



Request for Qualifications  
208-2006

For:

Supply, Installation and Operation of Photo Enforcement  
Program

Prepared by:

Winnipeg Police Service

August 28, 2006

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**FORM A: REQUEST FOR QUALIFICATIONS**

1. Contract Title REQUEST FOR QUALIFICATIONS FOR THE SUPPLY,  
INSTALLATION AND OPERATION OF PHOTO  
ENFORCEMENT PROGRAM

2. Proponent

\_\_\_\_\_  
Name of Proponent

\_\_\_\_\_  
Street

\_\_\_\_\_  
City Province Postal Code

\_\_\_\_\_  
Facsimile Number

(Mailing address if different)

\_\_\_\_\_  
Street or P.O. Box

\_\_\_\_\_  
City Province Postal Code

The Proponent is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Proponent hereby authorizes the following contact person to  
represent the Proponent for purposes of the Proposal.

\_\_\_\_\_  
Contact Person Title

\_\_\_\_\_  
Telephone Number Facsimile Number

4. Good Faith Declaration  
The Proponent declares that, in submitting its Request for Qualifications (RFQ), it does so in good faith and that to the best of its knowledge no member of Council or any officer or employee of the City would have any pecuniary interest, direct or indirect, should the Proponent be awarded a contract for the supply, installation and operation of the Photo Enforcement Program

5. Contract  
The Proponent agrees that the RFQ in its entirety shall be deemed to be incorporated in and to form a part of this submission notwithstanding that not all parts thereof are necessarily attached to or accompany this Proposal Submission.

6. Addenda  
The Proponent certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	_____	Dated	_____
	_____		_____
	_____		_____

7. Time  
This submission shall be open for acceptance, binding and irrevocable for a period of one hundred + sixty (160) Calendar Days following the Submission Deadline.

8. Signatures

In witness whereof the Proponent or the Proponent's authorized official or officials have signed this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_ .

(If no corporate seal)  
Signed and sealed in  
the presence of:

Signature of Proponent or  
Proponent's Authorized Official or Officials

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Print here name and official capacity of individual whose signature appears above)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Print here name and official capacity of individual whose signature appears above)

SEAL

## 2. DEFINITIONS

2.1 When used in this Request for Qualification:

- (a) "**Business Day**" means any Calendar Day, other than a Saturday, Sunday, or a Statutory or Civic Holiday;
- (b) "**Calendar Day**" means the period from one midnight to the following midnight;
- (c) "**Camera Unit**" means the portion(s), of the ISC which processes inputs from the Detector(s) and ISC / Traffic Signal Interface, records data, operates the Flash Unit and captures images on photographic film or digital medium;
- (d) "**Camera Unit Housing**" means the enclosure in which The Camera Unit is housed and which is affixed to a pole at the Site;
- (e) "**City**" means The City of Winnipeg as continued under The City of Winnipeg Charter, Statutes of Manitoba 2002, c. 39, and any subsequent amendments thereto;
- (f) "**City Council**" means the Council of The City of Winnipeg;
- (g) "**Contract**" means the combined documents consisting of the Request for Qualification package and any documents and drawings referred to and incorporated therein together with any submissions required to be made by the Contractor after award, and all amendments to the foregoing;
- (h) "**Contract Administrator**" means the person authorized to represent The City in respect of the Contract and is the Buyer unless otherwise specified hereinafter;
- (i) "**Contractor**" means the person undertaking the performance of the Work under the terms of the Contract;
- (j) "**DDVL**" means the Division of Driver and Vehicle Licensing, Manitoba Public Insurance;
- (k) "**Detector(s)**" means metal wires implanted in the roadway outside the Site in a looping formation that are capable of being activated when connected to the signal control box and transferring information to the ISC;
- (l) "**Flash Unit**" means the portion(s) of the ISC and photo radar which, triggered by a Camera Unit, generates light to supplement ambient light, improve the quality of photographic images and alert observers that the ISC and photo radar is functioning;
- (m) "**Intersection Safety Camera or ISC**" means a fixed device capable of detecting and capturing either by photographic film or digital medium, the licence plates of vehicles identified as having committed a violation for a red light offence and/or speeding offence at the intersection where the unit is installed;
- (n) "**Looping Detection System**" means an in-ground sensor that detects a vehicle by the disturbance of an electro-magnetic field;
- (o) "**may**" indicates an allowable action or feature which will not be evaluated;
- (p) "**must**" or "**shall**" indicates a mandatory requirement which will be evaluated on a pass/fail basis;
- (q) "**Notice**" means either an Offence Notice or a Warning Notice;
- (r) "**Notice Processing**" means the act of developing photos in relation to Photo Enforcement Equipment, issuing Notices related thereto, and attending Court as required;
- (s) "**Offence Notice**" means the summons served on the registered owner of vehicles identified as having committed the legal violation standards for a red light and/or speeding offence under *The Highway Traffic Act of Manitoba*;
- (t) "**Person**" means an individual, firm, partnership, association or corporation, or any combination thereof, and includes heirs, administrators, executors or legal representatives of a person;

