DATE:

December 16, 2003

TO:

THE HONORABLE MAYOR AND MEMBERS OF THE LYNWOOD CITY

COUNCIL

FROM:

Lorry Hempe, City Manager

BY:

Autra C. Adams, Special Assistant/Intergovernmental Relations

**SUBJECT:** 

Implementation of a Red Light Photo Enforcement Program

#### **PURPOSE:**

The purpose of this item is to have the City Council conduct the required public hearing and authorize the implementation of a red light photo enforcement system as part of a comprehensive increased public safety program.

#### **BACKGROUND:**

Staff is requesting that the City Council authorize a Red Light Photo Enforcement Program within the City and the installation of traffic signal cameras at up to a maximum of seven (7) selected intersections under a phased implementation plan. California Vehicle Code Section 21455.5 authorizes the implementation of Automated Red Light Photo Enforcement Programs. The use of such cameras, and resulting traffic citations, would help promote traffic safety as part of a comprehensive community safety program, and would require no direct funding by the City. Similar programs are already being used – or are being implemented – throughout California and the nation.

Research by the United States Department of Transportation (DOT) reveals there are more than 1.8 million intersection crashes annually, and, according to the Insurance Institute for Highway Safety, red light running is the leading cause of urban crashes.

A report by the State of California Bureau of State Audits concluded that red light running was a serious traffic problem and found that accidents related to motorists running red lights have generally decreased where local governments have employed cameras.

According to the State Office of Traffic Safety (OTS), Lynwood was rated 3<sup>rd</sup> for hit and run collisions, 9<sup>th</sup> for alcohol involved collisions, 19<sup>th</sup> for nighttime collisions, and 20<sup>th</sup> for total fatal and injury collisions among the 92 cities in California with a population of 50,000 to 100,000 in 2001. More alarmingly, however, Lynwood was rated 1<sup>st</sup> for fatal and injured pedestrian victims involving children under the age of 15, and 2<sup>nd</sup> for total pedestrian collisions among the 92 cities in California of similar population.

Below is a table with Lynwood's ranking by the Office of Traffic Safety. A ranking of 1 of 92 identifies the highest collision rate, whereas 92 of 92 would represent the lowest collision rate:



| FATAL AND INJURY<br>COLLISION TYPE                                  | RANKING BY<br>VEHICLE MILES  | RANKING BY<br>POPULATION |
|---|--|--------------------------|
| Total Fatal & Injuryana   | The state of the s | 69/92                    |
| Alcohol Involved Speed Related                                      | 9/92<br>52/92  | 48/92<br>75/92           |
| Nighttime   | 19/92  | 63/92                    |
| Hit and Run   | 3/92   | 10/92                    |
| HBD Driver under 21   | 53/92  | 78/92                    |
| HBD Driver 21/34<br>Composite                                       | 4/92<br>16/92  | 27/92 · ·                |
|   | LLED AND INJURED   | 59/92                    |
| 회사는 그는 그는 그는 사람이 있는 이 교육으로 그들다는 경기를 하는 것이 되었다. 그는 그리고 그를 하는 것이 되었다. | TIM CLASSIFICATION   |                          |
| <b>Pedestrians</b>  | 2/92   | 8/92                     |
| Pedestrians 65+   | 12/92  | 25/92                    |
| Pedestrians under 15<br>Bicyclists                                  | <b>1/92</b><br>51/92   | 1/92<br>74/92            |
| Bicyclists under 15   | 19/92  | 45/92                    |
| DUI Arrests   | Not Applicable   | 28/92                    |
| Bold type   | indicates "top 20" ranki   | ng                       |

Furthermore, in data obtained from the Los Angeles County Sheriff's Department, in the current year there have been 738 collisions in the City of Lynwood, of which 3 have involved fatalities and 281 have involved injuries. Because of the way that the Sheriff's Department collects data it is impossible to identify the number of collisions that were directly caused by red light infractions, however, as mentioned previously other studies have concluded that the leading cause of collisions is due to running red lights.

