
Subject: Implementation of Automated Speed Enforcement

Report to: Public Works Committee

Report date: Tuesday, March 10, 2020

Recommendations

1. That Regional Council **AUTHORIZE** the use of automated speed enforcement (ASE) technology on Regional roads for a five-year contract term with an option to extend for an additional five (5) years;
2. That the Commissioner of Public Works **BE AUTHORIZED** to negotiate, enter into and execute an operating agreement with Her Majesty the Queen in Right of Ontario, as represented by the Ministry of Transportation (the "MTO") of Ontario for the use of ASE technology by Niagara Region including the access and use of license plate registration information subject to successful negotiations with the LAMs with respect to the Niagara Region Courts Inter-Municipal Agreement;
3. That the Commissioner of Public Works **BE AUTHORIZED** to negotiate, enter into and execute an operating agreement with Redflex Traffic Systems (Canada) Limited to provide ASE service for five (5) years from date of award during the second quarter of 2020 to 2024 in the amount of an upset limit of \$950,000 (including 13% HST) with an option to renew on the sole discretion of the Commissioner of Public Works, and subject to budget approval, for one additional term of five (5) years subject to successful negotiations with the LAMs with respect to the Niagara Region Courts Inter-Municipal Agreement;
4. That the Commissioner of Public Works **BE AUTHORIZED** to negotiate, enter into and execute a partnering agreement with the City of Toronto for processing automated speed infractions at the Joint Processing Center subject to successful negotiations with the LAMs with respect to the Niagara Region Courts Inter-Municipal Agreement; and
5. That following implementation of recommendations 1-4, Regional Staff will review the implementation strategy, including technology assessment, safety and educational evaluation, impacts on the Region's Provincial Offences Courts, countermeasures, and budget and revenue to cover the five (5) year period of 2020-2024 and **REPORT BACK** to Council with an update late 2020.

Key Facts

- The Province enacted ASE Regulation #398/19 under the Highway Traffic Act on December 1, 2019, to enable Ontario Municipalities to administer an ASE program in their jurisdictions. Provincial Guidelines are provided to ensure transparency and for the purpose of promoting road safety while maintaining public trust.
- In July 2019, Regional Council authorized Staff to pursue the potential use of ASE 2019 to improve road safety and influence driver behaviour; please refer to PW 35-2019.
- ASE is the methodology which falls under Vision Zero Road Safety Program that was approved by Regional Council on November 14, 2019; please refer to PW 64-2019.
- The costs associated with the implementation of initiatives under the Vision Safety Program, including ASE, was referred for consideration as part of the 2020 Budget Process in accordance with the recommendations in PW 64-2019. Regional Council approved the associated budget, subject to successful negotiations with the LAMs of the Niagara Region Courts Inter-Municipal Agreement to ensure the program is financially sustainable.
- Niagara Region has one of the highest ratios of fatal collisions per 100,000 population among jurisdictions in Southern Ontario based on the latest Provincial statistics.
- Speeding has a direct impact on the consequences of any crash. Speeding also increases the frequency of crashes as the decision stopping distance increases proportionately with the travel speed.
- ASE systems are an important element in speed management and can be a very effective countermeasure to prevent speeding-related crashes.
- Regional staff propose to operate a combination of mobile and semi-fixed ASE units (quantity of four (4)) in school and community safety zones that were determined with maximum speeding violations during 2019.
- Regional staff will communicate the philosophy and strategy behind the ASE program with Niagara residents and tourists through a communication strategy. ASE is a tool which will enhance the capabilities of traffic law enforcement throughout Niagara region and will supplement, rather than replace, traffic stops by law enforcement officers.

- In order to operate ASE, Niagara Region must execute agreements with the Ministry of Transportation of Ontario (MTO), Redflex Traffic Systems (Canada) Limited and City of Toronto to use automated speed enforcement technology.
- Regional staff have been participating in an inter-municipal working group that was initiated by the Ontario Traffic Council (OTC) in an effort to establish common operating principles for ASE across the Province. Some of the issues under discussion include: i) criteria for site selection; ii) fixed location vs. mobile enforcement; iii) days and hours of operations iv) common definitions of school and community safety zone; v) evaluation of the regime; vi) operating guidelines; and vii) expected impacts to court services.
- Niagara Region designated two Community Safety Zones in September 2019 at:
 - Regional Road 81 (York Road) from Queenston Road to Concession 3 Road in the Town of Niagara-on-the-Lake, St. Davids Public School; and
 - Regional Road 24 (Victoria Avenue) from Frederick Avenue to Regional Road 81 (King Street) in the Town of Lincoln, Twenty Valley Public Schools.
- A staff report is coming forward in Q2 2020 to assign additional community safety zones on Regional roads that can receive ASE deployment.
- Staff have begun discussions with the Local Area Municipalities regarding the Niagara Region Court Inter Municipal Agreement with the first meeting taking place on February 21, 2020 with the Local Area Treasurers. At this meeting a combined presentation with Transportation, Public Works and Finance, Corporate Services did receive general support around the Vision Zero Safety program related to the amendments regarding cost sharing between the Region and Municipalities.

Financial Considerations

In order to successfully implement the ASE program, Transportation and Court Services will require increased capacity and resources based on the projected number of charges expected to be issued with the proposed recommendation of four (4) cameras initially. These cameras will be distributed across Regional schools and Community Safety Zones during 2020. Fine revenue is expected to make the ASE program fully cost recoverable, subject to successful amendment of the Niagara Region Courts Inter-Municipal Agreement with the LAMs.

The most significant costs to operate an Automated Speed Enforcement program include:

1. Cost to design, supply, install, operate and maintain the equipment payable to Redflex Traffic Systems (Canada) Limited: The total estimated Vendor cost for an initial five-year contract term is \$856,000 including 1.76% non-refundable HST to operate four (4) ASE units, a combination of mobile and semi-fixed, that will be rotated in school and Community Safety Zones. The annual operating cost associated with the supply of each ASE unit is estimated to be \$33,100 (including 1.76% non-refundable HST), or \$132,400 total for four units. Costs also include one-time capital costs for camera set-up included in the 2020 capital budget.
2. Cost to access MTO vehicle ownership database, payable to MTO: The Province charges a per-transaction fee every time that their vehicle ownership database is accessed by the Joint Processing Centre. These fees are invoiced directly to the municipality on a quarterly basis. The MTO fee will be approximately \$1.06 per transaction; with the total cost varying depending on the number of charges that are issued.
3. Cost to manage the Joint Processing Centre, payable to the City of Toronto: The City of Toronto will operate an Automated Speed Enforcement – Joint Processing Centre on behalf of all participating municipalities. City of Toronto Processing Centre Staff will review the images from each site and determine whether or not a charge can be laid. The City of Toronto will chargeback each municipality on a cost-recovery basis. The chargeback will include both a portion of fixed costs (for the facility, equipment etc.) and a per-transaction cost. The estimated charge per unit fee will be \$12.50.
4. Niagara Region Court costs: To process, prosecute and collect the fines resulting from charges issued pursuant to ASE. The registered owner of the vehicle can choose one of two options on how to proceed with the ASE ticket:
 - In most cases, the registered owner pays the fine with no contest
 - In other cases, the vehicle owner can choose an “early resolution” dispute process or can also request a trial

Records from other Municipalities operating a Red Light Camera (RLC) program prove that 80% of issued tickets will be paid without contest.

To manage the increased ticket volumes for Court Services when the initiatives are fully operational, 12 permanent, full-time FTEs will be required for the Vision Zero Program as a whole (including both RLC and ASE). This includes one prosecution co-ordinator, nine court clerks, and two trial co-ordinators. The costs associated with additional staffing for the Vision Zero Program have been allocated between both RLC and ASE and are dependent on ticket volume for both initiatives. It is anticipated that more staffing support will be required for ASE due to a higher estimated ticket volume than RLC. For the purposes of the approved business case included in the 2020 budget (see Appendix 4), the cost of nine court clerks and one trial co-ordinator have been allocated to the ASE program. The cost of one trial co-ordinator and one prosecution co-ordinator have been allocated to the RLC program.