- (u) **“Photo Radar”** means a radar speed timing device connected to a camera unit mounted in a vehicle that is capable of detecting and displaying speeds of passing vehicles and photographing violators who are speeding.
- (v) **“Photo Enforcement Equipment”** means the Camera Unit, Camera Unit Housing, Flash Unit, and a looping detection system in the case of an ISC and radar speed timing device and camera unit in the case of mobile photo radar;
- (w) **“Photo Radar Vehicle”** means a passenger vehicle, suitable to The City, equipped with a Camera Unit, a Speed-timing Device and a Flash Unit. The combination must be mobile and capable of detecting the speed of vehicles and photographically capturing the licence plate of the same vehicles identified as having committed a violation for a speeding offence on photographic film, or digital medium night or day; subject to speed tolerances set by The Winnipeg Police Service;
- (x) **“Photo Safety Technology”** or **“PST”** means an ISC System, Photo Radar Vehicle, Photo Radar Speed Trailer, or any other technology designed to capture red light offences, speeding offences or other such offences by means of photographic film or digital medium;
- (y) **“Proponent”** means any person submitting a Submission for Qualifications;
- (z) **“should”** indicates a desirable action or feature which will be evaluated on a relative scale;
- (aa) **“Site”** means the lands and other places on, under, in or through which the Work is to be performed;
- (bb) **“Speed-on-Green”** means technology applied to the Camera Unit enabling the ISC System to detect, record and verify the speeds of vehicles passing over or through the Detection System regardless of the traffic light phase and take a photograph/digital image of the offending vehicle.
- (cc) **“Speed Reader Board”** means a Speed-timing Device with an LED display large enough to be seen by passing vehicles that shows the speed of oncoming traffic captured by a radar gun incorporated therein;
- (dd) **“Speed-timing Device”** means a device capable of measuring speed in kilometres per hour, approved by the Attorney General of Manitoba;
- (ee) **“Submission Deadline”** means the time and date on the Request For Qualification cover sheet for final receipt of submissions;
- (ff) **“Traffic Signal Interface”** means a method of separating an ISC from a traffic control system so that the two electrical circuits work independently of one another and do not interfere with each others respective operations.
- (gg) **“Working Day”** means any Calendar Day, other than a Saturday, Sunday or a Statutory or Civic Holiday, on which the Contract Administrator determines atmospheric and Site conditions are such that the Contractor is able to work at least seven (7) hours.



### 3. PURPOSE OF DOCUMENT

- 3.1 The purpose of this Request for Qualification is to identify experienced and capable Proponents.
- 3.2 The primary objective of the Photo Enforcement Program is to improve safety at intersections controlled by traffic signals, construction, playgrounds and school zones by reducing the number of incidents where motorists disobey maximum speed limits and/or, where applicable, commit red light violations. This objective being achieved through the continuing use of Photo Safety Technology. Given the significant changes in this technology, the City of Winnipeg is interested in exploring new or alternative methods of service delivery and identifying as many qualified Proponents as possible for this endeavour.

### 4. BACKGROUND

- 4.1 The Winnipeg Photo Enforcement Program has been in operation since November of 2002. After a 2 month warning phase the program began full operation in January of 2003. The current 5-year contract expires on May 31<sup>st</sup> 2007.
- 4.2 The Winnipeg Photo Enforcement Program presently uses Gatsometer GTC-F Intersection Safety Cameras with speed determination capabilities for photographing red light and speeding violations. At present 48 signalized intersections throughout the City of Winnipeg have been equipped for enforcement and 30 cameras are rotated through these sites by outsourced service personnel under the direction of the Strategic Traffic Unit of the Winnipeg Police Service. The detection system in use in Winnipeg is an electromagnetic field (EMF) inductive magnetic loops system, monitoring 108 lanes at these 48 intersections for red light and speed. In the case of a vehicle speeding through a red light, Two (2) offence notices are issued, one for speeding and one for the red Light violation. At present 50, 60, 70 & 80 kilometre per hour intersections are monitored in the City of Winnipeg.
- 4.3 The City deploys 10 photo radar equipped vehicles of various makes and models. The units are currently staffed under a separate contract with the City. Photo radar enforcement is restricted by Provincial Legislation to enforcement of Playground, School and Construction zones. The units currently operate between the hours of 7 AM and 10 PM seven days a week under the direction of the Winnipeg Police Service.
- 4.4 A Tri-Party agreement between the City of Winnipeg, The Province of Manitoba and the contractor was negotiated in order for the contractor to receive Personal Registered Owner Information required to issue offence notices.
- 4.5 A processing centre for the Photo Enforcement Program is located in Winnipeg. The contractor's personnel is responsible for all processing/backend operations regarding violations. The operators of the mobile photo enforcement vehicles and Winnipeg Police Service staff (currently consisting of five members) work out of this location.
- 4.6 The Winnipeg Photo Enforcement Program currently uses a wet film system of which the photo enforcement equipment is Canadian Standards Association (CSA) approved.

**Table 1 Statistics**

<b>Existing Photo Enforcement Program Information</b>		
Active Sites	30	
Non Active Sites	18	
Mobile Vehicles	10*	*as of June 01, 2006, (prior was 5)
<b>Tickets issued for 12 months 2005</b>		
Speed on green tickets	60,000	
Red light tickets	8,500	
Mobile camera tickets	50,000	

## 5. DIGITAL SYSTEMS

5.1 Digital Systems will be considered with the following forewarning:

- (a) Manitoba Justice has approved a wet film system for prosecution of image capturing enforcement system violations due to reliability of film negatives. The introduction of a Digital system would require supportive evidence to confirm the authenticity of the digital image signature and security measures to support image transfer methods.
- (b) Amendments to the current Image Capturing Enforcement Regulation would be required from the Government of Manitoba for the authorization of any speed timing device currently not listed as an approved device in this regulation. Data contained in the photographs captured during a violation is detailed in schedules included in the Image Capturing Enforcement Regulation. These schedule changes would also have to be included in the amendments prior to equipment being approved for use. It is expected that a minimum of three months would be required from the time of submission to the Province of Manitoba Transportation and Government Services for regulatory changes to be completed, if approved.

## 6. APPLICABLE LEGISLATION

6.1 The Highway Traffic Act (Manitoba) and the related Image Capturing Enforcement Regulations can be found at the following links:

<http://web2.gov.mb.ca/laws/statutes/ccsm/h060e.php>

<http://web2.gov.mb.ca/laws/regs/pdf/h060-220.02.pdf>

## 7. WINNIPEG

7.1 Winnipeg is an important Canadian city, and the capital of the province of Manitoba. Located in Western Canada, Winnipeg plays a prominent role in transportation, finance, manufacturing, agriculture and education. It is known as the Gateway to the West.

The City is located near the geographic centre of North America. It lies in a flood plain at the confluence of the Red and Assiniboine rivers and started around the point now commonly known as The Forks. It is protected from flooding by the Red River Floodway. Winnipeg is the province's largest city with a population of 619,544 people (2001 Canadian Census). The Winnipeg Census Metropolitan Area (which includes Winnipeg and surrounding rural municipalities) has a population of 706,900 (Statistics Canada, July 1, 2005 estimate). Winnipeg covers an area of 663 square kilometers.