#### Legal Requirements

The State of California, has the following legal requirements that must be met in order to operate a red light camera program:

- Only a governmental agency in cooperation with a law enforcement agency may operate a red light camera program.
- Signs must clearly indicate the system's presence at each intersection or at all major entrances to the city or county.
- Yellow light time intervals must meet the California Department of Transportation's minimum standards.
- Photographs must be kept confidential and made available only to governmental and law enforcement agencies to pursue red light violations.
- The registered owner or any individual identified by the registered owner as the driver of the vehicle at the time of the violation must be permitted to review the photographic evidence.
- A citation must be delivered within 15 days from the date of the violation.

#### **ANALYSIS:**

Experience within Lynwood and other communities indicate that increased levels of enforcement at problem locations will reduce accidents and improve traffic safety. In those cities where photo enforcement technology has been deployed, red light violations, traffic collisions, and resulting injuries and fatalities have been significantly reduced at most locations over a period of several years. As a traffic safety program, the Los Angeles County Sheriff's Department believes that the implementation of red light photo enforcement will significantly reduce the number of red light and other violations, increase overall driver awareness, and will provide the City with another tool to improve traffic and pedestrian safety.

Over quite an extensive period, staff has reviewed materials related to photo-controlled traffic signals. We have spoken to numerous agencies that have implemented such programs and kept current on issues raised by the media. It is clear that Redflex Traffic Systems (RTS) provides the best product. RTS is also a vendor that has no pending legal actions, has had no programs shutdown, nor lost any incumbent programs.

Of the various technologies available, the system developed and manufactured by RTS is the only red light photo enforcement system that uses a combined approach of both digital video and digital still images. Specifically, RTS is the only provider that includes a total of four (4) digital cameras in each camera unit. The camera configuration includes three (3) digital still cameras and one (1) digital video camera.

The combined use of digital video and digital still images will significantly increase the City's total citation yield rates, reduce the number of red light violations that are contested and dismissed, provide the greatest compliance to the applicable California Vehicle Codes, and ultimately result in the greatest reduction in collision statistics. In addition, RTS is the only company that provides a full range of services that includes research and development, camera manufacturer, system installation, system maintenance and repair, and citation processing. Because of the full range of services provided, there are no chain-of-custody issues, and full system integrity and reliability.

Currently nearly two dozen California cities, including Culver City, Santa Monica, South Gate, Santa Ana, Ventura, Compton, Garden Grove, Bakersfield, San Juan Capistrano, El Cajon, San Jose, Hawthorne, Emeryville, Inglewood, Fremont, Upland, El Monte, Oxnard, Stockton, Maywood and others are either currently using—or are currently implementing—red light camera systems manufactured and installed by RTS. In addition, earlier this year, the City of Chicago, Illinois went through an extensive Request for Proposal Process where they actually tested various automated enforcement systems and RTS was awarded the contract.

Although numerous cities throughout California and the United States have implemented or are currently implementing red light programs, there have been legal challenges to the validity of such programs. In a highly publicized lawsuit, the City of San Diego was forced to suspend its program after a Superior Court judge ruled that the city had allowed the contractor excessive control, failed to provide proper oversight of the contractor during

the installation of equipment, and paid for the contractor's services according to the number of "paid" tickets. Although the ruling led to the dismissal of approximately 300 tickets, the judge did uphold the constitutionality of the program. What was also interesting in this particular incident, according to the California Bureau of State Audits, was that accidents caused by red light violations "increased citywide by 14%" during the time photo enforcement was curtailed.

In another case, the red light program in Denver, Colorado was halted after a district court judge ruled that the program illegally gave police powers to the private contractor, and that the policy of compensating the contractor based on ticket volume violated state law.

To avoid problems such as those that have occurred in San Diego and Denver, staff recommends that the following steps along with the necessary legal requirements be taken to insure program integrity:

- Staff including the environmental services department will work closely with RTS to provide oversight to ensure that camera installations, signal timings and detection loop placement meet appropriate standards as determined by the City.
- 2. RTS will be paid a flat amount per ticket on an "issued" ticket basis. All tickets will be reviewed and approved by the Los Angeles County Sheriff's Department before being "issued" and mailed to the violator.
- 3. The City and RTS will follow and implement recommendations contained in a July 2002 report issued by the California State Auditor on red light enforcement programs. By using this report as an additional source of information, the City can implement an effective program that will be in compliance with State law, and withstand any future State audit.