5. Transportation Services Division: The Division leads the planning and delivery of the program throughout Niagara Region; including the costs associated with program administration responsibilities, implementation, planning, communications, guidelines, consultant evaluation, coordination, and management with all parties and stakeholders. Staffing costs to manage the program include two permanent full-time project managers and one student for the Vision Zero program as a whole. This would include one project manager and one student to oversee the ASE program and one project manager overseeing the RLC program.
6. Business Licensing Unit: Accepting the delivery of Provincial Offences Tickets from the Toronto Joint Processing Center, verifying that the ticket matches the certificate of control and personal delivery of the package to Niagara Region Court.

A detailed breakdown of the program budget was included in the 2020 Operating Budget and endorsed by Regional Council on December 12, 2019.

See Appendix 4 for the program budget breakdown for the Vision Zero Program (including both the RLC and ASE initiatives) as presented and approved in the 2020 Operating Budget.

It is important to note that the Vision Zero Program will not proceed and no costs will be incurred under this program unless an agreement can be reached with the LAMs and the Inter-Municipal Agreement is successfully amended with respect to the share of revenues and operational costs, and therefore, no net revenue from this program has been included in the 2020 operating budget. The business case was prepared on the assumptions the RLC program would be operational for six months in 2020 and the ASE program would be operational for nine months in 2020. Timing of actual operation

of both the RLC and ASE initiatives is dependent on the timing of the successful negotiation of the Intermunicipal Agreement with the LAMs.

Fines Breakdown

The in court fines for speeding in Ontario are prescribed in Section 128(14) of the Highway Traffic Act are as follows:

Every person who contravenes this section or any by-law or regulation made under this section is guilty of an offence and on conviction is liable, where the rate of speed at which the motor vehicle was driven,

- a) is less than 20 kilometres per hour over the speed limit, to a fine of \$3 for each kilometre per hour that the motor vehicle was driven over the speed limit;
- b) is 20 kilometres per hour or more but less than 30 kilometres per hour over the speed limit, to a fine of \$4.50 for each kilometre per hour that the motor vehicle was driven over the speed limit;
- c) is 30 kilometres per hour or more but less than 50 kilometres per hour over the speed limit, to a fine of \$7 for each kilometre per hour that the motor vehicle was driven over the speed limit; and,

Please note that fines in Community Safety Zones and Construction Zones are doubled.

Analysis

The City of Toronto, on behalf of participating municipalities, awarded Redflex Traffic Systems to provide the service of automated speed enforcement to the province of Ontario

In May 2019, the City of Toronto issued a Request for Proposal No. 9148-19-0048 on behalf of all municipalities for the provision of ASE services. The vendor is required to supply, install, operate, maintain and test new ASE systems at various sites identified by the municipalities.

The City of Toronto awarded the contract to Redflex Traffic Systems (Canada) Limited, the highest scoring proponent identified in the evaluation process that met the requirements as set out in the Request for Proposal. Redflex Traffic Systems will be responsible for the supply, installation, operation, maintenance and decommissioning of

an automated speed enforcement system and maintenance of ASE image processing services.

This process ensures the same equipment is used throughout the Province and provides cost savings associated with group purchasing. Award of this Request for Proposal is a crucial step as the specific model of ASE equipment selected is prescribed in the Highway Traffic Act regulation. Niagara Region's participation aligns with co-operative purchasing provisions set out in Niagara Region's Purchasing Bylaw.

To promote safety in high-risk areas along Regional roads and assess impacts on Court system, Regional Staff propose to operate a combination of mobile and semi-fixed units with specified hours of operations to adhere to Niagara Regional Court capacity

Regional staff propose to operate a combination of mobile and semi-fixed units (quantity of four (4)) on Regional roads, during the second quarter of 2020. This will allow staff to quantify the number of charges and rate at which these charges are disputed. This opportunity will also allow Staff to evaluate the technology and service provided by the Vendor. Staff will report preliminary findings to Council late 2020.

Regional staff will rotate the units among school and community safety zones throughout proposed locations during 2020 with additional locations to be identified for 2021. This scenario allows for maximizing coverage across Niagara region and will help create broader awareness of ASE to familiarize motorists with the technology and the system.

Agreements with Ministry of Transportation Ontario, Redflex Traffic Systems and City of Toronto are required to operate an automated speed enforcement program

To operate an ASE program, Niagara Region is required to enter into necessary agreements with the following:

- Ministry of Transportation Ontario - an operational agreement for the use of automated speed enforcement on Regional roads and access to license plate registry information.
- Redflex Traffic Systems (Canada) Limited - for the supply, installation, operation and maintenance of the ASE units within Niagara Region.

- City of Toronto - for the operation and cost-sharing of the joint processing centre, which issues the Certificate of Offence. The City of Toronto will operate an ASE joint processing centre on behalf of partnering municipalities. The ASE joint processing centre will employ Provincial Offences Officers, designated by the province, to issue charges captured by the cameras, as well as additional support staff for site selection, investigation, contract management and record management. Operating costs for the ASE joint processing centre will be cost-shared by partnering municipalities.

As authorized by Regional Council pursuant to PW 64-2019, and the subsequent budget approval for the Vision Zero Road Safety Initiatives (including ASE), staff are in the process of initiating discussions with the LAMs to pursue an amendment to the Niagara Region Courts Inter-Municipal Agreement, which is a necessary first step in order for the program to be financially sustainable. The implementation of the ASE program, as indicated in the recommendations of this report and PW 64-2019, is subject to the successful completion of negotiations with the LAMs with respect to Niagara Region Courts Inter-Municipal Agreement (which will be the subject of a future report to Council to advise as to the outcome of the discussions and seek approval to execute an amendment to the Inter-Municipal Agreement as necessary).

Site Selection Process

The selection of the specific sites is determined using a data-driven approach which involves a thorough analysis of different components including speed, school type, daily volume, percent of sidewalk, boulevard, playground, parks and recreational centres, the number of students walking or crossing Regional roads, and collision data. The criteria for prioritizing and selecting sites was developed through the ASE Municipal Working Group and incorporated best practices as outlined by the National Highway Traffic Safety Administration's (NHTSA) operational guidelines for Speed Enforcement Camera Systems, and lessons learned from other jurisdictions in North America.

Niagara Region site selection methodology was developed using the above criteria in conjunction with Niagara Region's geographic information system (GIS) data, traffic data, and on-site visits by Regional Staff members. Traffic data such as annual average daily traffic (AADT) counts and proposed infractions of speeding violations were provided by a consultant, Pyramid Traffic Incorporation. The Niagara Student Transportation Services provided an approximate number of students travelling to schools from neighbouring area walking or crossing Regional roads.

Appendix 3 includes site locations for the launch and implementation of Automated Speed Enforcement during 2020 based on the criteria outlined above.

An education campaign will be launched to create safety awareness of automated speed enforcement throughout Niagara Region on Regional roads

Regional staff will create a communication plan utilizing different methods to advertise the use of ASE in school and community safety zones on Regional roads. The communication plan will include the following tactics to effectively reach residents and motorists:

- Ontario Traffic Council- Automated Speed Enforcement communications campaign: that includes a site that will act as a “hub” for individuals looking for more information on ASE in Ontario.
- A 90-day warning period in advance of ASE system activation and each new municipal ASE camera deployment that includes advance warning sign as per below detail.
- Social media posts (Facebook, Twitter, Instagram).
- Website content about the program (niagararegion.ca) supported by Local Area Municipalities websites.
- On-Street Regulatory Signage as per below detail.
- Other tactics to be determined as the plan is developed.

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Local Impact

Regional staff have been in dialogue with a number of the LAMs to understand how they can participate in road safety initiatives including ASE and RLC in their jurisdictions. Niagara Region will launch and lead different road safety regimes as part of Vision Zero Road Safety initiatives and consult with the LAMs on possible future implementation of ASE equipments once the program has been operational and evaluated for performance.

