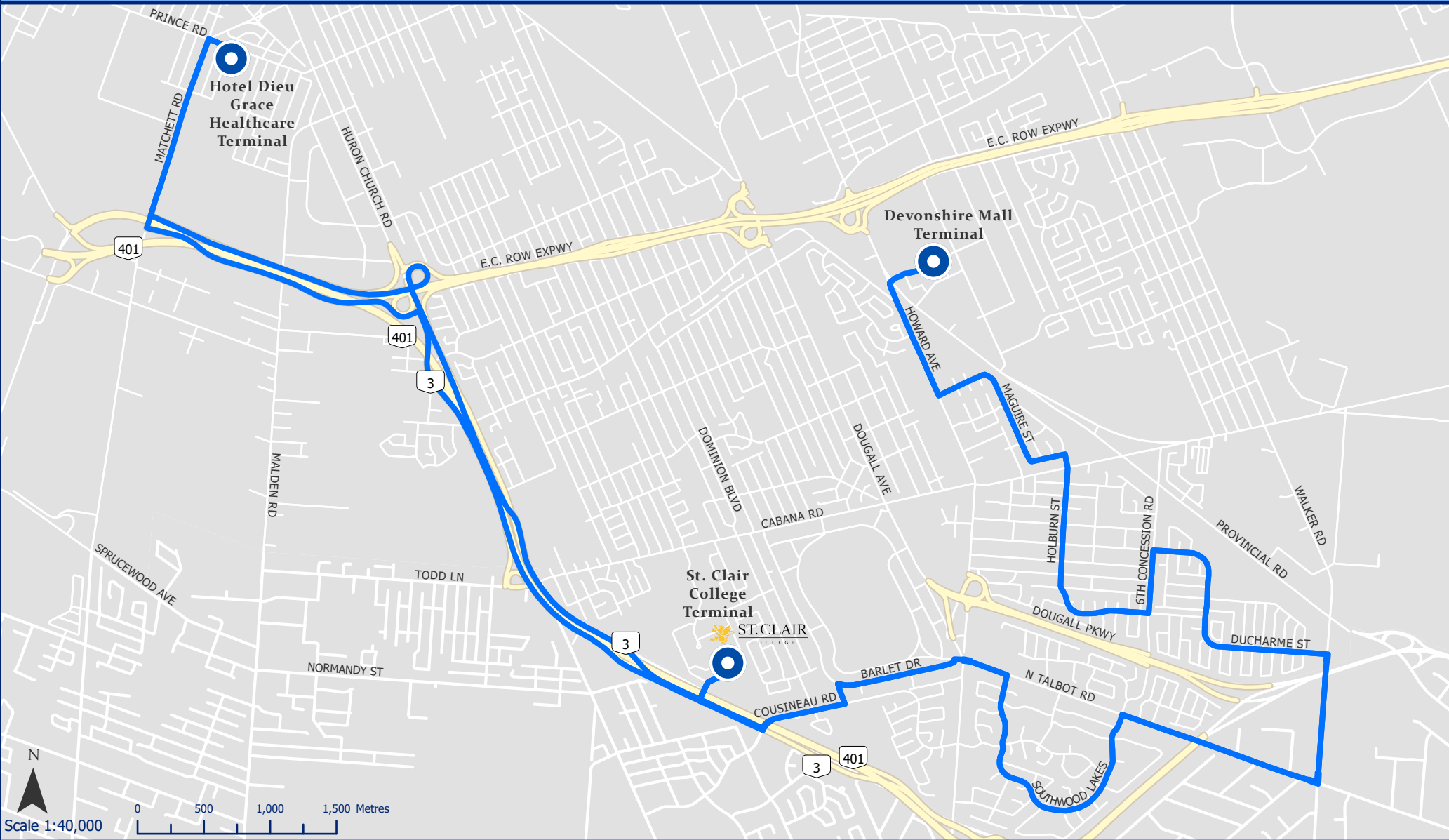
Proposed Route 310 - Monday to Sunday

Eastbound - Devonshire Mall Terminal to Transit Centre to Twin Oaks to NextStar Energy EV Battery Plant to Tecumseh Mall Terminal

Westbound - Tecumseh Mall Terminal to NextStar Energy EV Battery Plant to Twin Oaks to Transit Centre to Devonshire Mall Terminal

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Legend

- Transit Terminal
- Route 310

Proposed Route 310 - Monday to Sunday

Eastbound - Hotel Dieu Grace Healthcare Terminal to St. Clair College Terminal to Devonshire Mall Terminal

Westbound - Devonshire Mall Terminal to St. Clair College Terminal to Hotel Dieu Grace Healthcare Terminal

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Proposed Route 315 (Parent 14)

Transit Windsor
2024 Service Plan

Legend

-  Transit Terminal
-  Proposed Route 315 (Parent 14)

Proposed Route 315 (Parent 14) - Monday to Sunday

Southbound

Windsor International Transit Terminal to Devonshire Mall Terminal

Northbound

Devonshire Mall Terminal to Windsor International Transit Terminal