Based on information received to date, staff is requesting that a sole-source contract be established with Redflex Traffic Systems for the installation of red light cameras at up to a maximum of seven (7) intersections within the City for red light traffic enforcement. Staff and Redflex will mutually agree upon the intersections. Installation of the signals will require no up-front costs from the City, and will be implemented as a phased program.

#### <u>Fiscal Impact</u>

RTS will assume all risks for the program, and will be reimbursed at a tiered fee of not to exceed \$89 per issued citation. Of each violation processed, the City receives a fine of \$142 which would net the City at least \$53 per citation issued. The City shall be under no obligation to provide funding for construction, implementation or operation of the program. The City shall be responsible for monitoring traffic impacts of the program, and for providing personnel to review and approve the citations that are issued, and overall program oversight.

The program is being proposed in phases. Based on this, the Sheriff's Department has agreed to support the first two intersections with personnel assigned under the current contract with minimal overtime costs. Once the program grows beyond two intersections,

the Sheriff's Department is requesting to have an additional officer dedicated to administering the program, which is consistent with the staffing configuration of law enforcement agencies administering the program. However, the contract to be established with Redflex Traffic Systems is for a comprehensive program fully funded by violator citations, and by which RTS assumes responsibility for capitalization of the program, including all associated risks.

Although the emphasis of the City's Red Light Photo Enforcement Program will be on the reduction of red light violations and the corresponding reduction in vehicle collisions, it is anticipated that this program will provide sufficient revenue for all costs associated with the Red Light Photo Enforcement Program and eventually provide funding for other traffic safety-related programs and equipment.

#### **RECOMMENDATION:**

Staff recommends that the City Council conduct the advertised public hearing and adopt the attached resolution entitled, "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LYNWOOD AUTHORIZING A RED LIGHT PHOTO ENFORCEMENT PROGRAM AND AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT WITH REDFLEX TRAFFIC SYSTEMS FOR PROGRAM IMPLEMENTATION".

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|---------------|--------|-------|----|
|---------------|--------|-------|----|

## A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LYNWOOD AUTHORIZING A RED LIGHT PHOTO ENFORCEMENT PROGRAM AND AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT WITH REDFLEX TRAFFIC SYSTEMS FOR PROGRAM IMPLEMENTATION

**WHEREAS**, The California Vehicle Code Section 21455.5 authorizes the implementation of Automated Red Light Photo Enforcement Programs and the use of such cameras, and resulting traffic citations, would help promote traffic safety as part of a comprehensive community safety program; and

**WHEREAS,** In those cities where photo enforcement technology has been deployed, red light violations, traffic collisions, and resulting injuries and fatalities have been significantly reduced at most locations over a period of several years; and

**WHEREAS,** Of the various technologies available, the system developed and manufactured by Redflex Traffic Systems is the only red light photo enforcement system that uses a combined approach of both digital video and digital still images; and

**WHEREAS,** The combined use of digital video and digital still images will significantly increase the City's total citation yield rates, reduce the number of red light violations that are contested and dismissed, provide the greatest compliance to the applicable California Vehicle Codes, and ultimately result in the greatest reduction in collision statistics.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LYNWOOD, STATE OF CALIFORNIA, DOES HEREBY DECLARE, DETERMINE, ORDER, AND RESOLVE AS FOLLOWS:

- **Section 1.** The City Manager or her designee is authorized to carry out any necessary transactions as so ordered by this resolution.
- **Section 2.** That the City Council authorizes the implementation of a phased red light photo enforcement program in the City of Lynwood for up to (seven) intersections.
- **Section 3.** That the City Council authorizes the Mayor to execute an agreement with Redflex Traffic Systems for a five (5) year base contract with renewal options for the installation of red light photo enforcement and all related maintenance services based upon specific language to be approved by the City Attorney.