The climate in Winnipeg is very extreme; overall, it is one of the coldest large cities in the world, with temperatures averaging below freezing from mid-November through much of March. Winnipeg lies in an unprotected arctic trough which channels cold arctic air south, directly across the Canadian Shield and Canadian Prairie. This results in bone-chilling temperatures as early as the end of October, followed by bitter cold and icy winds during December, January and February. Cold weather and snow often extend into April. Summers are typically warm with average temperatures above 25 °C (77 °F) and much sunshine is received throughout the year. Spring and fall tend to be rather contracted seasons, each averaging little over six weeks. Average minimum/maximum temperatures for each month are as follows (source Environment Canada): January -22°C (-9°F) / -13 °C (9°F), February -19°C (-2°F) / -9°C (16), March -11°C (-12°F) / -1°C (30°F), April -2°C (28°F) / 10°C (50°F), May -5°C (41°F) / 19°C (67°F), June 11°C (52°F) / 23°C (74 °F), July 13°C (55°F) / 26°C (79°F), August 12°C (54°F) / 25°C (77°F), September 6°C (43°F) / 19°C (67°F), October -0.3°C (31°F) / 11°C (52°F), November -10°C

(14°F) 0°C (32°F), December -19°C (-2°F) / -10 °C (14°F), although from May to September temperatures often reach 30°C (86°F) and sometimes exceed 35 °C (95 °F). The most extreme temperatures were recorded on February 18, 1966 with a low of -45°C (-49°F) and on August 7, 1949 with a high of 40°C (104°F).

The City receives more precipitation in the forms of both rain and snow than other Prairie cities, but the weather is characterized year-round by an abundance of sunshine. The City receives an annual average of about 510 mm (20 inches) of precipitation including 115 cm (45 inches) of snow. There is generally snow cover from mid-November to the end of March, though this varies depending on the year—heavy snowfalls in late October and in April are not uncommon.

There are no substantial hills in the city or in its vicinity. Downtown Winnipeg is centered at the intersection of Portage Avenue and Main Street about one kilometer (0.6 miles) from The Forks of the Red and Assiniboine Rivers. From this intersection, known as the windiest in Canada (or conversely as the most famous intersection in Canada), all roads radiate outwards.

The City uses the grid system for streets although there are several different grids in place which correspond to old Red River Lots and the meandering courses of the rivers. This creates some very irregular intersections. As a result many visitors find it difficult to get around in Winnipeg. Unlike many cities in North America, all streets are named, not numbered. Of interest, many of the main thoroughfares in Winnipeg are extremely wide due to the spring soil conditions and the historical use of the Red River Cart which created wide ruts in the (then) muddy roads. Portage Avenue has four lanes of traffic in each direction plus a central boulevard for much of its run through Winnipeg.

Downtown Winnipeg is the financial heart of the city, and covers an area of about one square mile (2.5 km<sup>2</sup>) which is quite large for a city this size. Surrounding the downtown area are various residential neighborhoods. Urban development spreads in all directions from downtown but is greatest to the south and west, and has tended to follow (and has been determined by) the course of the two major rivers. The urbanized area in Winnipeg is about 25 km (15 mi) from east to west and 20 km (12 mi) from north to south, although there is still much land available for development within the City Limits.

Winnipeg has had a public transit system since the 1880s, starting with horse-drawn streetcars. Winnipeg Transit now operates entirely with diesel buses. Winnipeg is unique among North American cities its size in that it does not have freeways within the urban area. Beginning in 1958, the primarily suburban Metropolitan council proposed a system of freeways, including one that would have bisected the downtown area. The plan culminated in the monumental Winnipeg Area Transportation Study (WATS) of 1968. The extensive freeway plan faced stiff community opposition and was deemed over-ambitious. It was not implemented as a concerted undertaking, but construction of major traffic corridors follows the study to this day, including expressways such as Winnipeg City Route 165/Bishop Grandin Blvd., although most are in the form of urban arterial roads and no freeways are likely to be constructed within the urban area anytime soon. However, a one mile stretch of freeway was built in the late 1950s, and that freeway is called the Disraeli Freeway (part of the Disraeli Bridge project), part of it being a freeway, which is part of Winnipeg City Route 42.

A modern four-lane highway (the Perimeter Highway, which is mostly an expressway around the city (also known as a ring road) with interchanges and at-grade intersections) bypasses the city entirely, allowing travelers on the Trans-Canada Highway to avoid the city and continue east or west uninterrupted. Many Manitoba provincial highways enter Winnipeg, but the majority lose their highway designation and become Winnipeg City Routes once they reach the Perimeter Highway. At present, only two provincial highways pass entirely through the Winnipeg area:

Because of its extremely flat topography and substantial snowfall, Winnipeg is subject to severe flooding. The Red River reached its greatest flood height in 1826, and this event still remains the highest flood stage of the last two hundred years. Another large flood occurred in 1950, which caused millions of dollars in damages and thousands of evacuations. This flood prompted the government to build the Red River Floodway, a 49-kilometre (30-mile) long diversion channel that protects the city of

Winnipeg from flooding. Other related water diversion projects farther away from Winnipeg include the Portage Diversion (also known as the Assiniboine River Floodway) and the Shellmouth Dam. The flood-control system prevented flooding in 1974 and 1979 when water levels neared record levels. However, in the 1997 flood, flooding threatened the city's relatively unprotected southwest corner. Flood control dikes were reinforced and raised using sandbags and the threat was averted. Winnipeg suffered very limited damage compared to cities without flood control structures, such as Grand Forks, North Dakota, USA.

