

Automated Enforcement Programs Update 2024

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| Presented To: | Operations Committee |
| Meeting Date: | November 18, 2024 |
| Type: | Managers' Reports |
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| Recommended by: | General Manager of Growth and Infrastructure |

Report Summary

This report provides a recommendation regarding an update on the Red Light Camera Program as well as the Automated Speed Enforcement Program. It will also seek approval for an updated Automated Speed Enforcement site selection list.

Resolution

THAT the City of Greater Sudbury approves the 2024 prioritized ranking for the Automated Speed Enforcement program;

AND THAT the City of Greater Sudbury establishes Community Safety Zones for all locations where Automated Speed Enforcement units are deployed as outlined in the report entitled “Automated Enforcement Programs Update 2024”, from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on November 18, 2024;

AND THAT the City of Greater Sudbury directs staff to prepare a by-law to amend Traffic and Parking By-law 2010-1 in the City of Greater Sudbury to implement the recommended changes.

Relationship to the Strategic Plan, Health Impact Assessment and Climate Action Plans

This report supports the “achieve 35% active mobility transportation mode share by 2050” as identified in the City of Greater Sudbury Community Energy and Emissions Plan (CEEP) by reducing vehicle speeds which creates a safer and more inclusive road network for pedestrians and cyclists.

Financial Implications

There are no financial implications associated with this report.

Background

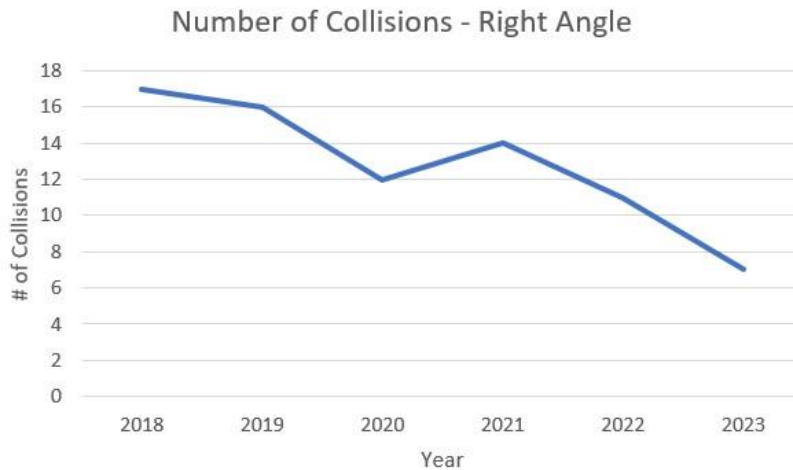
The City of Greater Sudbury currently deploys two types of automated enforcement programs throughout the City. First, red light cameras were deployed at six key intersections in September 2022 as a collision mitigation measure. Secondly, six mobile automated speed enforcement (ASE) cameras were first deployed in March 2024 as a speed reduction measure.

Red Light Cameras

The City worked with a consultant to help identify the intersections which had a higher than expected instance of right angle collisions (often referred to as 'T-bone' collisions). Right angle collisions are of the most severe collision types. They typically involve the vehicles travelling at a higher rate of speed and combined with the side impact location, are more likely to lead to more severe injury for the involved motorists. As a result, six intersections were identified and selected for red light camera deployments. These six intersections are:

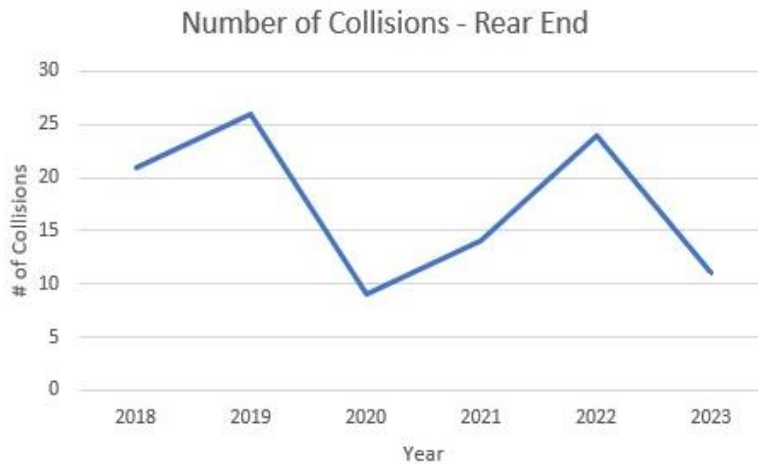
- Paris Street at Cedar Street
- Regent Street at Loach's Road/Algonquin Road
- Municipal Road 80 at Dominion Drive
- Lasalle Boulevard at Montrose Avenue
- Paris Street at Centennial Drive
- Lasalle Boulevard at Roy Avenue

Staff have been monitoring both the number of collisions and number of tickets issued for red light offences at these intersections. The number of collisions involving right angle collisions are summarized by year for all six intersections and shown in the below graph.