| Section 4.            | That the City Council appropriate \$50,000 from the unappropriated |
|-----------------------|--|
| general fund to Accou | Int #01-4555-4273 to pay for the costs of administration of the    |
| contract with Redflex | which is anticipated to be fully funded by violator citations.     |

| PASSED, APPROVED, AND ADOPTED this $\_$ | day of | , 2003 |
|---|--------|--------|
|---|--------|--------|

| ATTEST:                      | FERNANDO PEDROZA, MAYOR      |
|------------------------------|------------------------------|
| ANDREA L. HOOPER, CITY CLERK |                              |
| APPROVED AS TO FORM:         | APPROVED AS TO CONTENT:      |
| CITY ATTORNEY                | LORRY HEMPE,<br>CITY MANAGER |

| STATE OF CALIFORNIA }   |
|---|
| SS. COUNTY OF LOS ANGELES }   |
| I, the undersigned, City Clerk of the City of Lynwood, do hereby certify that   |
| the foregoing Resolution was passed and adopted by the City Council of the City |
| of Lynwood at a regular meeting held on the day of, 2003.                       |
| AYES:   |
| NOES:   |
| ABSENT:   |
| ABSTAIN:  |
| ANDREA L. HOOPER, CITY CLERK  |
| STATE OF CALIFORNIA }   |
| SS. COUNTY OF LOS ANGELES }   |
| I, the undersigned, City Clerk of the City of Lynwood, do hereby certify that   |
| the above and foregoing is a full, true and correct copy of Resolution          |
| No on file in my office and that said Resolution was adopted                    |
| on the date and by the vote therein stated.                                     |
| Dated this day of, 2003.  |
| ANDREA L. HOOPER, CITY CLERK  |
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21455.5. (a) The limit line, the intersection, or other places designated in Section 21455 where a driver is required to stop may be equipped with an automated enforcement system if the system meets both of the following requirements: (1) the system is identified by signs, clearly indicating the system's presence, visible to traffic approaching from all directions, or if signs are posted at all major entrances to the city, including, at a minimum, freeways, bridges, and state highway routes, and (2) the system is located at an intersection that meets the criteria specified in Section 21455.7.

Any city utilizing an automated traffic enforcement system at intersections shall, prior to issuing citations, commence a program to issue only warning notices for 30 days. The local jurisdiction shall also make a public announcement of the automated traffic enforcement system at least 30 days prior to the commencement of the enforcement program.

Only a governmental agency, in cooperation with a law enforcement agency, may operate an automated enforcement system.

- (b) (1) Notwithstanding Section 6253 of the Government Code, or any other provision of law, photographic records made by an automated enforcement system shall be confidential, and shall be made available only to governmental agencies and law enforcement agencies for the purposes of this article.
- (2) For purposes of this article only, any confidential information obtained from the Department of Motor Vehicles for the administration or enforcement of this article shall be held confidential, and may not be used for any other purpose.
- (c) Notwithstanding subdivision (b), the registered owner or any individual identified by the registered owner as the driver of the vehicle at the time of the alleged violation shall be permitted to review the photographic evidence of the alleged violation.
- 21455.6. (a) A city council or county board of supervisors shall conduct a public hearing on the proposed use of automated enforcement systems authorized pursuant to Section 21455.5 prior to that city or county entering into a contract for the use of those systems
- county entering into a contract for the use of those systems.

  (b) The authorization in Section 21455.5 to use automated enforcement systems does not authorize the use of photo radar for speed enforcement purposes by any jurisdiction.
- 21455.7. At each intersection at which there is an automated enforcement system in operation, the minimum yellow light change interval shall be established in accordance with the Traffic Manual of the Department of Transportation.

# Red Light Camera Programs:

Although They Have Contributed to a Reduction in Accidents, Operational Weaknesses Exist at the Local Level



#### **SUMMARY**

#### Audit Highlights . . .

Red light cameras have contributed to a reduction of accidents; however, our review of seven local governments found weaknesses in the way they are operating their programs that make them vulnerable to legal challenge. Specifically, we found that the local governments:

- ✓ Need to more rigorously supervise vendors to maintain control of their programs.
- ☑ Do not always follow the best practice of reviewing intersections for engineering problems before installing cameras.
- All but one would use photographs as evidence in criminal proceedings even though it would appear to conflict with the law governing the program.
- ☑ Generally follow required time intervals for yellow lights.

