

At the March 28, 2017 Council meeting Councillor Paul Smith put forward the following request:

Traffic Statistics:

Consider a group of vehicles travelling through an intersection at the same relative speed: if the middle vehicle gets a ticket for 70km in a 60km zone, would all of the vehicles in that group receive tickets? How discerning is the radar? What is the allowable variance in accuracy for radar? If all the vehicles are travelling 70km/hr. in a 60km/hr. zone, is this an indication that the posted speed limit should be modified? What budget do the funds from intersection radar fines go towards? What are the dollar amounts for the last four years? Is there a policy or other document that guides the use of these funds?

Intersection Safety Device and Automated Traffic Enforcement

In September of 2014, the Strathcona County Enforcement Services entered in a five year contract with Global Traffic Solution to look after our intersection safety devices. Global was using a new technology to capture speed and intersection related offence. The system, Knowledge Research in Imaging Applications (KRIA), had been designed in Italy and was already in wide spread use throughout Europe. The KRIA system was designed toward integrated vehicle detection systems based on advanced digital sensors and image recognition software.

The key success factors of all KRIA systems are minimal environmental impact, no need for civil works to adapt the site and - above all - the reliability and efficacy of traffic violation detection and the corresponding incontrovertible documentation.

The following is our response to Councillor Smith questions;

1. Consider a group of vehicles travelling through an intersection at the same relative speed; if the middle vehicle gets a ticket for 70 km/h in a 60 km/h zone; would all the vehicles in that groups receive tickets?

No. Only vehicles exceeding the posted speed limit would receive a ticket within the group of vehicles traveling through the intersection. The tickets issued would be for the speed of the actual vehicle, not a pack or average speed. As noted in the literature, the

KRIA T-EXSPEED is target specific, capable of measuring a vehicles speed when travelling in parallel direction with multiple vehicles, on multi-lane roadways.

2. How discernable is the radar?

The system as explained does not use a radar. KRIA is neither radar nor laser. KRIA can identify and calculate the vehicle speed in Nano-seconds, for all vehicles travelling in the same direction that fit through an intersection at the same time. As a result, the system is extremely accurate.

3. What is the allowable variance in accuracy for the radar?

As KRIA uses the {Speed= d/t formula}, it is capable of calculating the exact speed of a vehicle. So vehicles speed is calculated by two measurements taken of the vehicle receding from the ISD, the distance travelled divided by the time it took to cover the distance equals the speed. There is no variance provided by the manufacturer. The speed recorded is perfect to the meter per hour if necessary but only provided up to the hectometer per hour.

4. If all the vehicles are traveling 70 km/h in a 60 km/h zone, is this an indication that the posted speed limit should be modified?

Operating speeds on roads fluctuate with the time of day and the volume of vehicles travelling along it. Posted speed limits are established using standard and accepted best practices in transportation engineering to provide a safe and efficient transportation system based upon average operating conditions. As such, the posted speed limit is often aligned with the 85th percentile of operating speed along a corridor, fluctuations up and down are expected with lower and higher traffic volumes respectively, however speed limits represent the upper, maximum speed to maintain safety while providing operating efficiency. In abnormal conditions such as adverse weather or traffic congestion, drivers must reduce their speed and drive according to road conditions, while in an open, uncongested road, drivers must obey the maximum speed limit to ensure their ability to respond to any unforeseen situation and operate their vehicles in a safe and controlled manner.

5. What budget do the funds from intersection radar fines go toward?

The revenue from intersection safety devices is part of the 3301 Cost Centre Strathcona County Enforcement Services operating budget.

6. What are the dollar amounts for the last four years?

<u>Year</u>	<u>Total ISD Revenue</u>
2013	\$511,866
2014	\$552,319
2015	\$772,365
2016	\$1,172,262

The digital technology of the KRIA ISD system is an accurate and efficient system in monitoring intersections for speed and red light violations for multiple vehicles in multiple lanes simultaneously. This advancement in technology has provided a significant impact to ISD revenue. Compound this with the significant population growth experienced in the past five years, increased traffic volumes as well as changes in traffic patterns, with completion of the Anthony Henday ring road, have also impacted the total ISD fine revenue.

7. Is there a policy or other document that guides the use of these funds?

There is no policy or other document that guides the use of these funds. It is deemed as revenue to support operations of Strathcona County Enforcement Services.

Should additional information be required, the following links may be helpful in providing information on how KRIA works.

<https://youtu.be/yGSjj7mblic>

<http://www.kria.biz/traffic/texspeed/>

<http://www.kria.biz/kria/wp-content/uploads/2015/02/T-EXSPEED-Brochure-v.-2.0-rev.-2.1-EN.pdf>