**8. DESCRIPTION OF RFQ SOLICITATION AND SUBSEQUENT PROCESSES**

8.1 The administration will follow a three Phase process for soliciting and negotiating the best possible arrangements for the taxpayers of Winnipeg from the RFQ and RFP processes. The three phases and their anticipated timelines are as follows:

Preliminary schedule for this project is as follows:

<b>Phase</b>	<b>Timing</b>
I. RFQ Evaluation	Approximately 3 weeks from date of Final Receipt of Submissions.
II. RFP Detailed Proposal Solicitation, Evaluation, and Provincial Approval (if required)	Approximately 20 weeks from issuance of RFQ
III. Negotiation and Due Diligence, City Council Approval and Award of Contract	Approximately 4 -10 weeks from completion of Phase II (above)

8.2 Phase I – RFQ Evaluation:

(a) The City anticipates approximately 3 calendar weeks to review all RFQ submissions received. After completion of Phase I, the City will shortlist the most qualified Proponents. Only those Proponents on the shortlist will be invited to submit a Proposal in response to the Request for Proposals of Phase II.

8.3 Phase II – RFP Detailed Proposal Solicitation and Evaluation:

(a) The City will invite the Proponents determined to be qualified under the RFQ process to submit detailed proposals. The City anticipates approximately 20 weeks to solicit, review the detailed proposals submitted and to obtain Provincial approval for alternative technical systems (if other than what is currently being used). The evaluation of the detailed proposals will culminate in administration entering into negotiations with Proponents of the most advantageous detailed proposals in response to the RFP.

8.4 Phase III – Negotiation and Due Diligence:

(a) It is anticipated that the final recommendation for Award of Contract will be presented to Council in March 2007. The drafting of a formal Contract will take approximately 4 weeks

**9. CONFIDENTIALITY**

9.1 Information provided to a Proponent by the City or acquired by a Proponent by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the City. The Proponent shall not make any statement of fact or opinion regarding any aspect of the RFQ and RFP to the media or any member of the public without the prior written authorization of the City.

## **10. COUNCIL APPROVALS**

- 10.1 Following the negotiation of terms and due diligence, administration will ultimately present recommended option(s) to Council for approval from the Proponent determined to have the most advantageous proposal to the City.
- 10.2 Notwithstanding any other section of this document, The City of Winnipeg may, in its sole discretion, at any time by written notice, terminate the RFQ solicitation or evaluation process or, after the selection of Proponents determined to be qualified under the RFQ process, elect not to proceed with more detailed proposal submissions and, by written notice, terminate the process. After termination as described above, the City will be under no obligation to any Proponent.

## **11. RESPONSE INSTRUCTIONS**

- 11.1 Submission Content and Format  
Interested parties may submit an RFQ in the format of their choice but the RFQ Submission must submit the following minimum requirements:
- (a) Form A: Request for Qualifications
  - (b) Experience of Proponent
  - (c) Technology requirements - Section 25 – Check List
  - (d) Construction and implementation schedule
- 11.2 Submit one (1) original and six (6) bound hard copies (Submission must also be available in MSOffice compatible electronic format if requested later);

## **12. FORM A**

- 12.1 The Proponent shall complete Form A: Request for Qualifications, making all required entries.
- 12.2 Paragraph 2 of Form A: Request for Qualifications shall be completed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his own name, his name shall be inserted;
  - (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Proponent is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- 12.3 If the submission is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance to Clause 12.2
- 12.4 In Paragraph 3 of Form A: Request for Qualifications, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of this RFQ.
- 12.5 Paragraph 8 of Form A: Request for Qualifications shall be signed in accordance with the following requirements:
- (a) if the Proponent is sole proprietor carrying of business in his own name, it shall be signed by the Proponent;
  - (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;

- (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affix;
- (d) if the Proponent is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

12.6 The name and official capacity of all individuals signing Form A: Request for Qualifications shall be printed below such signatures.

12.7 All signatures shall be original and shall be witnessed except where a corporation seal has been affixed.

12.8 If a submission is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Submission, shall be both jointly and several.

### **13. EXPERIENCE**

13.1 As a large component of the RFQ evaluation deals with both past and present experience in the photo enforcement field, all Proponents must include a detailed summary of relevant experience with photo enforcement programs, qualifications, successes, proven problem solving abilities, number and names of client cities and the number of active sites and/or photo radar vehicles in each, and include references. This experience summary may also include, but not limited to, issuance rates, quality control issues, access to expert staff in specific areas, training programs, ability to get problems corrected in timely fashion such as damaged equipment (ie: poles knocked down, cameras, loops etc vandalized), court package preparation, processing times, offence notice service on time, timely changes/remedies to program components as required due to successful court challenges, regulatory (ie: changes to offence notices, procedural changes, equipment testing requirements, etc.).

13.2 The submission must also include general company literature, background information and resumes of key staff.

### **14. TECHNOLOGY REQUIREMENTS**

14.1 Proponents shall complete Section 25, providing an answer for each item. Failure to complete an item shall be considered a "No" answer.

### **15. CONSTRUCTION AND IMPLEMENTATION SCHEDULE**

15.1 Proponents shall provide a construction and implementation schedule detailing the anticipated timelines to fully implement system to present levels of 10 radar vehicles and 48 enforceable intersection safety camera locations with both speed and red light violation capabilities.

### **16. NON-DISCLOSURE**

16.1 Proponents must not disclose any details pertaining to their RFQ and the selection process in whole or in part to anyone not specifically involved in their submission, without the prior written approval of the City. Proponents shall not issue a news release or other public announcement pertaining to details of their RFQ Submission or the selection process without the prior written approval of the City.

16.2 Any attempt on the part of any Proponent or any of its employees, agents, contractors or representatives to contact any member of City Administration other than the person designated for enquiries herein or any members of City Council or their staff with respect to this RFQ solicitation may lead to disqualification.

## 17. RFQ EVALUATION CRITERIA

17.1 The Evaluation Committee may, in addition to the evaluation criteria described below, apply other evaluation criteria which the Evaluation Committee determines have become relevant during the evaluation process. The Evaluation Committee will apply the same criteria and methods to the evaluation of all RFQ Submissions.