Of the local governments we visited, only San Diego and Oxnard have generated significant revenue from their red light camera programs.

Our review of available data shows that red light accident rates decreased between 3 percent and 21 percent after red light cameras were installed by five of the local governments in our sample.

#### **RESULTS IN BRIEF**

otorists running red lights are a serious traffic problem, and because it is a difficult violation for a police officer to witness and enforce at the time it is committed, the Federal Highway Administration has identified automated enforcement systems—commonly known as red light cameras—as a measure to address the problem. After the California Legislature authorized their use in 1996, several local governments implemented red light cameras at key intersections to improve traffic safety. Local governments use the resulting photographs to identify motorists who drive through red lights and send them citations. Because of the advanced technology and cost considerations involved, local governments use private vendors to provide red light camera equipment and services.

Our review found that accidents related to motorists running red lights have generally decreased where local governments have employed cameras. However, the seven local governments we reviewed need to make operational improvements to maintain effective control of their programs and comply with state law. The law mandates that only a governmental agency, in cooperation with a law enforcement agency, can operate an automated enforcement system but does not include specific requirements for carrying out this mandate. Although the law needs further clarification, we believe that to avoid the legal challenges that have affected the city of San Diego's program, local governments need to rigorously oversee the vendors that provide red light camera services. Further, we could not always determine if local governments addressed engineering improvements to the intersections they chose before installing cameras. Although the most common reason for choosing red light camera sites was traffic safety, four local governments out of the seven in our sample avoided placing cameras at some of the dangerous intersections along state-owned highways. The cities of Fremont, Long Beach, and San Diego anticipated that obtaining state permission would delay their programs and Los Angeles County indicated it did not consider state-owned highways for its program. Local governments also have differing interpretations concerning the use of photos taken. Most believe they have a legal basis for using them for purposes other than

to prosecute red light violations, which appears to conflict with the enabling legislation. These and other operational weaknesses make red light camera programs vulnerable to legal challenge.

Despite operational concerns, our review of the available data shows that accidents caused by red light violations usually decrease after the introduction of red light cameras. For five local governments we visited, the number of accidents decreased between 3 percent and 21 percent after implementation of red light cameras, but accidents increased by 5 percent for the sixth. Fremont attributed the increase in accidents to higher traffic volume. Accident statistics were not available for Long Beach as the program is still too new. Statewide collision data indicates a 10 percent drop in accidents caused by motorists running red lights in areas with red light cameras compared to no change in the number of accidents in other areas. Even more telling, after San Diego suspended use of its program in June 2001, accidents caused by red light violations increased citywide by 14 percent, based on the four months of data we were able to obtain. Finally, local governments themselves make little or no profit from their programs. Only two of the programs we reviewed made significant revenues.

#### **RECOMMENDATIONS**

We recommended that local governments take several actions to ensure that they comply with state law for using red light cameras, maintain control over their programs, and minimize the risk for legal challenges. These actions include conducting more rigorous oversight of vendors, establishing shorter periods for destroying certain confidential information, developing added controls to ensure that vendors only mail authorized and approved citations, and periodically inspecting red light camera intersections. Before installing red light cameras, local governments should consider whether engineering measures would improve traffic safety and be more effective in addressing red light violations. Finally, to avoid overlooking dangerous intersections that are state owned, local governments should diligently pursue the required state approvals, despite any resulting delays to installing their cameras.

To remove the ambiguity regarding whether a local government or a vendor is operating a red light camera system, the Legislature should clarify the law to define which tasks a local government must perform to operate a red light camera program and which tasks can be delegated to a vendor providing red light camera services. Further, to eliminate ambiguity regarding the admissibility of evidence, the Legislature should consider clarifying the enabling legislation to state whether photographs taken by red light cameras can be used for other law enforcement purposes.

#### **AGENCY COMMENTS**

Los Angeles County, the cities of Oxnard and San Diego, and the city and county of San Francisco generally agreed with our recommendations and provided some clarifying comments in their responses. Fremont took exception to our analysis of the change in accidents before and after the installation of red light cameras. Long Beach agreed with our recommendations, but its city auditor took issue with the report for including a high-level summary of our findings and recommendations. Finally, the city of Sacramento disagreed with several of our findings, most notably that it needed added controls to ensure that the vendor does not mail unauthorized citations.



