



**City of Kingston  
Report to Council  
Report Number 16-096**

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| <b>To:</b>              | <b>Mayor and Members of Council</b>                     |
| <b>From:</b>            | <b>Jim Keech, President and CEO, Utilities Kingston</b> |
| <b>Resource Staff:</b>  | <b>Mark Van Buren, Director of Engineering</b>          |
| <b>Date of Meeting:</b> | <b>April 5, 2016</b>                                    |
| <b>Subject:</b>         | <b>Agreements Required For Red Light Camera Program</b> |

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**Executive Summary:**

At the March 18<sup>th</sup>, 2014 meeting of Council, engineering staff were directed to initiate the process required to implement a red light camera program at a minimum of 10 intersections in the City that could be operational by early 2017.

Red light cameras have been operating in Ontario since 2000 and have been installed in the following 7 municipalities thus far: City of Toronto, City of Ottawa, City of Hamilton, Region of Waterloo, Region of Peel, Halton Region and York Region. The City of London has plans to join the program along with the City of Kingston in early 2017.

The red light camera program and processes are well established and respected for their consistency and quality. For legal and practical reasons, all components of the program, from the equipment used through to the processing of the violations, are identical for all participating municipalities within Ontario.

As part of the process to initiate a red light camera program, the City must sign agreements with the vendor "Traffipax", the City of Toronto and the Ministry of Transportation Ontario. Council is also required to approve the list of 10 locations proposed for the operation of red light cameras as well as approve the proposed financial structure for the program.

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**Recommendation:**

That Council direct the Mayor and Clerk to enter into agreements as follows to the satisfaction of Legal Services:

1. A joint procurement agreement with the vendor "Traffipax" for the installation, operation and maintenance of the red light cameras;
2. A contract with the City of Toronto for red light camera ticket processing services;
3. A contract with the Ministry of Transportation Ontario for the provision of registered vehicle owner information to the City of Toronto for violation processing; and
4. Any other related documents required to allow the City of Kingston to enter into and participate in the red light camera program.

And furthermore that Council provides final approval for the installation of red light cameras at the 10 locations listed in this report and approves the proposed financial structure for the operation of the red light camera program.

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**Authorizing Signatures:**

ORIGINAL SIGNED BY PRESIDENT & CEO, UTILITIES KINGSTON

**Jim Keech, President & CEO, Utilities Kingston**

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

**Gerard Hunt, Chief Administrative Officer**

**Consultation with the following Members of the Corporate Management Team:**

|  |              |
|--|--------------|
| Cynthia Beach, Corporate & Strategic Initiatives             | Not required |
| Lanie Hurdle, Community Services                             | Not required |
| Denis Leger, Transportation, Facilities & Emergency Services | Not required |
| Desiree Kennedy, Chief Financial Officer & City Treasurer    | Not required |

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**Options/Discussion:**

## Introduction and Background:

At the April 9th, 2013 Council meeting, staff were directed to develop a business case to study the feasibility of implementing a red light camera (RLC) program in the City.

In order to complete the research regarding the implementation and operation of an RLC system in Ontario as well as complete a business case, the Engineering Department hired the consultant CIMA+. The consultant's work entitled, "Red Light Camera Business Case Study" and the related staff report are attached as Exhibit A.

At the March 18th, 2014 meeting of Council, the following motion was passed:

"THAT Engineering staff will be directed to initiate the process required to implement a Red Light Camera Program at a minimum of 10 intersections in Kingston that could be operational by early 2017."

Red light cameras have been operating in the Province since November 2000 and have so far been installed in 7 Ontario municipalities. The RLC program and processes are well established and respected for their consistency and quality. For legal and practical reasons, all components of the program, from the equipment used through to the processing of the violations, are identical for all participating municipalities within Ontario.

Red light cameras are an effective safety tool since they reduce the incidence of motorists running red lights. Red light running is one of the causes of angle or "t-bone" collisions, the most severe type of collision that often results in serious injuries. A review of the City's collision database indicated that there are an average of 60 right-angle collisions at signalized intersections per year. The most reliable statistics currently available suggest that RLC's can reduce the frequency of right-angle collisions by 25%.

## Proposed Locations of Red Light Cameras in Kingston:

In order to determine where RLC's should be installed, the consultant's report included a tentative list of 10 intersections recommended for RLC installation. This list was developed by the consultant CIMA+, City Engineering staff and Kingston City Police and was based on factors such as safety performance and local knowledge of driver behaviour. The recommended RLC locations were dispersed throughout the City in order to have the greatest positive impact on motorist behaviour.