Staff report PW 46-2019 recommended that Staff initiate discussions with the LAMs to pursue an amendment to the Intermunicipal Agreement to ensure financial sustainability for the successful operation and durability of the overall Vision Zero Road Safety Program. This operational model will benefit Niagara Region and Local Area Municipalities by ensuring a holistic approach, minimizing cost and allowing for the collection of revenue to offset operating costs.

More recently, the Province has issued guidelines that provide that Municipal revenue, collected under any Municipal ASE program, that exceeds the cost of delivering ASE program is to be used to support local public safety and educational initiatives. Accordingly, Parliamentary Assistant to the Minister of Transportation will be conducting a 180-day review to ensure the ASE program is operating as intended by meeting the objective of transparently improving road safety while maintaining public trust.

The review will be conducted by a specialized consultant on behalf of participating municipalities. The Hospital for Sick Children has been selected jointly to provide:

1. Feedback on the ASE site selection process across the province;
2. Short and long term ASE effectiveness in reducing vehicle speed and improving road safety; and
3. Feedback throughout two years post implementation and program evaluation as requested by the province.

Relevant Consultation

This report has been written in consultation with staff from Legal and Court Services, and Finance.

In addition, Public Health, School Board and Niagara Regional Police Services all are supportive of moving forward with this initiative and all share the same concerns around road safety as presented in this report.

Alternatives Reviewed

In addition, Regional staff have implemented a number of other supporting safety initiatives throughout Niagara Region:

- Installation of flashing beacons and decreasing speed limits in school zones.
- Enhanced pavement markings and signage.
- "Speed Display Trailer" mobile unit that is prioritized among Regional roads to educate motorist on their speed.
- Implementation of PXOs at different Regional road locations.
- In-service road safety reviews to reduce collision frequency and severity.

Relationship to Council Strategic Priorities

Implementing automated speed enforcement supports the 2019 to 2022 Strategic Plan and aligns with Transportation Master Plan TMP Vision 2041

Regional Council adopted Niagara Region Strategic Plan 2019-2022 with the vision statement of striving to achieve a prosperous, safe and inclusive community that embraces our natural spaces and promotes holistic wellbeing and quality of life. This project will address Niagara Region's commitment to the safe system approach, by recommending extensive, proactive and targeted initiatives, informed by data and aimed at eliminating serious injury and fatalities on Niagara Regional roads.

Alignment to Niagara Region Transportation Master Plan

Niagara Region is undergoing significant change and by 2041 will have grown and evolved on economic, demographic, social and technological fronts. This recommendation will support growth and enhance Niagara globally by promoting an integrated network of roads and highways for the safe movement of people and goods.

This recommendation is part of Transportation's Vision Zero Road Safety Program that is critical in building a safe and inclusive community. It is a philosophy of significant

departure from the traditional approach of road safety by providing a transportation network with safer walking, cycling, and motor vehicle routes.

Automated Speed Enforcement (ASE) is a modern system designed to work in tandem with other road safety measures, like engineering and education initiatives, to help improve safety for people of all ages by increasing speed compliance, altering driver behaviour and increasing public awareness about the critical need to slow down. The system is applied evenly and consistently to all motorists and is not biased towards or against any sector of the population to ensure equity and prioritizing vulnerable road users.

Other Pertinent Reports

PW 64-2019, Vision Zero Road Safety Program, November 5, 2019

PW 35-2019, Automated Speed Enforcement – Safer School Zones, July 9, 2019

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Appendices

Appendix 1 Provincial Guidelines provided by Ministry of Transportation

Appendix 2	Ontario Regulation 398/19 under Highway Traffic Act Automated Speed Enforcement
Appendix 3	Site locations for the launch and implementation of Automated Speed Enforcement during 2020
Appendix 4	Vision Zero Road Safety Program Costing



Guidelines for the use of Automated Speed Enforcement in Ontario

Prepared by the Ontario Traffic Council
in conjunction with the
ASE Steering Committee
October, 2019

Background

Since the enactment of the Safer School Zones Act, 2017, the Ontario Traffic Council has been working with interested municipalities on the implementation of automated speed enforcement in Ontario. The legislation authorizes the use of automated speed enforcement in school zones and community safety zones. Automated speed enforcement, commonly referred to as ASE, is the use of a prescribed device that consists of a camera, a speed measurement device and technology that operate in combination to result in images of motor vehicles being taken, and data recorded, when a motor vehicle travels on a road way past the device at a rate of speed greater than the posted speed limit. The operation of the device does not require that a human be present or on site.

For over two years, the Ontario Traffic Council and participating municipalities have worked to ensure the effective use of automated speed enforcement as a road safety tool throughout Ontario. Considerable research was undertaken to determine how automated speed enforcement was introduced in other jurisdictions both within Canada and across North America. It is expected that the provisions related to automated speed enforcement will be proclaimed in effect in late 2019. In anticipation of the proclamation, various communication platforms have been developed to inform the public with regard to the automated speed enforcement program in Ontario. One example is the microsite: aseontario.com. The public has the right to expect a fair and transparent automated speed enforcement program that is consistent across Ontario and that generates charges based on the proper use of a prescribed device and the application of other, clear guidelines. Open and transparent communication with the public is viewed as essential to the success of the program.

Given that only sixteen municipalities are expected to use automated speed enforcement in the first year, these guidelines have been prepared to ensure that lessons from and decisions made during the initial implementation phase are documented not only to provide guidance for those municipalities that follow but to provide the public with transparency regarding the operation of automated speed enforcement in their communities. In preparing these guidelines, the implementation group had the benefit, for example, of the National Highway Traffic Safety Administration's Speed Enforcement Program Guidelines and Speed Enforcement Camera Systems Operational Guidelines; Winnipeg's Photo Enforcement Final Report; the Saskatchewan Evaluation of the Photo Speed Enforcement Pilot Program and the Alberta Automated Traffic Enforcement Technology Guidelines. As with the Alberta and other guidelines, these guidelines are intended to promote consistent, fair, effective and transparent use of automated speed enforcement as a road safety tool throughout Ontario.

Guidelines

Objective: To ensure that automated speed enforcement is used as a road safety tool to promote compliance with posted speed limits in school and community safety zones with a resulting improvement in collision and other outcomes. ASE must only be operated as part of a road safety plan to improve speed compliance and reduce collisions.

With this objective in mind, the following are guidelines for or features of a road safety based automated speed enforcement program:

1. **Evaluation:** The operation of automated speed enforcement should be subject to evaluation to ensure that the objective of improved speed compliance is being met in specific sites as well as generally within communities and across municipalities. Evaluation results should be made available to the public.
2. **Site Selection:** To support the objective, automated speed enforcement should only be utilized in school and community safety zones that meet or exceed the criteria for site selection as set out in Appendix A. Individual municipalities may score site selection in a manner that best reflects issues specific to that municipality; however site selection assessments should be reflective of risk; low or poor speed compliance; frequency of collisions and volume of vulnerable road users in or around that site.
3. **Signage:** Automated speed enforcement should only be operated in school and community safety zones that are designated by by-law and signed as required. All sites must have signage indicating the posted speed limit for that site. Neighbourhood or area signage is not sufficient. Advisory signage indicating that drivers are approaching an ASE site should be posted.
4. **Speed Limit:** The speed limit for the site must be posted. Default speed limits cannot be used. Time of day or variable speed limits also cannot be used unless MTO approves signage that permits clear communication of the applicable speed limit.
5. **Devices:** Automated speed enforcement must only be operated in accordance with the applicable regulation made under the *Highway Traffic Act*. This means, for example, that only prescribed automated speed enforcement devices can be used to detect and charge motor vehicles travelling above the posted speed limit. Any use of a device that is not prescribed will result in images not being processed and no charges laid, or if charges are laid the charges will be withdrawn.
6. **Transition Zones:** Automated speed enforcement must not be used to detect motor vehicles travelling above the posted speed limit in so-called transition zones. The definition of transition zone as developed in Alberta applies to the use of ASE in Ontario. A transition zone is the area immediately adjacent to a maximum speed limit sign, when the sign indicates a speed change from a higher speed to a lower speed; or vice versa, in accordance with the Table in Appendix B.
7. **School Zones:** ASE cannot be used in school zones where the lower speed limit is signaled or communicated through the use of flashing beacons as there is no ability to prove whether the flashing lights or beacons were in operation at the time of the

offence. Signage communicating the lower speed limit must be posted through the use of tabs or otherwise.

