



Report to Council

Department: Infrastructure Services

Division: Capital Works and Asset Management

Date: December 2, 2024

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Report Number: Capital Works and Asset Management-2024-22

Subject: 2024 Annual Speed Monitoring Program

Number of Pages: 10

Recommendation(s)

That Capital Works and Asset Management 2024-22 entitled, “2024 Annual Speed Monitoring Program” prepared by Erica Tilley, Assistant Manager, Capital Works and Asset Management dated December 2, 2024 be received.

Purpose

This report has been prepared to share with Council the findings from the 2024 Annual Speed Monitoring Program.

Background and Discussion

The Town of Essex own’s three different types of devices to monitor traffic speed. These devices are:

- **Black CAT:** discrete radar data collection device.



- **Digital Radar Sign:** visually displays the traveling speed of the vehicle passing by and can be programmed to display messages such as “slow down”.



- **Speed Trailer:** similar to the digital radar sign but mounted onto a moveable trailer, the speed trailer is operated by the Ontario Provincial Police (OPP).

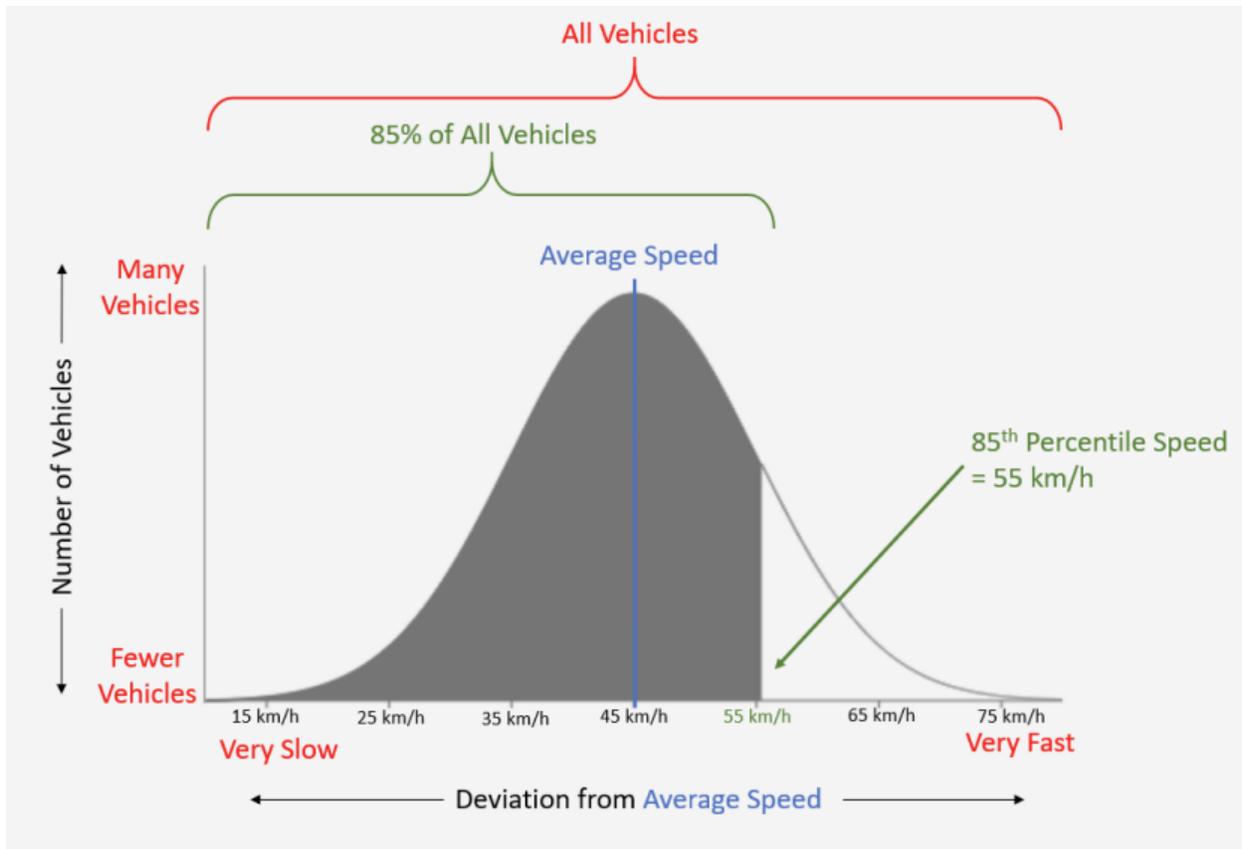


The devices are programmed to capture and collect speed information of each vehicle that passes the device. The data collected is used to create a speed data analysis report that summarizes the information collected. Data can then be compared to the posted speed limit.

The information collected is shared with the OPP and can be used as a source for the OPP to implement enforcement in a certain location based on the results. The information is also analyzed internally and can be used a tool to determine if the posted speed limit on a roadway is appropriate. The digital radar signs are used as a traffic calming measure and enforcement tool to help educate the public on speeding by displaying a real time message that reflects current driving behaviour.

From May 1st to October 31st the devices are utilized to continuously collect data by rotating the devices after a data collection period of at least seven (7) days. The attached table and corresponding maps show a summary of the data collected throughout the reporting period and displays to Council the volume of vehicles collected, the average speed observed, and the 85th percentile speed.