The original proposed 10 RLC locations listed in the March 18th, 2014 report to Council included the intersection of Division and Johnson Street. When the vendor "Traffipax" completed a field inspection at this location, it was revealed that a steel maintenance hole cover on the road would interfere with the RLC equipment. Staff therefore substituted this location with Sir John A. Macdonald Boulevard at John Counter Boulevard. The revised list of locations for RLC installation now includes the following:

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1. Queen Street & Montreal Street (westbound traffic)
2. Division Street & John Counter Boulevard (southbound traffic)
3. Perth Road & Unity Road (southbound traffic)
4. Taylor Kidd Boulevard & Bayridge Drive (eastbound traffic)
5. Bath Road & Portsmouth Avenue (eastbound traffic)
6. Gardiners Road & Princess Street (southbound traffic)
7. Princess Street & Sir John A Macdonald Boulevard (eastbound traffic)
8. Princess Street & Taylor Kidd/John Counter Boulevard (southbound traffic)
9. Gardiners Road & Taylor Kidd Boulevard (westbound)
10. John Counter Boulevard & Sir John A Macdonald Boulevard (southbound traffic)

**Agreements Required:**

As part of the process to initiate a red light camera program, the City must sign agreements with the vendor "Traffipax", the City of Toronto and the Ministry of Transportation Ontario.

- **Joint Procurement Agreement with Vendor "Traffipax":**

The 7 Ontario municipalities already in the RLC program have an existing joint contract with the vendor "Traffipax" for the installation, operation and maintenance of every RLC in the province. The existing contract expires at the end of 2016 but through a recent procurement process, Traffipax was again chosen as the successful vendor for the next contract that begins on January 1, 2017. This new contract is for a 5 year-period with an optional extension to 10 years.

The City of Kingston will need to sign the joint procurement agreement with the vendor "Traffipax" for the installation, operation and maintenance of the red light cameras prior to the cameras being installed. After the cameras have been installed at the initial 10 intersections, the cameras may be moved to other locations and additional cameras may be added at any time but at an increased operational cost. For this reason, it is recommended that the cameras remain at an intersection for a minimum of 5 to 10-years when possible.

- **Contract with the City of Toronto for Ticket Processing:**

All red light camera violations for the 7 Ontario municipalities already in the program are forwarded to a centralized processing centre operated by the City of Toronto. Trained Provincial Offences Officers carefully review every photograph to verify information and to ensure that the vehicle is in violation. The centralized ticket processing centre in Toronto works well since it is impractical to consider individual processing due to economies of scale and the complexity of the RLC equipment. The City of Toronto processes the tickets based on a cost recovery "not for profit" model.

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To commence the red light camera program, the City of Kingston will need to sign a contract with the City of Toronto to process RLC violation notices.

•Contract with the Ministry of Transportation Ontario:

In order to operate red light cameras in Kingston, the City will be required to sign a contractual agreement with the Ministry of Transportation Ontario (MTO). While the primary purpose of the agreement is to ensure that registered vehicle ownership information is supplied to the processing centre, MTO also requires compliance with a number of other conditions such as standard signage at red light camera intersections and annual reporting of collision information at the RLC sites.

Financial Structure:

Based on an RLC program with 10 cameras, the estimated total operating cost is \$52,000 per camera per year for a total of \$520,000 per year for all 10 cameras. This cost includes payments to the vendor "Traffipax" (monthly) for the installation, operation and maintenance of the cameras, the City of Toronto processing centre (once per year) and the Ministry of Transportation Ontario (4 times per year) for vehicle ownership information.

The set fine for running a red light is currently \$325. This charge includes \$260 returned to the municipality, a \$60 victim surcharge and a \$5 court cost. All operating costs for the program could be funded with an average of 0.5 violations per camera per day. Since the number of red light violations is difficult to predict, especially in the early years of operation, the program should be viewed as a safety initiative since excess revenues are not a certainty.

Within the Engineering Department's Operating Budget, a separate program for the red light cameras has been set up for the years 2017 to 2021 to track expenditures and revenues. An annual reconciliation will be completed to ensure that all ticket revenue received is accounted for within the current year.

In the early years of the program, excess revenues will be deferred to a reserve in order to cover any shortfalls in future years. Some of the revenues will fund a full-time traffic safety technologist position that would assist with the operation of the red light camera program and other safety-related initiatives.

When the program is financially stable and revenues become relatively predictable, any potential excess revenues are recommended to be utilized for the following safety-related initiatives:

- The continuation of road safety audits to identify high collision locations along with the evaluation of potential mitigative measures.
- The continuation of safety-related intersection or roadway improvements for pedestrians, cyclists and motorists.