### REDFLEX

HIGH RESOLUTION DIGITAL RED LIGHT & SPEED PHOTO ENFORCEMENT CAMERA SYSTEMS





REDFLEXred: the digital red-light enforcement system providing a powerful tool to modify unsafe driving behaviours

#### The facts

Around the world some 400,000 people die in road accidents every year.

Red-light running causes around 260,000 crashes each year, of which approximately 750 are fatal.

Fatal red-light crashes are on the increase, far outpacing all other fatal crashes. In the USA, the economic impact of crashes overall is estimated at US\$7 billion each year in medical costs, time off work, insurance hikes and property damage.

#### Behavioural changes

The ultimate goal of red-light cameras must be to reduce the number of accidents at signalised intersections where there is a history of red-light violations. Large-scale automated photo enforcement technologies provide powerful tools to modify unsafe driving behaviour.

#### The results

Redflex digital camera enforcement programs deliver impressive results:

Within the first 12 months Ventura, CA, experienced a reduction in red light collisions at monitored approaches ranging from 37% to 70%. Ventura also

experienced a 19% reduction in red lig collisions citywide since the introduct of the program.

- The Toledo Police Department's Traffic Section report a 26% overall drop in tr accidents at monitored approaches. A number of intersections showed a reduction in accidents by up to a 65%
- According to the County Sheriff's Department of San Juan Capistrano, ( there was a 40% drop in injury collision at targeted intersections in 2001.

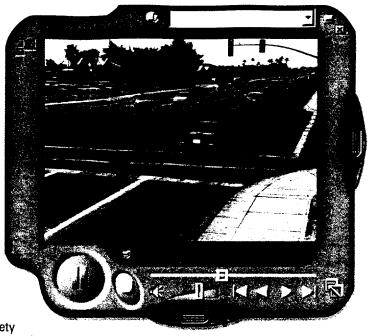
The results are undeniable: camera enforcement systems change driver behaviour by modifying the driving environment. In the short-term, motor develop the perception that if you run light you will be caught; in the long-te attitudes and behaviours change.

#### Redflex program benefits

Proven outcomes of using digital solu for public safety include dramatic reductions in road trauma, substantia infrastructure savings and the powerf intangible benefits of saved lives and injuries.

#### Public acceptance

Communities want safer roads. An A survey conducted by Behaviour Rese Inc. found that almost 80% of Scottso



SMARTscene combines the dynamics of full motion video with the prosecutability of highresolution digital images

drivers supported the Focus on Safety program using Redflex speed and red light camera systems.

#### Digital verses wet film

Redflex is committed to operating digital based operations. The advantages of digital over wet-film relate to such issues as time factors, security, error, storage needs and equipment fault. This sees digital operations providing significant improvement in program results and efficiency.

#### Redflex SMARTscene

SMARTscene combines the dynamics of full motion video with the prosecutability of high-resolution digital images.

SMARTscene provides a 12 second motion

video clip showing a view of the intersection 6 seconds before and 6 seconds after the red light violation.

#### Web access

No matter what state or city the customer is in, access to all contract information is via Redflex WEBops simply by using the Internet and a standard web browser. WEBops provides secure access to the Police Authorisation facility, reports, program management, statistics and performance information.

#### Security

For security over wired and wireless telecommunications networks and the Internet, Redflex uses the VeriSign Trust Network<sup>TM</sup>. Customers who access information from



Scene image B

Scene image A

the Redflex Traffic Systems Web site can be confident that information really comes from Redflex and has not been altered or corrupted since it was created and signed.

#### **Equipment verification**

All Redflex Traffic Systems digital cameras are accessible on-line to maintain and verify camera operation 24 hours a day, 7 days a week.

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#### **Notice printing**

Notices are printed with colour images showing the scene, plate and driver's face. Clear identifiable pictures of the offending vehicle and driver showing the status of the traffic lights reduces the need for public viewing facilities and the number of disputed tickets.