		<b>SCORE</b>
<b>A.</b>	<b>CONFORMANCE OF MANDATORY REQUIREMENTS</b>	<b>PASS/FAIL</b>
	The City of Winnipeg may reject a Proposal as being non responsive if: a) the proposal submission is incomplete, obscure or conditional b) the proposal submission contains deletions, alterations or other irregularities.	
<b>B.</b>	<b>EXPERIENCE</b>	<b>70%</b>
	i) Proponents will be evaluated on both past and current experience with the latter being given greater weight.	
	ii) Related projects of similar scope within schedule and within budget	
	iii) Demonstrated experience and ability to work with the similar jurisdictions like the City of Winnipeg on photo radar projects.	
	iv) Ability to work effectively on complex public/private projects with effective participation of client and community	
<b>C.</b>	<b>TECHNOLOGY REQUIREMENTS</b>	<b>PASS/FAIL</b>
	i) Compliance of proposed equipment to Mandatory Requirements (Section 25)	
<b>D.</b>	<b>CONSTRUCTION AND IMPLEMENTATION SCHEDULE</b>	<b>30%</b>
	i) Proponents will be evaluated on anticipated timelines to fully implement system to present levels of 10 Radar Vehicles and 48 enforceable Intersection Safety Camera locations with both speed and red light Violation capabilities	

17.2 In order to receive a PASS for Evaluation Criteria B and D, the Proponent must receive more than 50% of the available points for that criteria.

## **18. ENQUIRIES**

- 18.1 Any Proponent who has questions as to the meaning or intent of any part of this document or who believes this document contains any error, inconsistency or omission should make an enquiry prior to the Submission Closing Date requesting clarification, interpretation or explanation in writing to the City at the following address:

Patrol Sergeant Randy Vertone  
Contract Administrator  
Winnipeg Police Service  
P.O. Box 1680  
Winnipeg, Manitoba  
R3C 2Z7  
Phone number (204) 928-7602  
Fax number (204) 986-6545

## **19. ADDENDUMS**

- 19.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Qualification, or clarifying the meaning or intent of any provision therein. The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission.
- (a) The Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, and the Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>
  - (b) The Proponents are responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda shortly before the Submission Deadline.
- 19.2 Proponents are requested NOT to make verbal enquiries of City staff. Oral information provided to any Proponent by anyone at the City will not be binding on the City.

## **20. SUBMISSION**

- 20.1 The Submission Deadline is 4:00 p.m. Winnipeg time, September 22, 2006.
- 20.2 The Request for Qualification Submissions will not be opened publicly.
- 20.3 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Request for Qualification number and the Proponent's name and address.
- 20.4 RFQ Submissions determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned unopened.
- 20.5 The City may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified for the submission of Proposals.
- 20.6 RFQ Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.



20.7 RFQ Submissions shall be submitted to:

The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **21. SUBMISSION CONFIDENTIALITY**

- 21.1 To the extent permitted, the City shall treat all submissions as confidential, however the Proponent is advised that any information contained in any submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.
- 21.2 All RFQ Submissions submitted to the City will be kept in strict confidence with the City administrators mentioned above for the sole purposes of evaluating and developing the best possible strategic option for the City of Winnipeg. RFQ Submissions will become the property of the City of Winnipeg. The City will have the right to make copies of all RFQ Submissions for its internal review process and to provide such copies to its staff, legal, technical and financial advisors and representatives.
- 21.3 All information will become and remain the property of the City of Winnipeg, none will be returned. If the application contains any proprietary or trade secret information, said information must be indicated as such.

## **22. NO CONTRACT**

- 22.1 By submitting an RFQ Submission and participating in the process as outlined in this document Proponents expressly agree that no contract of any kind is formed under, or arises from this RFQ and that no legal obligations will arise. The City will have no obligation to enter into negotiations or a Contract with a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive. However, if the City proceeds to issue an RFP, it will issue it to all Proponents determined to be qualified under the RFQ process, and only to those determined to be qualified under the RFQ process. The City will have no obligation to award a Contract under the RFP process where:
- (a) only one submission is received; or
  - (b) in the judgment of the City, the interests of the City would best be served by not entering into a Contract.

## **23. PROPONENT'S COSTS AND EXPENSES**

- 23.1 Proponents are solely responsible for their own costs and expenses in preparing and submitting an RFQ Submission and participating in the Request for Qualifications, including the provision of any additional information or attendance at meetings.

## **24. MANDATORY REQUIREMENTS**

- 24.1 The following are, at minimum, the mandatory requirements in order to be considered for Phase II:
- (a) The City of Winnipeg will give greater weight in evaluation of proposals for a program that is housed and operated by the contractor, from a facility within the City of Winnipeg. All alternative delivery systems located within Canada will also be considered for evaluation..
  - (b) Description of proposed type of facility for:
    - (i) Processing
    - (ii) Image Storage

(iii) Vehicle Security

- (c) Non video based system
- (d) The ability to electronically access personal information data from Manitoba Public Insurance for enforcement purposes.
- (e) Process and deliver that personal information electronically on an approved Manitoba Government form (Offence Notice). Such personal information must not cross international boundaries
- (f) Vehicle Detection System shall not be placed on the surface of the roadway.
- (g) Must be Single contractor for combined program of ISC and Photo Radar enforcement.
- (h) The City of Winnipeg will give greater weight in evaluation of proposals for systems that superimpose offence data on the photograph/image at the time of event. All other systems will be considered for evaluation only if it can be proven to 100% accuracy that the offence data not superimposed on the photograph/image at the time of event (added later) correlates to the photograph/image.
- (i) For evidentiary purposes and to properly assess system performance the process must assign and record a sequential number automatically to all events regardless of photograph/image produced that cannot be altered or deleted. Thereafter the photographs/images must be stored by the contractor for a minimum of three years or at which point the contract terminates if earlier than three years or as governed by any Manitoba Provincial law, regulation, or agreement. All photograph/images remain the property of the City and cannot be destroyed or deleted without authorization from the City.
- (j) Must have a minimum of 3 photo enforcement programs currently operating in North America
- (k) ISC system must be capable of detecting red light and/or speeding violations at intersections with concrete surfaces.
- (l) ISC system must be capable of detecting speeding violations at intersections with concrete surface (Speed on Green).
- (m) ISC system must have a Traffic Signal Interface
- (n) ISC system must have proven capability of operating in extreme climate range of -30 °C ( -22° F) to +30 °C (86 °F)

**25. CHECK LIST**

To be completed by Proponents for verification purposes.