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**Next Steps:**

After the City signs agreements with the vendor "Traffipax", the City of Toronto and the Ministry of Transportation Ontario, the vendor will begin installation of the RLC equipment. The operation of the RLC's is tentatively expected to begin on January 1, 2017.

Prior to this date, the Engineering Department has plans to work closely with City Communications and Kingston City Police such that the public receives comprehensive information about the RLC program. On-going public communication will continue as required throughout the course of the program.

In order to keep Council up-to-date on the operation of the red light camera program, status reports will be provided at key intervals throughout the program.

**Existing Policy/By Law:**

Not applicable.

**Notice Provisions:**

Not applicable.

**Accessibility Considerations:**

Not applicable.

**Financial Considerations:**

Based on an RLC program with 10 cameras, the estimated total operating cost is \$52,000 per camera per year for a total of \$520,000 per year for all 10 cameras. All operating costs for the program could be funded with an average of 0.5 violations per camera per day. Since the number of red light violations is difficult to predict, especially in the early years of operation, the program should be viewed as a safety initiative since excess revenues are not a certainty.

Within the Engineering Department's Operating Budget, a separate program for the red light cameras has been set up for the years 2017 to 2021 to track expenditures and revenues.

**Contacts:**

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Deanna Green, Manager Traffic Division, 613-546-4291, ext. 3170

**Other City Of Kingston Staff Consulted:**

Alan McLeod, Senior Legal Counsel

Lana Foulds, Manager, Financial Planning, Financial Services

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Wendy McCafferty, Court Administrator, Legal Services

**Exhibits Attached:**

Exhibit A: "Red Light Camera Business Case", EITP 14-005, March 5, 2014

Exhibit B: Red Light Cameras Q & A





**CITY OF KINGSTON**

**CONSIDERATION REPORT TO ENVIRONMENT,  
INFRASTRUCTURE & TRANSPORTATION  
POLICIES COMMITTEE**

**Report No.: EITP 14-005**

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**TO:** Chair and Members of the Environment, Infrastructure & Transportation Policies Committee

**FROM:** Jim Keech, President & C.E.O., Utilities Kingston

**RESOURCE STAFF:** Mark Van Buren, Director, Engineering Department

**DATE OF MEETING:** March 5, 2014

**SUBJECT:** Red Light Camera Business Case

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**EXECUTIVE SUMMARY:**

At the April 9<sup>th</sup>, 2013 meeting of Council, staff were directed to develop a business case to study the feasibility of implementing a red light camera (RLC) program in the City. Red light cameras have been operating in the Province since November 2000 and have so far been installed in 7 Ontario municipalities.

The RLC implementation process could take up to 2 years from the time Council approves the program to when the cameras are actually operating. Red light cameras are an effective safety tool since they reduce the incidence of motorists running red lights. Based on an RLC program with 10 cameras, the estimated total operating cost would be \$520,000 per year with estimated revenues of \$970,000 per year. This equates to potential annual excess revenues of \$450,000. Since the number of red light violations is however difficult to predict, excess revenues are not a certainty hence the program should be viewed as a safety initiative.

This report provides information about Red Light Camera Programs in Ontario and provides the Committee with two options:

- 1) Direct Engineering staff to initiate the process required to implement a Red Light Camera Program at a minimum of 10 intersections in Kingston that could be operational by early 2017.
- 2) Continue to enforce red light infractions in the City with police resources only and do not consider the implementation of a Red Light Camera Program at this time.

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**RECOMMENDATION:**

**THAT** the EITP Committee provides direction to staff with respect to how the City will enforce red light infractions with consideration for the following two options:

Option 1

**THAT** Engineering staff will be directed to initiate the process required to implement a Red Light Camera Program at a minimum of 10 intersections in Kingston that could be operational by early 2017, and all associated costs be included in the 2015 and 2016 operating budgets.

Option 2

**THAT** red light camera infractions in the City will continue to be enforced with police resources only and that the implementation of a Red Light Camera Program will not be considered at this time.

**AUTHORIZING SIGNATURES:**

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|--|
| _____<br>Jim Keech, President & CEO Utilities Kingston |
| _____<br>Gerard Hunt, Chief Administrative Officer     |

**CONSULTATION WITH THE FOLLOWING COMMISSIONERS:**

|   |     |
|---|-----|
| Cynthia Beach, <i>Corporate &amp; Strategic Initiatives</i>             | N/R |
| Lanie Hurdle, <i>Community Services</i>                                 | N/R |
| Denis Leger, <i>Transportation, Facilities &amp; Emergency Services</i> | N/R |

***(N/R indicates consultation not required)***

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## OPTIONS/DISCUSSION:

### BACKGROUND

At the April 9<sup>th</sup>, 2013 meeting of Council, the following motion was passed that directed staff to develop a business case to study the feasibility of implementing and operating a red light camera program in Kingston:

*Moved by Deputy Mayor Hector*

*Seconded by Councillor Scott*

**WHEREAS** *the City of Kingston is striving to increase Active Transportation; and*

**WHEREAS** *the City of Kingston works to maintain a safe transportation system for all users; and*

**WHEREAS** *most collisions involving pedestrians, cyclists or vehicles occur at signalized intersections; and*

**WHEREAS** *collisions resulting in serious injury or death can occur when motorists run red lights at signalized intersections; and*

**WHEREAS** *the Province of Ontario permits municipalities to operate "Red Light Camera" systems; and*

**WHEREAS** *there is increased concern with respect to motorists running red lights at intersections and higher instances of property damage with insurance cost implications in Kingston; and*

**WHEREAS** *this illegal driving behaviour is dangerous and increases the risk for pedestrians, cyclists and other motorists; and*

**WHEREAS** *it is a challenge, time-consuming and expensive for police to enforce red light infractions at intersections adding to the high operational cost of policing and the municipal tax burden on residents; and*

**WHEREAS** *red light cameras are proven to be an effective means to reduce the incidences of red light infractions making streets safer for all users;*

**THEREFORE BE IT RESOLVED THAT** *City staff be directed to develop a business case to study the feasibility of implementing and operating a red light camera program in Kingston and that the sum of \$50,000 be directed from the Working Fund Reserve to complete this work.*

In order to complete the research regarding the implementation and operation of a red light camera system in Ontario as well as complete a business case, the Engineering Department hired the consultant CIMA+. The consultant's work entitled, "Red Light Camera Business Case Study" is attached in Appendix A.

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Red light cameras have been operating in Ontario since November 2000. The RLC program and processes are well established and respected for their consistency and quality. The seven municipalities currently operating red light cameras in Ontario are:

1. City of Toronto
2. City of Ottawa
3. City of Hamilton
4. Region of Waterloo
5. Halton Region
6. Region of Peel
7. York Region

For legal and practical reasons, all components of the program, from the equipment used through to the processing of the violations, are identical for all participating municipalities.

#### SAFETY BENEFITS OF RED LIGHT CAMERAS

Red light cameras at signalized intersections are an effective safety tool since they reduce the incidence of motorists running red lights. Collisions due to red light running are typically severe as they usually result in right-angle (t-bone) type collisions.

The most reliable statistics currently available suggest that RLCs can reduce the frequency of right-angle collisions by 25%. This reduction would be higher except for the following reasons:

- The statistics quoted are for the entire intersection (all 4 approaches) while the RLC equipment is typically installed on only one approach.
- RLCs only influence drivers who deliberately violate the red light. Some red light running is caused by inattentiveness and is therefore not resolved through changes in driver behaviour.
- RLC convictions in the Province of Ontario do not result in a loss of demerit points so some drivers may not treat the violations seriously.

Despite the above-noted typical reduction in right-angle collisions, it should be noted that in the early stages of RLC operation, the frequency of rear-end collisions could increase by 15%.

#### PROCESS TO IMPLEMENT A RED LIGHT CAMERA (RLC) PROGRAM IN ONTARIO

The implementation and approvals process could take up to 2 years from the time Council approves the program and the time that the cameras are actually in operation. The information below defines the steps required in order to join an RLC program in Ontario.

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Final Site Selection

The attached consultant's report includes a tentative list of 10 intersections recommended for RLC installation. This list was developed by the consultant CIMA+, City Engineering staff and Kingston City Police and is based on factors such as safety performance, local knowledge of driver behaviour and revenue potential. The recommended RLC locations are dispersed throughout the City in order to have the greatest positive impact on motorist behaviour.

In order to satisfy the requirements of the current vendor Traffipax, RLC must be installed at a minimum of 10 intersections. If however, the City waits to implement the program in 2017 and signs on in accordance with the new terms of reference, the exact number of locations could be dictated by the City. It is important to note that 10 locations is considered to be a good starting point for the City and RLC could be installed at additional locations as the program evolves.