8. Threshold speeds: Municipalities will operate automated speed enforcement using the threshold speeds as established by the ASE Steering Committee. These thresholds speeds reflect information gained through an extensive literature review of experiences in other jurisdictions; guidelines or recommendations in use in other jurisdictions or from agencies involved in speed or traffic safety enforcement; traditional or police speed enforcement practices in Ontario municipalities and considerations of long term program sustainability. The use of automated speed enforcement should not result in all motor vehicles travelling above the posted speed limit being charged. Such an approach is not sustainable due to overall volume as well as severely diminished acceptance of ASE by the public. As any operation of a motor vehicle above the posted speed limit is speeding, and therefore an offence under section 128 of the *Highway Traffic Act*, threshold speeds are not to be publicized or communicated in any way by participating municipalities or individuals involved in implementing or delivering the program, in order to avoid the appearance or creation of higher speed limits than those posted.
9. Charging Process: All motor vehicles captured by the automated speed enforcement device travelling above the posted speed limit, and for which the alpha numeric characters are clearly ascertainable, shall be charged with speeding. No motor vehicles are exempt from being charged with speeding; however some vehicles, such as emergency vehicles, may claim a statutory exemption, as set out in the *Highway Traffic Act*, and those charges, provided that the incident falls within a listed exemption, may be withdrawn by the prosecutor. Only provincial offences officers, employed by municipalities and designated as such to enforce the *Highway Traffic Act* by the Minister of Transportation, may review images, obtain vehicle plate registration information and complete and sign charging documents. All images or incidents captured by the ASE device must be processed.
10. Required information: Irrespective of whether images are processed by and charges laid by a joint processing centre or a processing centre run by an individual municipality, or group of municipalities, no charges shall be laid unless there is plate registration information for the date of the offence; there is information that the offence took place in a school or community safety zone; that the evidence was obtained using a prescribed device; that the motor vehicle plate alpha numeric characters are clearly identifiable; that the motor vehicle is somehow marked in the image to identify that motor vehicle as the one travelling in excess of the posted speed limit; that the provincial offences officer has viewed the certificate of accuracy for the device issued within 12 months of the offence date and that all guidelines herein have been complied with.

A municipality wanting to use automated speed enforcement must comply with these guidelines and also obtain the approval of their Municipal Council to do so; speak with staff at the Ministry of Transportation; enter into the various required agreements; have a plan to process charges and actively engage in public communication regarding the use of ASE in that municipality. As a local decision, municipalities may, for example, determine their own hours of operation of the ASE devices as well as the duration of

use of ASE; however such decisions must be made in conjunction with the processing centre to best allow for the orderly processing of images within the statutory framework. ASE must not be used as a revenue generating tool. Site selection and other related decisions must be driven by the over-arching objective of road safety.

Appendix A

Recommended Site Selection Criteria and Ranking Process

Much of the following is based upon IBI's prior work and discussions at various committee meetings. The format of the ranking process is based on the City of Sudbury Sidewalk Priority Index Warrant since the rating and weighting scoring is fairly easy to explain whereas other rankings tend to have more complicated calculations and are therefore difficult to explain to those outside of the ASE committees.

- A) Exposure: Municipality's candidate ASE locations reflect roadways with low speed limit compliance. In order for ASE to affect the largest population of drivers and benefit the largest number of pedestrians, an exposure index component has been included in the site selection ranking. Exposure includes: vehicle volume, 85th percentile vehicle speed, length of Community Safety Zone / School Zone, School Population and after school hour outdoor use data elements. While ASE may only be used during school hours, the after hour use of the candidate zone is an important exposure factor and is therefore included. Applying the following ratings and weights, candidate zones with the highest exposure will have the highest rankings.

Component	Range	Rating	Weight
Traffic Volume (AADT)	< 1,000 v.p.d	1	3.0
"	1,001 to 3,000 v.p.d	2	
"	3001 to 5,000 v.p.d	3	
"	> 5,000 v.p.d	4	
Travel Speed	85 th percent - posted < 10 km/h	1	4.0
"	85 th percent - posted = 11 to 20 km/h	2	
"	85 th percent - posted = 21 to 30 km/h	3	
"	85 th percent - posted > 31 km/h	4	
Length of Zone	< 100 m	1	1.0
"	101 - 200 m	2	
"	201 - 300 m	3	
"	> 301 m	4	
School Population	<400 students	1	2.0
"	401 - 900 students	2	
"	901 - 1200 students	3	
"	> 1201 students	4	

Component	Range	Rating	Weight
After Hour Use	no	0	1.0
	yes	1	

- B) Prior Collisions: It is recommended that the collision history of candidate ASE locations should be considered. However, not all collisions are considered to have been speed related. In order to include collision history without undertaking a significant collision data verification exercise, it is recommended that pedestrian - motor vehicle collisions only are included in the ranking process. Some collision data verification may be required to determine which historical collisions occurred within the candidate zone and which occurred beyond the candidate zone. Rating only pedestrian - motorist only collisions will equalize local, collector and arterial roadways to some degree as arterial roadways tend to have higher numbers of collisions and more collision types than the lower roadway classifications.

Component	Range	Rating	Weight
Prior 3 years Pedestrian Collisions Only	0	0	4
"	1	2	
"	2	3	
"	3	4	
"	> 3	5	

- C) Zone Environment: The absence of sidewalks, the presence of on-street parking (whether permitted or prohibited), the curvature of the roadway within and immediately adjacent to the candidate zone and the presence of a speed limit transition within one kilometer of the candidate zone are all factors which may impact a pedestrian's comfort and safety when travelling along or crossing each candidate zone. The applied ratings and weights will ensure that the environment of the zone is reflected in the site selection process.

Component	Range	Rating	Weight
Sidewalks	Both Sides	0	2.0
"	One Side Only	1	
"	None	2	
On Street Parking	None	1	1.0
	Present Although Prohibited	2	

Component	Range	Rating	Weight
	Present and Permitted	3	
Roadway Curvature	None	0	2.0
	Present	1	
Speed Transition	None	0	2.0
	Present	1	

D) Traditional Enforcement: Municipalities will likely experience public requests for ASE beyond their available ASE resources. Consequently site selection process should consider if there is an available alternative available, even if only temporarily. While traditional police enforcement may be easiest ASE alternative to deploy, traditional enforcement may have been used previously with no long term impact on travel speeds.

Component	Range	Rating	Weight
Site Conditions Support Traditional Enforcement	Feasible	0	4.0
"	Not Feasible	1	
Prior Police Enforcement	Measurable Impact on Travel Speed	0	3.0
"	No Long Term Impact on Travel Speed	1	

Additional considerations may include other vulnerable road users, the type of school, whether children or other vulnerable road users cross the road, percentage of students being driven to school versus walking, police and public input and whether schools have programs to actively encourage walking.

Prior to finalizing the locations, a site audit should be conducted to ensure there are no physical impediments that may prevent or restrict the full functionality of the ASE equipment, including power supply.