The most useful data for Administration and Council from the table is the 85th percentile speed. As displayed below, the 85th percentile speed is the speed at which 85 percent of drivers are observed to travel at under free flowing conditions past a monitored point. It is typically the speed that most drivers feel comfortable driving at and can be the indicator of if the posted speed limit is an appropriate limit for that section of roadway.



In accordance with the Transportation Association of Canada, setting a speed limit in accordance with the 85th percentile speed is premised on safety research that concluded travelling at or around the 85th percentile yields the lowest crash risk for drivers. Therefore, a speed limit coincident with the 85th percentile speed encourages motorists to travel at the safest speed. This method is also attractive because it reflects the collective judgement of motorists as to a reasonable speed limit for a roadway. Assuming that the majority of motorists are acting reasonably, this also aligns with the legislative objective that laws (i.e. Speed limits) should not make people acting reasonably into lawbreakers. Furthermore, the use of 85th percentile as the primary criterion for selecting a suitable speed limit also satisfies the legal concept that a law cannot be effectively enforced without the consent and voluntary compliance of the public majority. The OPP also utilizes the speed trailer on County roads, those results are shared with the County but not included in the summary as they are not Town roads.

Enforcement ratings are determined by comparing the travelled speed to the tolerable speed (enforcement tolerance). Enforcement tolerance is set based on the current posted speed limit. For the purposes of this monitoring program, roads that have a posted speed limit **of 60km/h or lower** have an enforcement tolerance of 10km/h over the posted speed limit. Similarly, roads that have a posted speed limit of **over 60km/h** have an enforcement tolerance of 15km/h over the posted speed limit. Any speed above the enforcement tolerance is considered an enforceable violation. The enforcement rating is subjective and not part of the Ontario Traffic Manual, therefore, the values have been set by Administration using the following scale:

- **Low** is less than or equal to 10% ($\leq 10\%$)
- **Medium** is above 10% and less than or equal to 20% ($10\% < \text{tolerance} \leq 20\%$)
- **High** is greater than 20% ($> 20\%$)

The following locations were flagged by Administration to have a high enforcement rating:

- South Talbot Road North, north of Victoria Ave (between Maidstone Ave and Victoria Ave)
- Dunn Road
- Concession Road 4

When South Talbot Road North was designed by the Ministry of Transportation (MTO) as part of the Highway 3 widening project, the geometric design of the road incorporated features that were for a 50km/h design speed. However, it is likely that the speeding on the road is due to the environmental conditions of the road. For instance, there is a feeling of openness on the road from buildings being set back, lack of roadside obstructions, and having Highway 3 set far back from South Talbot that will influence driver behaviour. In 2024, the OPP conducted traffic enforcement on this stretch. In addition, Administration will install the digital radar signs in 2025 for traffic calming and to educate the public. Further, Administration will encourage the OPP to continue enforcement efforts on this road. It is important to note that the observed 85th percentile speed in this stretch is 65km/h which would indicate that motorists observe the safe speed limit for this stretch of road to be 60km/h.

Similar to the above, the environmental conditions of Dunn Road are having an impact on speed. This mainly due to the residential development on the east side of the road and agricultural property on the west creating a feeling of openness. In addition, the bike lanes may also be creating the effect that the travelled portion of the road is wider than it really is, therefore, Administration will review in 2025 the paint lines along this stretch of Dunn Road to improve driver perception and adjust the travelled portion of the road to be more in line with the current posted speed limit.

Concession Road 4 previously had a posted speed limit of 80km/h, however, in October of 2015 through notice of motion and the passing of By-Law 1454, Council reduced the speed limit to 60km/h to address concerns with wildlife crossings and sightings without any traffic study or opinion from Administration of the time. However, through the 2024 Speed Monitoring Program, Administration has obtained objective data that would indicate that motorists observe a safe driving speed of 80km/h based on the conditions of the road. Therefore, it can be concluded that the reduction from 80km/h to 60km/h has caused vehicles travelling at the observed safe driving speed to be in violation of the posted speed limit. Further, if the Town conducted a review today of Concession Road 4, utilizing the Town's policy for Establishing Speed Limits on Town of Essex Roads, there would be no warrant for the reduction of the speed limit from 80km/h to 60km/h.

Financial Impact

There is no financial impact as a result of this report.

Consultations

There were no consultations for this report.

Link to Strategic Priorities

- Embrace asset management best practices to build, maintain, and continuously improve our municipally owned infrastructure.
- Leverage our Town's competitive advantages to promote jobs and economic investment.
- Take care of our natural environment and strengthen the sense of belonging to everyone who makes Essex "home".
- Deliver friendly customer service in an efficient, effective, and transparent manner while providing an exceptional working environment for our employees.
- Build corporate-level and community-level climate resilience through community engagement and partnership and corporate objectives.

Report Approval Details

Document Title:	2024 Annual Speed Monitoring Program - Capital Works and Asset Mgmt-2024-22.docx
Attachments:	- 2024 Annual Speed Monitoring Program Report Capital Works and Asset Management 2024-22 attachment.pdf
Final Approval Date:	Nov 26, 2024

This report and all of its attachments were approved and signed as outlined below:

David McBeth, Manager, Capital Works & Asset Management - Nov 26, 2024 - 2:10 PM



Kevin Girard, Director, Infrastructure Services - Nov 26, 2024 - 3:44 PM



Doug Sweet, Chief Administrative Officer - Nov 26, 2024 - 3:45 PM