The following list of intersections for RLC installation would be subject to the approval of Council and confirmation from the vendor that the equipment can be installed at the chosen intersections, before the locations are finalized:

1. Division Street & Johnson Street
2. Queen Street & Montreal Street
3. Division Street & John Counter Boulevard
4. Perth Road & Unity Road
5. Taylor Kidd Boulevard & Bayridge Drive
6. Bath Road & Portsmouth Avenue
7. Gardiners Road & Princess Street
8. Princess Street & Sir John A Macdonald Boulevard
9. Princess Street & Taylor Kidd/John Counter Boulevard
10. Gardiners Road & Taylor Kidd Boulevard

Council Approval

As part of the RLC implementation process, City Council would need to approve the following:

1. Final list of locations for RLC installation
2. Confirmation of financial structure
3. Contract with the vendor for the installation and maintenance of the red light cameras
4. Contract with the City of Toronto for ticket processing services
5. Concurrence of the Ministry of the Attorney General
6. Contract with Ministry of Transportation Ontario

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### Highway Traffic Act Regulation Amendment

The type of red light camera system being used in Ontario is already defined and identified within the Highway Traffic Act of Ontario (Regulation 277/99). Individual intersections with red light cameras in operation are provided with specific identification numbers within the Regulation. The City of Kingston would need to request an amendment to the Ministry of Transportation that the Regulation be revised to include the final list of proposed RLC sites in the City of Kingston.

### Processing Agreements

Red light camera violation notices (tickets) for the 7 Ontario municipalities already in the program are ALL currently processed by the City of Toronto since it is impractical to consider individual processing due to economies of scale and the complexity of the RLC equipment. The City of Toronto processes the tickets based on a cost recovery (not for profit) model. As part of the implementation process, the City of Kingston would need to confirm that the City of Toronto has the capacity to process violation notices.

### Installation, Operation & Maintenance of the Red Light Cameras

The 7 Ontario municipalities already in the RLC program have an existing joint contract with the vendor Traffipax for the installation, operation and maintenance of every red light camera in Ontario. Since this contract expires at the beginning of 2017, the City of Kingston would need to enter into a sole-source agreement with Traffipax in order to join the program prior to 2017. The contract would most likely be based on the current agreements which are in place with the 7 participating municipalities, with the exception that the cost formula would be revised to reflect a shorter period of amortization between start-up and the end of 2016. Since the vendor may change for 2017, if Kingston were to implement an RLC program in 2016, the contract would only be valid for one year and there is a risk that all of the RLC equipment would need to be removed and then replaced by another vendor in 2017.

Since the existing RLC contract with Traffipax expires at the end of 2016, the 7 Ontario municipalities in the RLC program will be issuing a Request for Proposals in mid-2014 to jointly procure a vendor for RLC installation, operation and maintenance services to begin in early 2017. If The City of Kingston wishes to join the RLC program at the beginning of 2017, the choice of vendor would be restricted to the vendor selected during the 2014 RFP process. Since the implementation process to get an RLC program up and running takes at least 2 years, it may be reasonable to expect that Kingston would be ready to join the program at the beginning of the new joint procurement contract in 2017.

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Approval from Ministry of the Attorney General (MAG)

The Ontario Ministry of the Attorney General (MAG) is the agency which ensures that the proper procedures are followed for registering red light violations with the local court system. MAG also ensures that all necessary preparations are made in terms of the justice system for any court cases. All RLC violations are processed through the Ministry's ICON computer system.

In order for the City of Kingston to join the red light camera program, it would be necessary to get the approval of the Ministry of the Attorney General and to work with them to ensure that the local court system is structured such that red light camera violation notices and court requests can be properly managed.

Ministry of Transportation Ontario (MTO)

When all of the arrangements are complete and necessary agreements in place, the City of Kingston would be required to sign a contractual agreement with the Ministry of Transportation Ontario (MTO) in order to proceed with the RLC program.

While the primary purpose of the agreement is to ensure that license plate ownership information is supplied to the processing centre, MTO also requires compliance with a number of other conditions such as standard signage at red light camera intersections and regular reporting of safety-related information.

COSTING DETAIL

The estimated cost to operate all components required for a red light camera program, not including staff time, is \$52,000 per year per intersection. Typically an RLC camera is installed on only one approach of an intersection. Based on a program with 10 cameras (10 intersections), the estimated total operating cost would be \$520,000 per year.

Since the RLC vendor cost is confidential, only the total cost to run the program is provided. A description of the direct costs associated with an RLC program are summarized below:

1. Red Light Camera Hardware & Software

The contract with the RLC vendor includes all costs associated with the installation, operation and maintenance of the cameras. The vendor is also responsible for the transfer of data for ticket processing.

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2. Processing Violations

All processing for red light camera violations is completed by the City of Toronto on a cost recovery model. For the purpose of this report, the City of Toronto provided CIMA+ with the current processing cost based on 10 cameras.

3. Ministry of Transportation Ontario (MTO)

The City of Kingston would need to reimburse MTO for the cost to provide vehicle ownership information for the red light violations as verified by the license plate registration.