		Yes	No
1	Supply, Installation and Operations of the Photo Enforcement Program within the City of Winnipeg		
2	Supply, Installation and Operations of the Photo Enforcement Program outside of the City of Winnipeg but within Canada		
3	Provide Description of Proposed type of facility as per Clause 24.1 (b)		
4	Non video based system		
5	Ability to electronically access personal information data from Manitoba Public Insurance for enforcement purposes.		
6	Ability to process and deliver the above personal information on an approved Manitoba Government Form (Offence Notice)		
7	Ability to process and deliver the above personal information where it does not cross international boundaries		
8	Vehicle Detection System not on roadway surface as per Clause 24.1 (f)		
9	Single Contractor for the combined program for ISC and Photo Radar enforcement		
10	Superimposed on the photograph/image at the time of the event (If no provide documentation describing alternative system along with proven accuracy of 100%)		
11	Sequential numbering of all photograph/imagine events that can not be altered		
12	Documentation of a minimum of 3 photo enforcement programs currently operating in North America attached		
13	ISC system capable of detecting red light and/or speeding violations at intersections constructed of all types of roadway surfaces including concrete surfaces, (if no explain)		
14	ISC system capable of detecting speeding violations (Speed on Green) at intersections constructed of all types of roadway surfaces including concrete surfaces, (if no explain)		

15	ISC system has a Traffic Signal Interface		
16	ISC system proven capability of operating in extreme climate range of -30 °C ( - 22° F) to +30 °C (86 °F) (provide documentation)		
17	Provide, install and perform the maintenance of cameras/monitoring devices for speed enforcement and red light violations at intersections.		
18	Able to provide vehicles and perform the maintenance for vehicles for mobile photo radar speed enforcement.		
19	Able to provide training to Photo Radar Operators – speed enforcement.		
20	Able to provide, install and perform the maintenance of cameras/monitoring devices – intersection safety (red light).		
21	Able to provide, install and maintain the street level infrastructure – intersection safety.		
22	Able to provide ongoing measurement and calibration of street level detection system – intersection safety.		
23	Able to provide wet film system		
24	Able to provide a digital image system		
25	Able to provide Processing Centre hardware,		
26	Able to provide Processing Centre software,		
27	Able to provide Processing Centre system requirements,		
28	Able to provide installation and maintenance of Processing Centre hardware,		
29	Able to provide installation and maintenance of Processing Centre software,		
30	Able to provide staffing and administration for Processing Centre operations.		
31	Ability to print and distribute offence notices.		
32	Produce court packages to assist in prosecution of violations in compliance with Provincial Regulations.		

33	Able to provide qualified assistance in the event of court challenges, disputes and/or litigation.		
34	Ability to expand operations should The City deem additional units be required to a maximum of 100% over existing services.		

## **Appendix A – Current System Operations**

## Intersection Safety Cameras

1. The system incorporates summons-processing software used for issuing summonses for red light and speeding violations.
2. The system is not based on the use of video cameras that record images on magnetic media or via frame grabbing hardware and software.
3. The system is capable of identifying and photographing vehicles traveling through a signalized intersection on the red (red light violation) and speeding through the intersection during all three light phases of traffic control using the same detection system. The system takes two photographs of the rear of the vehicle as it proceeds through the intersection, one with the vehicle prior to the stop line and one with the vehicle clearly within the intersection.
4. The system is installed so that each violation is recorded by the camera unit at all times of the day, during all seasons of the year, and under varying conditions of sunlight and shadowing, and at night. The photograph incorporates the following views:
  - i. Rear view of vehicle.
  - ii. Characters and numbers on reflectorized and non-reflectorized license plates.
  - iii. Superimposed Data Information.
5. The system is fully suitable and functional for unattended use, under climatic conditions within The City of Winnipeg, was easy to install, service and maintain on a daily basis.
6. A weather and vandal proof, lockable housing is provided to protect the camera unit and its ancillary equipment.
7. The camera housing contains a heating system which will reduce any fogging on the windows which may obstruct the view of the camera.
  - i. Is water and spray resistant with sealed access panel.
  - ii. Has double walled steel construction including welded joints.
  - iii. Has a baked enamel or powder coat paint finish.
  - iv. Has three (3) security locks.
  - v. Mounts atop the pole so as to allow both horizontal and vertical adjustment at the intersection. Pole is vertically manual (crown).
8. The camera unit provides high-resolution images of the vehicle making the violation. The images are recorded on silver halide negatives.
9. The operation of the camera is microprocessor controlled and fully automatic.
10. The camera unit is constructed as one single unit incorporating the camera, flash, digital loop detector, keypad, and associated electronics.
11. The camera unit provides for placement of filters\* in front of the camera lens and the flash unit.

\*To compensate for Retro reflective plates, currently used on Manitoba License Plates.

12. The camera lenses are interchangeable. Depending on the location, it may be necessary to use lenses ranging from 45mm to 150mm. All lenses are fixed focus.
13. The camera unit is connected to the traffic signal controller to obtain the following:
  - i. Contact closure of signal when traffic lights enter the amber phase.
  - ii. Contact closure of signal when traffic light enters the red phase
  - iii. Monitor and display on LCD panel the number of seconds in which the signal has been in the amber and red phase.
  - iv. Power Source (110V AC).
  - v. The interface between the camera unit and the traffic signal equipment is coupled so that there is no interference with the operation of the traffic signal equipment. Power and signal phase current is fused at a rating no higher than 10 amps.
14. The camera unit allows for on site adjustment of camera activation as follows:
  - i. User to specify the delay time in tenths of a second
  - ii. User to specify the time-distance interval between first and second violation photograph
  - iii. The date, day and time
  - iv. The minimum speed needed to activate camera in 1 km/h increments
  - v. The distance between loops
  - vi. Timer operation for automatic on/off activation
15. The system is capable of monitoring at least four (4) violations per each red phase.
16. The camera unit is capable of counting the number of violations and traffic volumes. Traffic volumes are counted by lane and no less than two lanes of operation are performed at all of the 48 current sites.
17. The camera provides the capability to calculate and monitor vehicle speed, so that violations are recorded only when vehicles have entered the detection zone during any light phase and are exceeding a user specified minimum speed for either a red light violation or speeding violation. The minimum speed is adjustable to the nearest kilometer per hour within a range of 0 km/h to 99 km/h.
18. The camera unit is capable of photographing violations at a rate of 2 frames per second.
19. The camera unit is designed so that malfunctions can be easily identified and debugged and includes:
  - i. Performing self-tests on the photographic unit and flash.
  - ii. Simulates a violation being recorded for testing.
  - iii. Provides warning lights and error messages for selected malfunctions
  - iv. Records date and time of camera shutdown in the event of a malfunction or when film runs out.
20. The camera unit is designed so that service personnel without specialized equipment can easily change the film and verify that the film has been correctly installed in the camera.