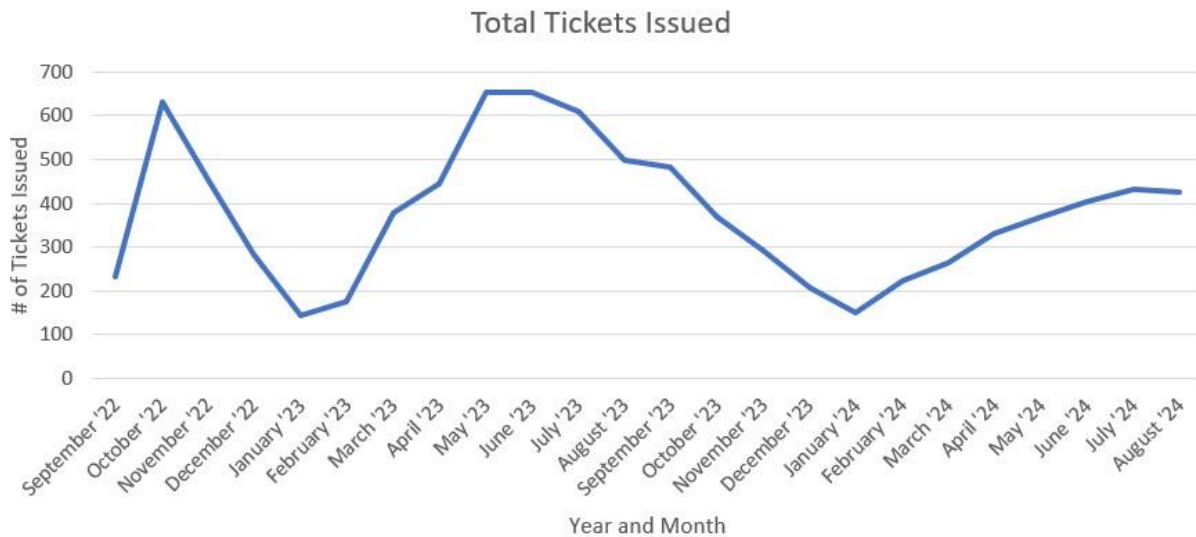
It should be noted that during the pandemic traffic volumes were considerably less than normal and as a result the collision rate dropped accordingly, starting in 2020.

As it is often linked with red light camera systems, rear end collisions at the six intersections are shown in the below graph. Notwithstanding the dip in collision rates due to the pandemic as mentioned previously, no correlation has been found to date between adding the red light cameras and an increase in rear end collisions.



The most up to date collision data that staff has is up to the beginning of September 2023 and there is likely additional collisions which occurred in 2023 which are not captured in this data. Continued monitoring of these intersections will be required in order to get a fulsome representation of the impact the red light cameras have had on the rate of collisions. Collision rates can vary year over year, so looking at collision trends over multiple years, during normal traffic patterns and volumes, is required.

Since the start of the red light camera program in September 2022, a total of 9,105 charges have been issued up until the end of August 2024. A breakdown by year and month of those charges can be seen in the below graph.



The noticeable decrease in tickets issued during winter months can be attributed to a combination of motorists driving more cautiously during snowy conditions and the impact winter conditions have on pavement marking visibility and the requirement to have a visible stop bar to be able to issue a red light camera ticket. Overall however, a significant reduction in tickets being issued in 2024 versus 2023 can be seen in the graph. A lower instance of tickets being issued directly results from less motorists running the red light and therefore eliminating the potential for a collision to occur when doing so.

Automated Speed Enforcement Cameras

City staff developed a warrant tool which determined which roadways had the highest need of speed reduction based on multiple factors contained within the warrant. The warrant identified and ranked 45 road segments. Staff started to deploy the six ASE cameras to the highest ranked locations for a period of four months at each location. The six ASE cameras were then rotated to the next six highest ranked locations and the cameras are still currently deployed at these second round locations.

The first round locations had the ASE cameras installed in March 2024 and saw a significant decrease in operating speeds while the units were operational. Staff has conducted before, during and after speed studies at all of the first six locations. The after speed studies were conducted in the fall of 2024, approximately 3 months after the ASE cameras were moved. The after studies show that the ASE cameras do have a lasting effect on the operating speed at the majority of locations, despite being higher than the during deployment operating speeds.