The following criteria should be reviewed at all proposed sites:

- All necessary regulatory signs are in place
- There are no obstructions to the ASE equipment including on-street parking
- There is no road work planned. ASE should not be used if there is road work or construction in the school or community safety zone.
- If the location involves a change in the posted speed limit, the ability to accommodate a sufficient buffer

- There is adequate boulevard space to accommodate the ASE equipment
- There are no sharp curves in the road or extreme grading that may affect the operation of the ASE system
- No speed limit reductions are planned or recently implemented

Appendix B

Speed Change In Kilometres per Hour	Area Adjacent to Speed Change Sign
10 km/hr speed change e.g. from 40 km/hr to 30 km/hr	10m on either side of sign, 20m total
20 km/hr speed change e.g. from 80 km/hr to 60 km/hr	25m on either side of sign, 50m total
30 km/hr or greater speed change e.g. from 80 km/hr to 50 km/hr	100m on either side of sign, 200m total

ONTARIO REGULATION 398/19

made under the

HIGHWAY TRAFFIC ACT

Made: November 28, 2019

Filed: November 29, 2019

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AUTOMATED SPEED ENFORCEMENT

Definitions

1. (1) For the purposes of Part XIV.1 of the Act,

“photograph” includes any form of image that is recorded and stored electronically and that can be displayed as an image, and includes a copy, reproduction or enlargement of all or part of the image or photograph.

(2) In this Regulation,

“posted speed limit” means the maximum rate of speed prescribed under section 128 of the Act for a highway or portion of a highway.

Automated speed enforcement system

2. (1) For the purposes of Part XIV.1 of the Act, a system is an automated speed enforcement system if it consists of a combination of a camera and speed-measuring equipment that can be used to take a photograph of a motor vehicle and determine and record the rate of speed at which the motor vehicle is travelling at the time the photograph is taken.

(2) An automated speed enforcement system may be permanently or temporarily located on or adjacent to any highway.

Information or data on photograph

3. (1) A photograph taken by an automated speed enforcement system may show or have superimposed upon it any information or data, including:

1. The time and date when the photograph was taken.
2. A description of the location where the photograph was taken, including the names of streets and the direction of travel.
3. The rate of speed at which a motor vehicle shown in the photograph was travelling when the photograph was taken.
4. A mark, line or other indicator to identify the motor vehicle shown in the photograph that was determined to have been speeding.
5. Subject to subsection (2), an indication of the lane in which the motor vehicle was travelling.
6. The posted speed limit on the highway at the time when and the place where the photograph was taken.

(2) For the purposes of paragraph 5 of subsection (1), the lane furthest to the right side of a highway may be identified as lane 1, and each lane to the left of lane 1 may be identified as lane 2, lane 3 and so on.

Photographs as evidence

4. (1) Subject to subsection (2), a photograph obtained through the use of an automated speed enforcement system shall be received in evidence in a proceeding under the *Provincial Offences Act* in respect of an alleged offence under section 128 of the Act.

(2) The photograph must comply with the requirements of this Regulation.

(3) A photograph that purports to be certified by a provincial offences officer as having been obtained through the use of an automated speed enforcement system shall be received in evidence as proof, in the absence of evidence to the contrary, that the photograph was obtained through the use of an automated speed enforcement system.

(4) A provincial offences officer shall not certify a photograph as having been obtained through the use of an automated speed enforcement system unless the automated speed enforcement system was tested and established to be accurate within the 12 months immediately preceding the date of offence.

(5) A photograph of a motor vehicle obtained through the use of an automated speed enforcement system is proof, in the absence of evidence to the contrary, that,

- (a) the automated speed enforcement system was located on or adjacent to a highway and was working properly at the time that the photograph was taken;
- (b) the information or data that is shown or superimposed on the front or the back of the photograph, including any information or data authorized under section 3, is true; and
- (c) the motor vehicle was being operated at a rate of speed in excess of the posted speed limit contrary to section 128 of the Act.

(6) In order to be received in evidence, an enlargement of a photograph must clearly show the number plate of the vehicle that is the subject of the photograph and as much of the rest of the photograph as is necessary to show that the enlargement is of part of that photograph.

(7) An enlargement or reproduction of a photograph or part of a photograph taken by an automated speed enforcement system is not required to show or have superimposed on it any information, if the enlargement or reproduction is tendered in evidence together with the photograph of which it is an enlargement or reproduction.

(8) No person who has entered a plea of not guilty at trial shall be convicted of an offence on the basis of a photograph obtained through the use of an automated speed enforcement system unless the photograph is tendered in evidence at trial.

Statements of officer

5. (1) The certified statements of a provincial offences officer in a certificate of offence are admissible in evidence as proof, in the absence of evidence to the contrary, of the facts stated in the certificate.

(2) A provincial offences officer who prepares a certificate of offence shall, in the certificate,

- (a) state that the system used to take the photograph was an automated speed enforcement system under subsection 2 (1) when the photograph was taken; and
- (b) set out the manufacturer's name and the model number of the automated speed enforcement system used to take the photograph.

(3) The provincial offences officer who used the evidence obtained through the use of an automated speed enforcement system to identify the owner of the motor vehicle involved in the alleged offence, and who issued the certificate of offence and offence notice, shall not be required to give oral evidence at trial unless a summons requiring the officer to attend is issued at trial under section 39 of the *Provincial Offences Act*.

(4) A provincial offences officer who certifies that a photograph was obtained through the use of an automated speed enforcement system shall not be required to give oral evidence at trial unless a summons requiring the officer to attend is issued at trial under section 39 of the *Provincial Offences Act*.

(5) No summons shall be issued to a provincial offences officer referred to in subsection (3) or (4) unless a justice is satisfied that the defendant will not be able to have a fair trial if the officer is not required to give oral evidence.

Evidence of ownership

6. Evidence of ownership of the motor vehicle involved in the alleged offence may be contained in the certificate of offence or it may be set out in a separate document.

Offence notice

7. (1) An offence notice issued in a proceeding based on evidence obtained through the use of an automated speed enforcement system may be served by sending the offence notice by regular prepaid mail or by courier to the person charged at the address that appears on the Ministry's records on the date of the alleged offence within 23 days after the occurrence of the alleged offence.

(2) If the person is charged as the owner of the motor vehicle, the offence notice shall be sent to the address of the holder of the plate portion of the permit for the motor vehicle.

(3) If the provincial offences officer who issued the certificate of offence also mails or couriers the offence notice or causes it to be mailed or couriered, that officer shall certify, on the certificate of offence, the fact that the offence notice was mailed or couriered and the date it was mailed or couriered, and that certified statement shall be received in evidence and is proof of service in the absence of evidence to the contrary.

(4) Where the provincial offences officer who issued the certificate of offence believes that the person charged resides or, in the case of a corporation, has its principal place of business outside Ontario, the address outside Ontario at which the officer believes the person resides or has its principal place of business shall be used, and proof of ownership of the motor vehicle and of the owner's address shall be provided in accordance with section 210.1 of the Act.

(5) Service of an offence notice mailed or couriered in accordance with this Regulation shall be deemed to be effected on the seventh day following the day on which it was mailed or couriered.

Municipal speed camera signs

8. (1) Where an automated speed enforcement system is in use on a part of a highway designated as a school zone under clause 128 (5) (a) of the Act, or designated as a community safety zone under subsection 214.1 (1) of the Act, a sign and, if applicable, an additional sign shall be displayed in accordance with this section.

(2) A sign that meets the following requirements shall be displayed at or immediately before the location at which the automated speed enforcement system is in use:

1. The sign faces approaching traffic and is displayed on the right side of the highway.
2. The sign is not less than 60 centimetres in width and 75 centimetres in height.
3. The sign bears the markings and has the dimensions as illustrated in the following Figure:



(3) In an area designated in the Schedule to the *French Language Services Act*, an additional sign that meets the following requirements shall be displayed at or immediately before the location at which the automated speed enforcement system is in use:

1. The sign faces approaching traffic and is displayed on the right of the sign prescribed in subsection (2).
2. The sign is not less than 60 centimetres in width and 75 centimetres in height.
3. The sign bears the markings and has the dimensions as illustrated in the following Figure:



(4) The sign prescribed in subsection (2) and the additional sign prescribed in subsection (3) shall not be displayed when an automated speed enforcement system is not in use.