21. The camera unit is designed so that service personnel without specialized equipment can easily perform the following functions on the street:

- i. Set the day, date, and time (24 hour clock).
- ii. Adjust the minimum speed for recording violation.
- iii. Adjust for the delay time or number of elapsed seconds (in tenths of a second) since light has turned red before violation is recorded.
- iv. Adjust for the time-distance interval, or number of elapsed seconds (in tenths of a second) between the first and second photograph for a recorded violation.
- v. Set the 4 digit numeric location identification number(Location code)
- vi. Set the number of hours of operation for each day of the week.
- vii. Set the "sleep time" for operation on a timer
- viii. Initialize the traffic count
- ix. On-site system tests including test photograph.

22. The camera unit uses standard 35mm film as follows:

- i. 30 meter rolls of film in a cassette those records up to 800 frames.
- ii. C-41 Processing
- iii. 50-1600 ASA
- iv. Standard 36 exposure film rolls.(For Testing/Alignment)

23. The data is superimposed onto the negative simultaneously with the exposure of the violation photographs (Dual Shutter Robot Camera).

24. The data box contains the following data information for the first photo red light violation.

- i. Time (24 hour clock)
- ii. Date (DD/MM/YY)
- iii. Lane in which violation occurred
- iv. Number of seconds amber aspect displayed
- v. Number of seconds red aspect displayed
- vi. Violation number
- vii. Location code

25. The data box contains the following data information for the second photo red Light violation.

- i. Time (24 hour clock)
- ii. Date (DD/MM/YY)
- iii. Real time elapsed between first and second photo.
- iv. Number of seconds red aspect displayed
- v. Violation number
- vi. Vehicle speed.

26. The data box contains the following data information for the first photo speeding violation.

- i. Time (24 hour clock)
- ii. Date (DD/MM/YY)
- iii. Lane in which violation occurred
- iv. Number of seconds amber aspect displayed
- v. Distance of the loops for speed measurement

- vi. Violation number
  - vii. Location code
27. The data box contains the following data information for the second photo speeding violation.
- i. Time (24 hour clock)
  - ii. Date (DD/MM/YY)
  - iii. Real time elapsed between first and second photo.
  - iv. Distance of the loops for speed measurement
  - v. Violation number
  - vi. Vehicle speed.
28. The system is capable of performing a self-test on the street. Self-testing is done during the green phase and recorded in the data box.
29. The data recorded on the self test includes the following:
- i. Date
  - ii. Time (24 hour clock)
  - iii. The designation of "TST"
  - iv. The lane of the test
  - v. The pitch or loop distance for speed sensitivity
  - vi. The velocity of the vehicle captured in the test photograph
30. The camera unit possesses a memory card capable of retaining a minimum of 6000 registrations.
31. The information recorded on the Memory Card is easily downloadable to a PC-Compatible computer for statistical evaluation.
32. The flash unit is fully integrated into the camera unit so as to be part of a single camera system, allowing for easy relocation of a single piece system.
33. The flash unit provides adequate illumination for photographic violations under all light and weather conditions.
- i. For an area of up to three (3) traffic lanes or approximately 35 feet wide at a distance of up to 150 feet.
  - ii. At varying levels of ambient light conditions.
  - iii. For both the first and second violation photographs
34. The flash unit is synchronized to the camera shutter at 1/1000 of a second
35. The flash is capable of operation in the following modes:
- i. Automatic – Flash activated when ambient light conditions dictate via photoelectric cell
  - ii. Manual – Flash activated for all photographs, no matter what ambient light conditions are present.
36. Flash intensity is selectable on the street with a maximum intensity of 250 W/s.
37. The flash allows for three (3) selections (High, Medium, and Low) the highest not in excess of 250 W/s.

38. The flash is of full flash within 0.5 second of a previous discharge
39. Digital Inductive loop detectors are used for vehicle detection. The loop detectors have the following features:
  - i. Automatic self tuning
  - ii. Self Adjusting
  - iii. Automatic recovery outputs
  - iv. Four (4) channel outputs
  - v. Individual pitch setting for each monitored lane
40. Digital Inductive loop detectors recognize individual vehicle profiles as part of the process for speed determination to ensure accurate vehicle identification.
41. The Digital loop detector is incorporated into the one-piece camera unit to allow for easy relocation between enforcement sites
42. The digital loop detector control unit is installed to allow service personnel to easily initialize and adjust detector setting on the street.
43. Two (2) loops are installed in each lane and/or direction.
44. The digital detector is capable of proper detection of vehicles with a loop distance set at 3.0 meters.
45. The detector system is direction sensitive.
46. The detector system is speed sensitive.
47. The system operates under a main power supply voltage of 115V AC (10%) and 60 Hz (2%)
48. Backup power is provided so that the system clock and other data elements displayed on the photograph are maintained for a minimum of seven (7) days in the event of a main power supply failure.
49. The system power supply is protected by fuse or breaker rated at no more than 10 amps.