The results of these studies are shown in the table below.

| Street Name | Posted Speed Limit | 85th Percentile Speed (Before) | 85th Percentile Speed (During) | 85th Percentile Speed (After) |
|--|---------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| Bellevue Avenue (from Picard Street to Ralph Street) | 50 | 59 | 48 | 54 |
| Algonquin Road (from Maurice Street to Field Street) | 30 | 62 | 38 | 56 |
| Falconbridge Road (from Donnelly Drive to Church Street) | 60 | 79 | 63 | 79 |
| Main Street (from Justin Street to Municipal Road 80) | 60 | 80 | 62 | 77 |
| Hillcrest Drive (from Brian Street to Mikkola Road) | 40 | 56 | 39 | 50 |
| Gary Avenue (from Lasalle Boulevard to Madison Avenue) | 40 | 55 | 41 | 55 |

During the first round of deployment a total of 2,295 tickets were issued for speeding offences. The second round of locations had ASE cameras installed in August 2024 and have also seen a significant decrease in operation speeds while the units are currently deployed. The results of the before and during speed studies can be seen the table below.

| Street Name | Posted Speed Limit | 85th Percentile Speed (Before) | 85th Percentile Speed (During) |
|--|---------------------------|---------------------------------------|---------------------------------------|
| Garson Coniston Road (from Maki Street to Falconbridge Road) | 50 | 75 | 55 |
| Howey Drive (from Somerset Street to Downing Street) | 50 | 58 | 52 |
| Bancroft Drive (from Bellevue Avenue to Kingsway) | 50 | 59 | 49 |
| Moonlight Avenue (from Claude Street to Gagne Street) | 50 | 65 | 54 |
| Bancroft Drive (from Hazelton Drive to Estelle Street) | 50 | 65 | 52 |
| Municipal Road 80 (from Robin Avenue to Hubert Street) | 60 | 84 | 63 |

As of the end of August a total of 3,036 tickets have been issued during the second round of the ASE deployment.

Collision statistics for the ASE camera locations are challenging to analyze. Collision rates are often looked at year over year to identify trends in collision patterns as previously mentioned in this report. Collision rates can naturally fluctuate and the sample size of just a few months during deployment is too small of a sample size to make any reasonable conclusions. However, it is known that lower operating speeds increase the perception and reaction times motorists have to respond to hazards in the road, vastly increase the

survivability of pedestrians who are struck by motor vehicles and decrease vehicle stopping distances.

The third round of ASE cameras is currently scheduled to begin in January 2025 and the required 'coming soon' signs have been installed at the six locations. These locations are shown in the below table.

| Street Name |
|---|
| Second Avenue (from Scarlett Road to Bancroft Drive) |
| Hawthorne Drive (from Barry Downe Road to Auger Avenue) |
| Countryside Drive (from Countryside Drive to Algonquin Road) |
| Loach's Road (from Regent Street to Oriole Drive) |
| Notre Dame Street West (from Rayside Avenue to Marier Street) |
| Valleyview Road (from Municipal Road 80 to Fournier Drive) |

Since the beginning of the ASE camera program, staff have received numerous requests of local residents to have roads evaluated for ASE cameras. To process these requests, staff have collected the required data and have conducted a warrant review to rank these additional roadways. As well, staff have used the after speed study results from the first round locations to update the warrant for those roadways. The 2024 prioritized ranking with the new locations added, as well as the updated scoring for the first round locations can be found in Appendix A. In addition, the original prioritized ranking and corresponding warrants were done prior to the implementation of the Gateway Speed Limit Pilot Project. The 2024 prioritized ranking reflects the change in scores and rankings due to the Gateway Speed Limits.

Next Steps

Staff will continue to move the six ASE cameras approximately every four months and will utilize the prioritized ranking list for the site selections. Locations will be reviewed with the ASE vendor to confirm the ability to deploy ASE units.

If a location is not suitable for ASE deployment, the next highest priority location will be considered. In addition, while the highest 18 ranked locations will have ASE units deployed to them between May 2025 and May 2026, staff may deploy ASE units to lower ranking locations before higher ranked locations based on how the roadway is utilized during different seasons. For example, ASE may be deployed to a lower ranked road with a school zone during the fall months when there is a higher probability of children walking and cycling to school as opposed to the summer months when schools are closed. Further, in order to implement ASE, Community Safety Zones need to be established at each location where ASE units will be deployed. It is required that the Traffic and Parking By-Law 2010-1 be updated to include the locations where ASE will be deployed.

Further, staff will continue to monitor the impact the red light cameras and ASE cameras have on key road safety measures as well as the trends in the number of tickets issued. These statistics will be presented annually to the Operations Committee.

Finally, staff will continue to apply the ASE warrant to requested locations and regularly bring forward an updated prioritized ranking list. It is anticipated the next updated prioritized ranking list will be brought forward by Q1 of 2026

Resources Cited

City of Greater Sudbury, Automated Speed Enforcement Program Update, Accessed Online:

<https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=49824>

City of Greater Sudbury, 2024 Gateway Speed Limit Pilot Project Update, Accessed Online:

<https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=54921>

City of Greater Sudbury, Red Light Camera Program Update, Accessed Online:

<https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=40623>