4. Court System

There is usually additional effort required by the local courts in order to register red light violations. There may also be appeals that could lead to trials. The courts may ask for reimbursement of any costs incurred by the RLC program. For the purpose of this report, a cost was estimated based on court system costs incurred by the Ontario municipalities already in the program.

5. Staff Resources

The cost of staff resources is usually not included as part of the direct operating costs of an RLC program since it can be so variable. There is however a significant amount of staff effort required at the beginning of the program and continued resources required as follows:

- Engineering Department – Management of the RLC program, including implementation and ongoing day-to-day operation
- Communications – Ongoing information and education about the RLC program
- Legal – Preparation of contractual documents and provision of a prosecutor to respond to appeals and trial requests
- Finance – Set up the cost centres, reserves and financial structure
- Purchasing – Review and approve the RLC joint procurement contract
- Utilities Kingston – Assist the vendor with installation and equipment inspection



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## FINE REVENUE

Red light running is an offence under the *Highway Traffic Act of Ontario* with a current fine of \$325, of which \$60 is designated as the victim surcharge. This results in a net revenue of \$265 per red light violation being returned to the municipality.

Total fine revenue generated by an RLC program is difficult to accurately predict. Although initial estimates to predict fine revenue can be related to the number of violations, some violations will not be captured due to out-of-province licence plates, dirty license plates or improper vehicle registrations. For this reason, the City should expect to realize approximately 20% of the total potential fine revenues.

Since RLCs are considered to be a safety device, a successful program will result in a decrease in the number of violations and a corresponding reduction in revenues as time passes. Although CIMA+ completed a detailed cost-benefit analysis based on observed rates of red light violations in the field, the number of violations varies greatly on a daily basis at each intersection since red light running is a random occurrence. The red light violation studies completed by CIMA+ in Kingston showed that there were an average of 5 violations per site per day at 6 of the sites on the proposed list of 10 intersections (the highest and lowest numbers were removed from the average).

The estimated potential fine revenue from an RLC program per intersection (based on 5 violations per site per day) is \$1325 per site per day or \$483,625 per site per year. If there are 10 cameras in the program, the total potential estimated revenue would be \$13,250 per day or \$4.8 million per year. If the City realizes 20% of the total possible fine revenues, the expected annual total revenue would be \$970,000. It is however important to note that since the number of red light violations is difficult to predict, excess annual revenues are not a certainty hence the program should be viewed as a safety initiative.

## FINANCIAL FEASIBILITY

Based on an RLC program with 10 cameras, the estimated total operating cost would be \$520,000 per year with estimated revenues of \$970,000 per year. This equates to potential excess revenues of almost \$450,000.

A financial structure would be required to manage the needs of the RLC program. One approach is to manage the expenses through an operating account cost centre, connected to a reserve fund specific to the red light camera program. Any excess fine revenues could be specifically assigned to the reserve in anticipation of later years when fewer violations will likely occur. Since the primary purpose of the RLC program is safety, any excess revenues could be earmarked for road safety program expenditures. Even if the RLC program is revenue neutral, there would be a cash flow delay between start-up and receipt of the first fine revenues from the province, so funds would need to be available in order to offset this delay.

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**EXISTING POLICY/BY LAW:**

Not applicable

**NOTICE PROVISIONS:**

Not applicable

**ACCESSIBILITY CONSIDERATIONS:**

Not applicable

**FINANCIAL CONSIDERATIONS:**

Based on an RLC program with 10 cameras, the estimated total operating cost would be \$520,000 per year with estimated revenues of \$970,000 per year. This equates to potential excess annual revenues of almost \$450,000. Since the number of red light violations is difficult to predict, excess annual revenues are not a certainty. Even if the RLC program is revenue neutral, there would be a cash flow delay between start-up and receipt of the first fine revenues from the province, so funds would need to be available in order to offset this delay. There are no funds at this time in the City's budget that have been specifically allocated for a red light camera program.

**CONTACTS:**

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Deanna Green, Manager Traffic Division

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613-546-4291, ext. 3170

**OTHER CITY OF KINGSTON STAFF CONSULTED:**

Sgt. Steve Saunders, Kingston Police Force

**EXHIBITS ATTACHED:**

Exhibit A - Consultant's report, "Red Light Camera Business Case Study Final Report" by CIMA+, February 2014



## **Red Light Cameras**

### Frequently Asked Questions

#### **Q. What is red light running?**

It is a violation that occurs when a driver enters the intersection when the traffic signal is red. A driver that enters the intersection on a green or amber traffic signal will not be ticketed by a red light camera system.