## Mobile Photo Radar

50. The Photo Radar unit is constructed in the following component configuration:

- i. Camera Control Unit
- ii. Radar Control Unit
- iii. Antenna
- iv. Flash Unit
- v. Energy Box or Power Unit

51. The radar control unit has individual buttons used for the following specific functions:

- i. On/Off Button
- ii. Direction Switch
- iii. Radar Range Switch
- iv. speed Threshold Inputs in 1 km/h increments
- v. Test Button

52. The radar control unit has a LCD window in which the speed of each passing vehicle is displayed.

53. The radar control unit allows for direction setting by the use of a switch.

- i. Approaching traffic
- ii. Receding traffic
- iii. Simultaneous detection of both approaching and receding traffic

\*Manitoba Regulations restrict images to be taken from the rear only\*

54. The radar control unit allows the operator to enter the minimum speed threshold at which a violation will be detected and photographed. The threshold settings are in increments of 1 km/h.

55. The radar control unit has a single test button that when activated initiates a test sequence which tests the control unit, radar, camera as well as all associated software and connections. The activation of the test button results in a photograph to verify that the operator has performed the test sequence.

56. In the event that a test sequence is not properly completed, the unit will not proceed to the enforcement stage. A series of error messages are displayed to inform the operator of the problem with the unit.

57. The control unit possesses the capability of generating an audio Doppler tone.

58. The audio Doppler tone is volume controlled.

59. The control unit is fused to prevent any damage to the electronic components and sub system in the event of any power surge and/or cross wiring.
60. The camera unit provides high-resolution images of the vehicle making the violation. The images are recorded on silver halide negatives.
61. The operation of the camera is microprocessor controlled and fully automatic.
62. The camera unit uses standard 35mm film as follows:
  - i. 30 meter rolls of film in a cassette that record up to 800 frames.
  - ii. C-41 Processing
  - iii. 50-1600 ASA
  - iv. Standard 36 exposure film rolls.(For Testing/Alignment)
63. The data is superimposed onto the negative simultaneously with the exposure of the violation photograph. The camera unit records data information pertinent to each violation in a clear, concise fashion that does not interfere, in any manner, with the photo image.
64. The camera unit is synchronized with a flash unit at 1/1000 of a second. The flash unit has the ability to be used in either manual or automatic modes.
65. The data box contains the following data information for each violation sequence.
  - i. Direction of travel (approaching or receding)
  - ii. Range setting of the Radar Unit
  - iii. Patrol Vehicle Speed
  - iv. Offenders Overtaking Speed
  - v. Total Violation Speed
  - vi. Time (24-hour clock).
  - vii. Date (YY/MM/DD).
  - viii. Officers I.D. Number
  - ix. Film Roll Number
  - x. Location Code
  - xi. Violation Number.
  - xii. Information Window for each location utilized.
66. The camera unit incorporates an Automatic Diaphragm Control Unit with film sensitivity settings of 25 - 1600 ASA (ISO)
67. The camera unit is capable of photographing violations at a rate of no less than 2 frames per second.
68. The camera lens is interchangeable. Depending on the location, lenses ranging from 45 mm with a viewing angle of 42° to 150 mm with a viewing angle of 12° are utilized. All lenses are fixed focus.
69. The camera unit possesses a memory card capable of retaining a minimum of 6000 registrations.
70. At a minimum the data retained for each registration on the memory card includes the following information:
  - i. Direction of travel (approaching or receding)

- ii. Range setting of the Radar Unit
- iii. Patrol Vehicle Speed
- iv. Offenders Overtaking Speed
- v. Total Violation Speed
- vi. Time (24-hour clock).
- vii. Date (YY/MM/DD).
- viii. Officers I.D. Number
- ix. Film Roll Number
- x. Location Code
- xi. Violation Number.

71. The information recorded on the Memory Card is easily downloadable to a PC-Compatible computer for statistical evaluation.

72. The Camera unit possesses a LCD display allowing the officer to view the following:

- i. Date
- ii. Time
- iii. Frame Number
- iv. Speed of last vehicle

73. All alphanumeric changes to the camera unit are accessible to the user in a simple, straightforward manner. Data entry is prompted via a menu driven configuration displayed on the cameras LCD display.

74. The camera unit and associate components are separately fused to prevent electric damage in the event of power surges and/or cross wiring.

75. The radar antenna is mounted outside of the passenger compartment

76. The radar unit has an approved speed measuring range of 20 - 250 km/h

77. The radar unit conforms to Canadian radiation standards.

78. The flash unit is composed of two components. A flash generator and a flash head.

79. The flash head is fully weather proof and mounted outside of the passenger compartment, capable of operation at -30°C.

80. The flash unit provides adequate illumination for photographic violations under all light and weather conditions.

- i. For an area of up to four traffic lanes.
- ii. At varying levels of ambient light conditions.

81. The flash unit is synchronized to the camera shutter at a minimum of 1/1000 of a second.

82. The flash operates in the following mode(s):

- i. Automatic - Flash activated when ambient light conditions dictate via photoelectric cell.
  - ii. Manual - Flash activated for all photographs, no matter what ambient light conditions are present.
83. The flash is fully rechargeable within 0.5 seconds of a previous discharge.
84. Power to the radar system is provided by means of a rechargeable external power source. The System does not use the vehicle's electrical system to power the Photo Radar unit.
85. The rechargeable power supply contains the following:
  - i. A rugged leak proof plastic housing
  - ii. A trickle charger operable at 110 V AC (60Hz)
  - iii. Amphenol type output sockets to connect to the Photo Radar system. The outputs are protected against cross connection.
  - iv. At a minimum the power supply lasts at least eight (8) hours per charge.
86. The internal batteries of the power supply pack is sealed lead acid types with power ratings of 12V, 26 Ah.
87. The power pack is fused to protect the Photo Radar unit, and the charger unit from any cross wiring and or power surges.
88. The power pack does not allow for the operation of the Photo Radar unit while it is being recharged.
89. The system identifies vehicles traveling through the radar beam, and takes a photograph of the rear of each vehicle traveling in excess of a predetermined speed threshold.
90. The system is installed so that each violation is recorded by the camera unit at all times of the day, during all seasons of the year, and under varying conditions of sunlight and shadowing, and at night. The photograph incorporates the following views:
  - i. Rear view of vehicle.
  - ii. Characters and numbers on reflectorized and non-reflectorized license plates.
  - iii. Superimposed Data Information.