Typical red light violation notice



#### Redflex Traffic Systems Inc.

15020 North 74th Street Scottsdale AZ, USA 85260

Tel: +1 (480) 607 0705 Fax: +1 (480) 607 0752

#### **Redflex Traffic Systems Inc.**

5813A Uplander Way Culver City, CA USA 90230

**Tel**: +1 (310) 642 0470 **Fax**: +1 (310) 642 0142

#### Redflex Traffic Systems Pty Ltd

17 Market Street, South Melbourne.

Victoria, Australia 3205. **Tel**: +61 (3) 9674 1888 **Fax**: +61 (3) 9690 0705

**E-Mail:** sales@redflex.com **Web:** www.redflex.com

## SAFETY FIRST



Volume :

# Redflex Introduces the Industry's Only Combined All-Digital System That Includes <u>Digital Still</u> & <u>Digital Video</u> Violation Capture Technology



The State-of-the-Art Combined Camera Unit, Housing and Synchronized Illumination Module

As the leading provider of total end-to-end traffic enforcement solutions, Redflex is pleased to introduce the latest innovation in all-digital red light enforcement - The Combined All-Digital Still and Video Synchronized Camera Unit. Each camera unit provides the industry's highest resolution images with an aggregate of over **7,000,000**pixels. This state-of-the-art technology translates into unequaled image clarity and detail on a 24x7 basis regardless of weather or lighting conditions. Each Redflex Camera Unit provides 4 crisp color still images and 12 seconds of color video images for non-refutable and virtually non-contestable violation enforcement. These units are the cultivation of over 10 years of research and development and have been designed from the ground up specifically for traffic enforcement photography. Each also includes a synchronized Unit illumination module for unparalleled nighttime violation capture without causing public and/or safety nuisances. All images are encrypted on-site at the point of capture.

### Redflex claims victory in the City of Chicago, IL.>>

In the most heated competition ever, which included proposals, presentations, site visits, reference checks and even a fully functional head-to-head pilot, the City of Chicago selected Redflex from a field of nearly a dozen competitors. Redflex was the only vendor to receive an overall rating of "Excellent"!!!

# Redflex is now the largest automated <u>all-digital</u> red light enforcement vendor in North America>>

With several recent "wins" Redflex has solidified its leadership position as the largest and longest established vendor of all-digital red light enforcement programs in the United States. Redflex is currently working with over 30 municipalities in 8 states. Redflex currently has more digital systems "operational" than all the competition combined.

## SAFETY FIRST



Volume 1

### The Redflex System Provides Five (5) Pieces of Violation Evidence!!!



Image #1 (Scene A): Violating Vehicle Before the Stop Line



Image #2 (Scene B): Violating
 Vehicle Beyond the Stop Line



12 Seconds of Action Video



the Violator

Image #3:

Face Image of

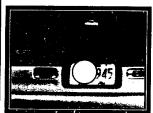


Image #4: License Plate Image of Vehicle

#### volume 1

NEW REDFLEX "WINS">>>

Chicago, IL. Rome, GA Cary, NC. Upland, CA Inglewood, CA Oxnard, CA El Monte, CA. Compton, CA. South Gate, CA. Dayton, OH. Monroe, NC. Indian Trail, NC. Savannah, GA. Bakersfield, CA. El Cajon, CA. Culver City, CA. Santa Monica, CA. Santa Ana, CA.

### The Redflex System Produced the Industry's Highest Safety Results

Ventura, CA.
Achieved a <u>65%</u>
Reduction in Injury
Collisions with a
Downward Trend
Citywide

For more information about the City of Ventura's Red Light Program, please contact: Sgt. John Turner (805) 207-9350 Culver City, CA.
Achieved a <u>65% and</u>
<u>48% Reduction</u> in
Collisions in the 1<sup>st</sup> and
2<sup>nd</sup> years of their
program, respectively

For more information about the City of Culver City's Red Light Program, please contact: Sgt. Omar Corrales (310) 489-2506

### FOR MORE INFORAMTION, PLEASE CONTACT

Toledo, OH.

Aaron M. Rosenberg Vice President of Sales Redflex Traffic Systems 5813 A Uplander Way Culver City, CA. 90230 Phone: (310) 738-8775 arosenberg@redflex.com www.Redflex.com