#### **Q. How do the red light cameras work?**

The red light camera takes 2 photographs. The first photo is taken when a vehicle is behind the stop bar and about to enter the intersection when the traffic signal is red. The second photo is taken when the vehicle is actually within the intersection. In order to capture the license plate, both photos show the rear of the vehicle only. The violation notice sent to the registered owner includes both of these photos in addition to an enlarged photograph of the rear license plate of the vehicle.

#### **Q. When will red light cameras be operating in Kingston?**

There are plans for red light cameras to be operational at the following 10 intersections in Kingston in early 2017.

1. Queen Street & Montreal Street
2. Division Street & John Counter Boulevard
3. Perth Road & Unity Road
4. Taylor Kidd Boulevard & Bayridge Drive
5. Bath Road & Portsmouth Avenue
6. Gardiners Road & Princess Street
7. Princess Street & Sir John A Macdonald Boulevard
8. Princess Street & Taylor Kidd/John Counter Boulevard
9. Gardiners Road & Taylor Kidd Boulevard
10. John Counter Boulevard & Sir John A Macdonald Boulevard



**Q. How serious is the red light running problem in Kingston?**

As part of a red light camera study, violation surveys were completed in the City at 22 intersections for a period of 6 hours at each location. There was an average of 5 violations per day at each intersection with a high of 30 violations per day at one location.

Red light running is one of the causes of angle or “t-bone” collisions, the most severe type of collision that often results in serious injuries. A review of the City’s collision history showed that an average of 60 right-angle collisions occur per year at signalized intersections. In Kingston, 64% of right-angle collisions result in serious injuries. By contrast, 78% of rear-end collisions in Kingston result in property damage only.

**Q. How do red light cameras increase safety if they can’t actually prevent a collision from happening?**

Public awareness of red light cameras reduces aggressive driving behaviour and decreases red light running. The cameras are a deterrent such that the threat of a ticket can change motorist behaviour. Studies have shown that red light violation rates can decrease by as much as 42% within a few months of camera installation and that right-angle collisions can be reduced by 25%. The benefits of improved driving behaviour can even spread to intersections without red light cameras.

**Q. Why install red light cameras? Aren’t there other ways to reduce red light running?**

As part of the background research for the City’s red light camera study, the City’s high collision locations were reviewed in the field. Minor improvements were suggested for some of the locations but none of these were thought to be effective enough alone to solve the red light running issues. Some of the factors considered were the length of amber and all-red clearances, visibility of traffic signal heads, proper signage, lane configuration and roadway alignment.

**Q. What if a vehicle is making a left turn and the signal turns red when the vehicle is still in the intersection?**

As long as the vehicle enters the intersection on a green or amber traffic signal, the left-turning motorist will not be ticketed for turning when the traffic signal is red.



**Q. What if a vehicle is making a permitted right turn on red? Will the motorist receive a ticket?**

As long as the vehicle comes to a complete stop before the stop bar prior to turning, the motorist will not be ticketed for turning right on red.

**Q. Why not just make the amber light longer so that vehicles have more time to clear the intersection?**

The City uses Ministry of Transportation Ontario guidelines to determine both the length of the amber and the all-red phase at signalized intersections. The guidelines consider the posted speed limit and the width of the intersection such that a vehicle entering the intersection at the end of amber should still be able to clear the intersection before the end of the red light. A longer amber may only encourage motorists to continue driving through the intersection and it increases overall delays for all users of the intersection.

**Q. Will the City shorten the length of amber lights at traffic signals in order to catch more vehicles running red lights?**

No. The City will continue to adhere to Ministry of Transportation Ontario guidelines to determine both the length of the amber and the all-red phase at signalized intersections. The length of amber lights at signalized intersections will not be adjusted in order to catch more red light runners.

**Q. Are the cameras installed on all approaches at the intersection?**

No. Red light cameras are typically installed on only one approach of an intersection. The camera is usually installed on the approach that has the highest risk of red light running.

**Q. Are signs installed at intersections with red light cameras in order to warn motorists?**

Yes. All intersections with red light cameras must be signed on all 4 approaches. Since red light cameras are typically installed on only one approach of an intersection, motorists may not be aware which approach has a camera.



**Q. Do red light cameras replace police officers at intersections? Isn't regular police enforcement enough?**

Red light cameras are another tool being used to help police efforts and to discourage motorists from running red lights. It is difficult for police to enforce red light running since they must follow offenders through the intersection in order to catch them. The cameras allow police to focus on other enforcement needs.

**Q. What do Kingston Police think of red light cameras?**

The following statement was issued by Kingston Police:

"The Kingston Police support a red light camera program in Kingston. Chief LaRochelle is familiar with the Ottawa program, which has been shown to increase public safety by inhibiting aggressive driving and decreasing the incidence of red light violations. Red light cameras have proven useful in discouraging motorists from running red lights, which allows police to focus on other enforcement needs."