(5) Sections 44, 46, 47 and 52 of Regulation 615 of the Revised Regulations of Ontario, 1990 (Signs), made under the Act, apply, with necessary modifications, with respect to the sign prescribed in subsection (2) and the additional sign prescribed in subsection (3).

Commencement

9. This Regulation comes into force on the latest of,

- (a) December 1, 2019;**
- (b) the day that section 5 of the *Safer School Zones Act, 2017* comes into force; and**
- (c) the day this Regulation is filed.**

Français

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ASE Site Locations

Legend



- Owner
- Provincial
 - Municipal
 - Regional
 - Major Waterbodies
 - Urban Area Boundaries

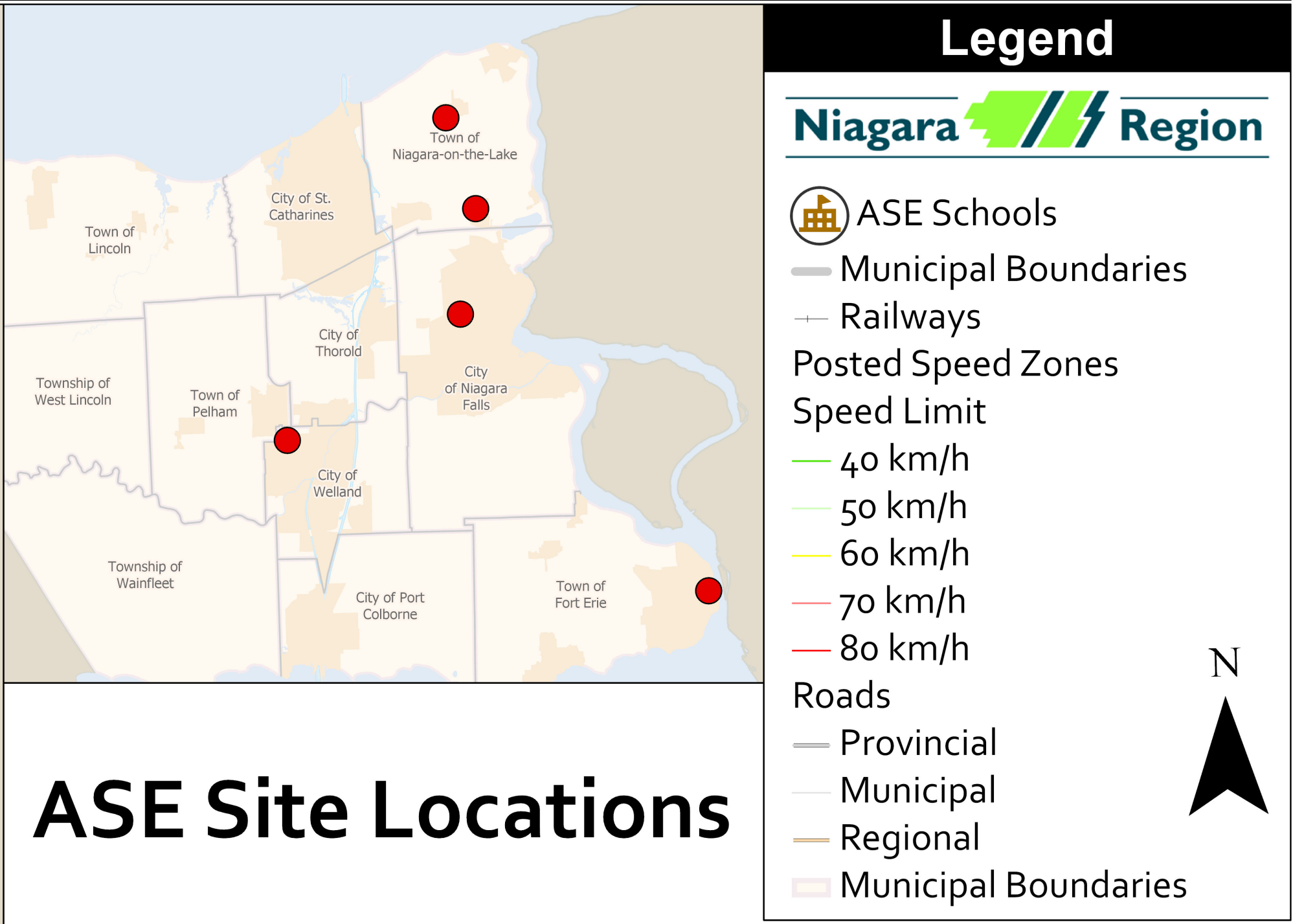
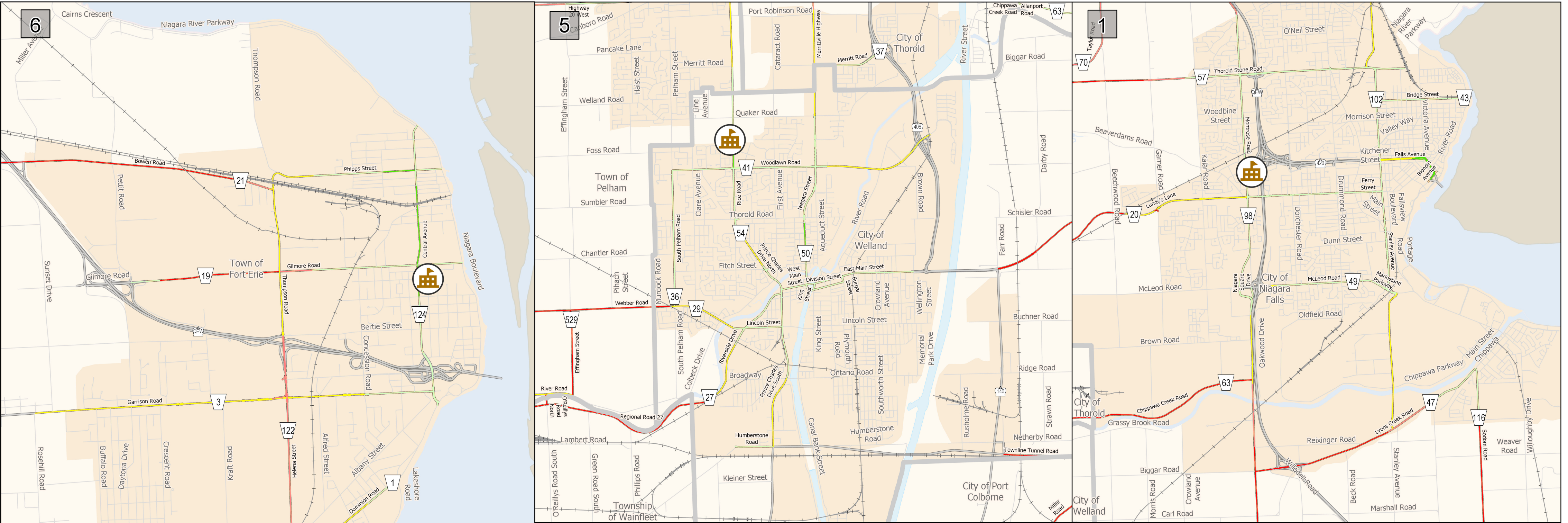
- Speed Limit
- 40 km/h
 - 50 km/h
 - 60 km/h
 - 70 km/h
 - 80 km/h