**Q. What is the penalty for running a red light if caught by a red light camera system?**

The set fine for running a red light is currently \$325. This charge includes \$260 returned to the municipality, a \$60 victim surcharge and a \$5 court cost. Since the registered owner of the vehicle may not actually be the driver that ran the red light, demerit points are NOT issued with red light camera tickets.

**Q. What is the penalty for running a red light if caught by a police officer?**

The set fine for running a red light when caught by a police officer is \$325 and 3 demerit points.

**Q. Do the cameras photograph every vehicle passing through the intersection?**

No. The cameras only photograph vehicles that enter an intersection after the traffic signal has turned red. Vehicles that enter the intersection on a green or amber traffic signal will not be photographed.



**Q. Can cyclists who run red lights be ticketed?**

The red light camera will not detect and photograph cyclists who run red lights. Although cyclists are subject to the same laws as motor vehicles, there is currently no system in place that could identify cyclists in a photograph.

**Q. Will emergency vehicles receive tickets for running red lights?**

In accordance with the *Highway Traffic Act of Ontario*, all emergency vehicles responding to calls, including police, fire and ambulance MUST STOP at red lights to ensure that traffic has stopped before proceeding through the intersection. If an emergency vehicle does not come to a complete stop at a red light before entering the intersection, they will receive a ticket for a red light violation.

**Q. How are violations processed? Are the photographs carefully reviewed before motorists are ticketed?**

The contractor typically downloads the digital film at the intersections on a weekly basis. All images are sent to a centralized processing centre operated by the City of Toronto. Trained Provincial Offences Officers carefully review every photograph to verify information and to ensure that the vehicle is in violation. Tickets are mailed to registered vehicle owners only if the photographs clearly show that the vehicle ran the red light. The local court system is responsible for any appeals or trials.

**Q. Who receives the ticket for running a red light detected by a camera system?**

The registered license plate holder receives the ticket, regardless of who was driving the vehicle.

**Q. Do red light cameras violate privacy?**

Every attempt is made to minimize capturing members of the public in the photos. If members of the public are inadvertently captured on film, it will not be possible to identify them from the photos.



**Q. How long does it take to receive the ticket in the mail?**

The regulations state that the ticket must be sent within 23 days of the offence. The letter is expected to arrive within 7 days so the ticket should be received within 30 days or less after the offence.

**Q. What is the cost of a red light camera?**

The red light camera contractor installs, operates and maintains the camera system and then charges the municipality a monthly fee based on a minimum 5-year contract. The estimated cost to operate a red light camera system, exclusive of staff time, is \$52,000 per camera per year. Based on a program with 10 cameras, the estimated total cost is \$520,000 per year.

**Q. Do red light cameras generate a lot of revenue?**

The focus of the red light camera program is SAFETY and not a means to generate revenue. A successful red light camera program is revenue neutral. Since the incidence of red light running decreases after the installation of cameras, it is difficult to predict the number of red light violations. Once operating expenses and staff time are accounted for, municipalities cannot ensure that the program will generate revenue.

**Q. How many violations are required per intersection in order for the program to pay for itself or “break even”?**

An average of 0.5 violations per camera per day is required to “break even”. It is important to note that not all offenders receive tickets for reasons such as out of province vehicles cannot be ticketed, dirty license plates, plate blocked by trailer hitch and poor visibility due to weather.

**Q. Who supplies the cameras? How big are the cameras? Where are they located?**

The red light camera supply contract for all municipalities in the program is with the vendor Traffipax. The camera is an industrial digital camera, manufactured for unattended operation in an outdoor environment. The cameras are housed in a 1/2 metre by 1/2 metre by 1/2 metre enclosure. The cameras are mounted on a pole, approximately 20 metres in advance of the intersection and are mounted approximately 3.6 metres above the ground. These cameras operate even in darkness, 24 hours per day, 7 days per week.





**Q. Where are red light cameras currently operating in Ontario?**

Red light cameras have been operating in Ontario since 2000 and have been installed in the following 7 municipalities thus far: City of Toronto, City of Ottawa, City of Hamilton, Region of Waterloo, Region of Peel, Halton Region and York Region. The City of London has plans to join the program along with the City of Kingston in early 2017.

**Q. What other countries use red light cameras?**

Red light cameras are used extensively in many other countries including Australia, Austria, Belgium, Germany, Israel, the Netherlands, Singapore, South Africa, Switzerland, Taiwan, the United Kingdom and the United States. Within Canada, the cameras are used in British Columbia, Alberta, Manitoba and Quebec.