- Municipal Boundaries
- ASE School Location

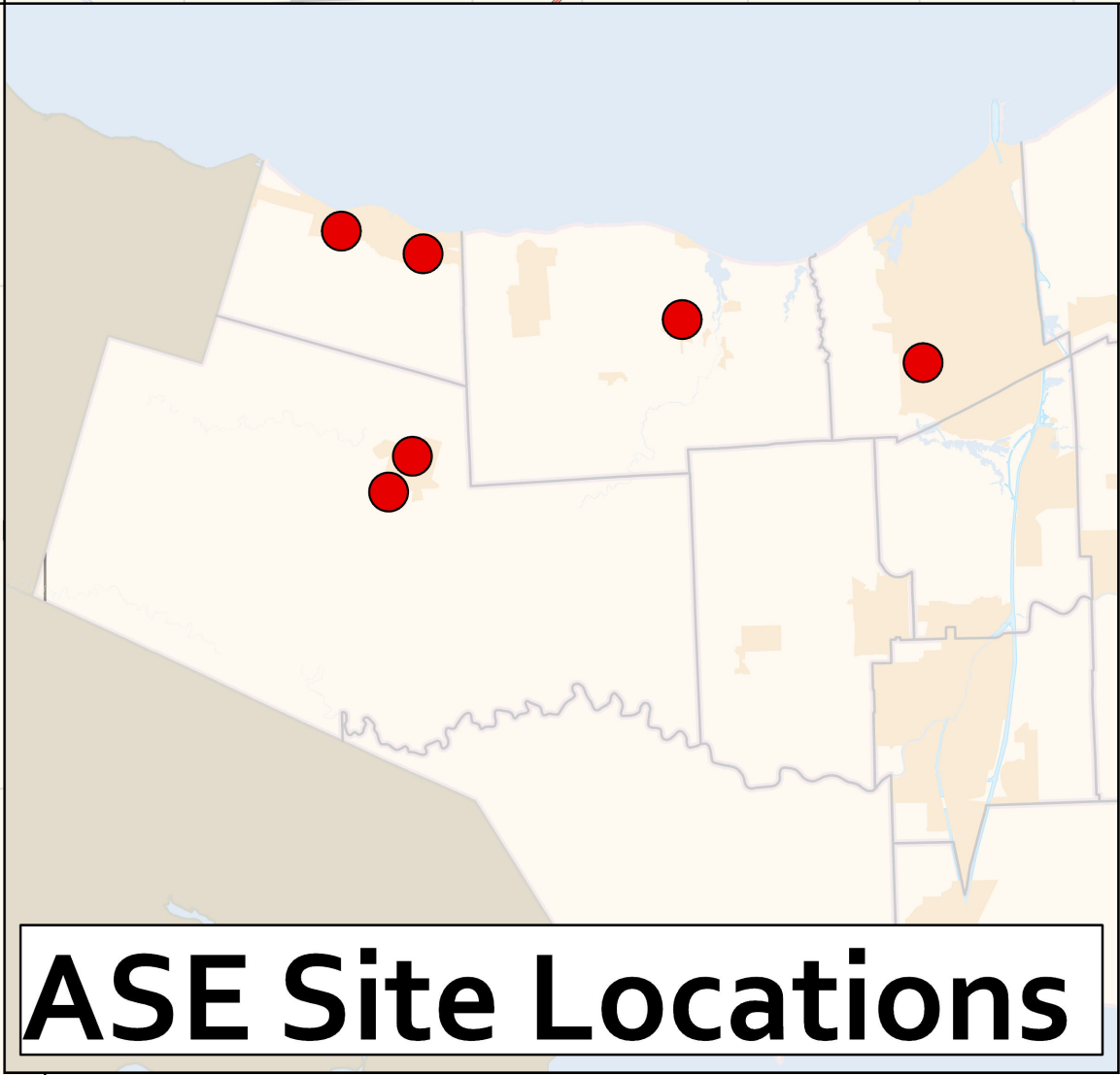
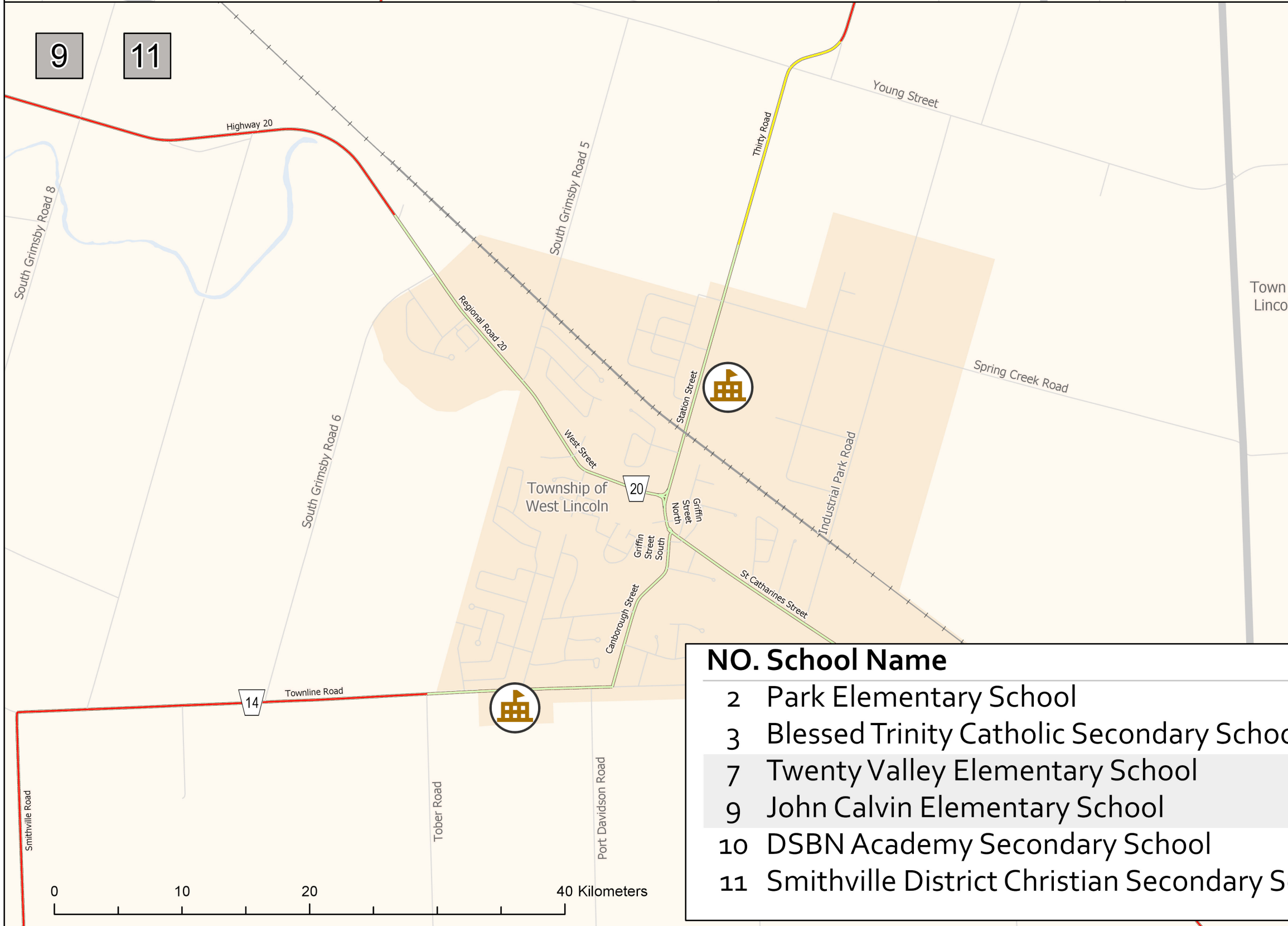
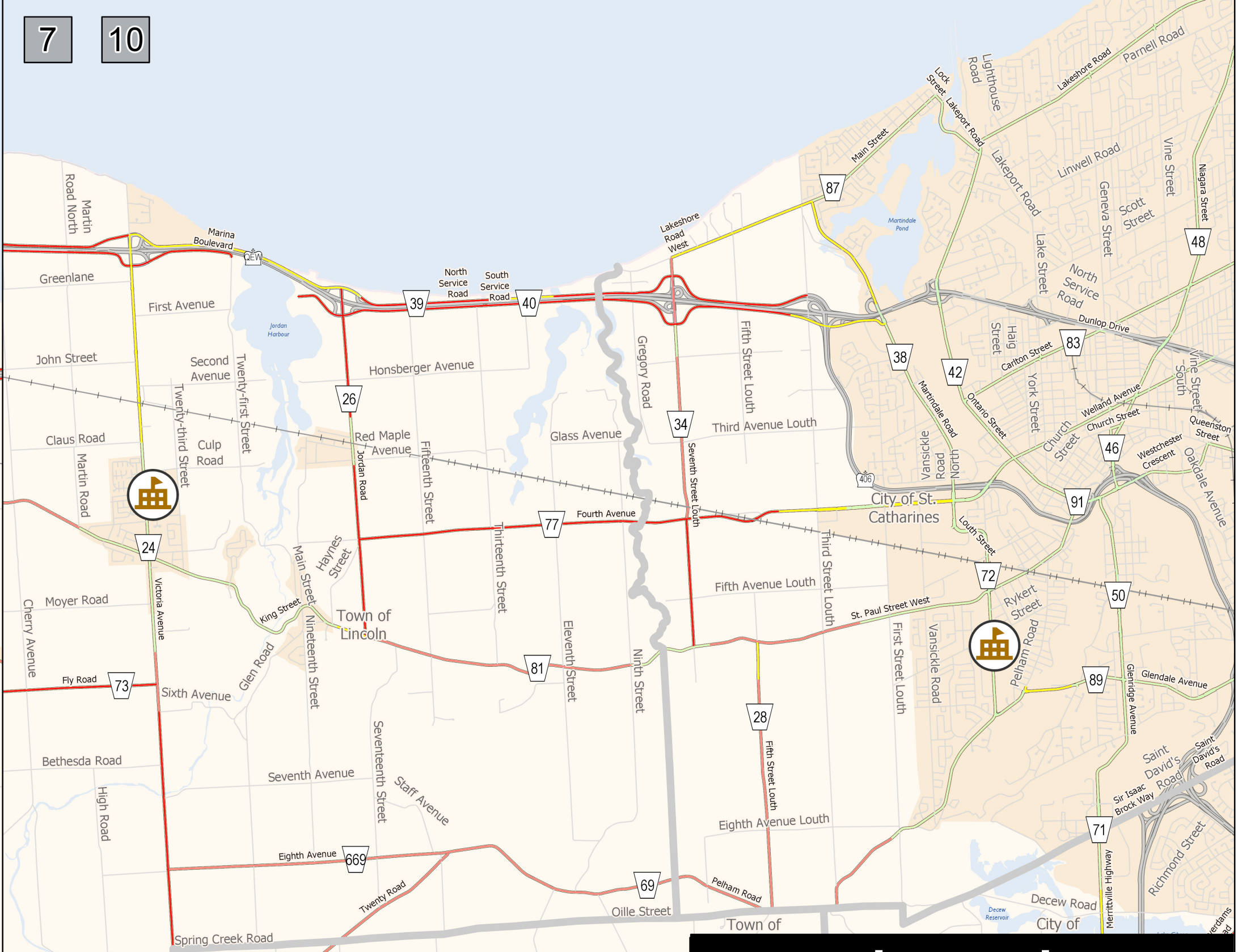
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Map projection NAD83, UTM Zone 17N CSRS. Data accurate as of November 2019.



NO.	School Name	Full Address	Regional Road	Municipality
1	Greendale Elementary School	5504 Montrose Rd	98	Niagara Falls
2	Park Elementary School	217 Main Street East	81	Grimsby
3	Blessed Trinity Catholic Secondary School	145 Livingston Avenue	512	Grimsby
4	Crossroads Public Elementary School	1350 Niagara Stone Road	55	Niagara-on-the-Lake
5	Alexander Kuska KSG Catholic Elementary School	333 Rice Road	54	Welland
6	Our Lady of Victory Catholic Elementary School	300 Central Avenue	124	Fort Erie
7	Twenty Valley Elementary School	4057 Victoria Avenue	24	Lincoln
8	St. David's Public Elementary School	1344 York Road	81	Niagara-on-the-Lake
9	John Calvin Elementary School	320 Station Street	14	West Lincoln
10	DSBN Academy Secondary School	130 Louth Street	71	St. Catharines
11	Smithville District Christian Secondary School	6488 Towline Road	14	West Lincoln



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Legend

Niagara Region

- ASE Schools
- Municipal Boundaries
- Railways
- Posted Speed Zones**
- Speed Limit**
 - 40 km/h
 - 50 km/h
 - 60 km/h
 - 70 km/h
 - 80 km/h
- Roads**
 - Provincial
 - Municipal
 - Regional
 - Municipal Boundaries

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Appendix 4 - Vision Zero Road Safety Program Costing

		Total Vision Zero			Red Light Camera (RLC)			Automated Speed Enforcement (ASE)		
		2020	2021	2022	2020	2021	2022	2020	2021	2022
Revenue:										
	Gross Ticket Revenue	\$ 3,546,591	\$ 5,058,960	\$ 5,759,125	\$ 878,977	\$ 1,444,309	\$ 1,052,475	\$ 2,667,615	\$ 3,614,651	\$ 4,706,650
	less: Victim Fine Surcharge expense	(723,710)	(1,057,160)	(1,447,420)	(138,320)	(276,640)	(276,640)	(585,390)	(780,520)	(1,170,780)
	Net Ticket Revenue	\$ 2,822,881	\$ 4,001,800	\$ 4,311,705	\$ 740,657	\$ 1,167,669	\$ 775,835	\$ 2,082,225	\$ 2,834,131	\$ 3,535,870
Expenses:										
Transportation Services	Equipment Costs	\$ 388,292	\$ 714,356	\$ 319,390	\$ 290,978	\$ 581,956	\$ 186,990	\$ 97,314	\$ 132,400	\$ 132,400
	Ticket Processing Costs	601,625	804,250	1,143,250	93,125	126,250	126,250	508,500	678,000	1,017,000
	Staffing	282,899	288,557	294,328	115,098	117,400	119,748	167,801	171,157	174,580
	Other	452,500	475,000	475,000	72,500	95,000	95,000	380,000	380,000	380,000
		1,725,316	2,282,163	2,231,968	571,701	920,606	527,988	1,153,615	1,361,557	1,703,980
Business Licensing	Processing and Delivery Costs	\$ 26,528	\$ 34,089	\$ 34,092	\$ 3,626	\$ 6,193	\$ 6,197	\$ 22,902	\$ 27,896	\$ 27,896
Court Services	Staffing	\$ 650,404	\$ 889,282	\$ 1,178,678	\$ 124,213	\$ 168,637	\$ 169,161	\$ 526,191	\$ 720,645	\$ 1,009,517
	Courtroom Costs	240,300	529,600	532,800	19,700	39,400	39,656	220,600	490,200	493,144
	Ticket Processing Costs	108,000	148,500	216,000	6,750	13,500	13,500	101,250	135,000	202,500
	Other	72,333	118,167	118,167	14,667	19,333	19,333	57,667	98,833	98,833
		1,071,037	1,685,548	2,045,645	165,330	240,870	241,650	905,708	1,444,678	1,803,994
	Total Expenses (excluding Victim Fine Surcharge)	\$ 2,822,881	\$ 4,001,800	\$ 4,311,705	\$ 740,657	\$ 1,167,669	\$ 775,835	\$ 2,082,225	\$ 2,834,131	\$ 3,535,870
Net Revenue (Cost)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total Expenses per above (excluding Victim Fine Surcharge)	\$ 2,822,881	\$ 4,001,800	\$ 4,311,705	\$ 740,657	\$ 1,167,669	\$ 775,835	\$ 2,082,225	\$ 2,834,131	\$ 3,535,870
add: Victim Fine Surcharge Costs	723,710	1,057,160	1,447,420	138,320	276,640	276,640	585,390	780,520	1,170,780
Total Expenses including Victim Fine Surcharge	\$ 3,546,591	\$ 5,058,960	\$ 5,759,125	\$ 878,977	\$ 1,444,309	\$ 1,052,475	\$ 2,667,615	\$ 3,614,651	\$ 4,706,650