

VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL WORKSHOP
JULY 8, 2008 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
Red Light Camera Enforcement System	Resolution Ordinance Motion <input checked="" type="checkbox"/> Discussion Only	Robert Porter Chief of Police

SYNOPSIS

An overview of the potential costs, revenues, issues and benefits associated with implementing a red light camera system has been prepared Village Council discussion.

STRATEGIC PLAN ALIGNMENT

The Five Year Plan and Goals for 2007-2012 identified *Preservation of Our Residential and Neighborhood Character*. A supporting objective of this goal is *Maintain Safe and Secure Neighborhoods*.

FISCAL IMPACT

The FY08 General Fund Budget includes \$100,000 of costs and \$200,000 of revenues for red light camera enforcement.

RECOMMENDATION

Information only.

BACKGROUND

Red light camera systems utilize sensors and digital photography to identify violators. Sensors are linked to a signalization system; when the light turns red, the system can detect if a vehicle travels past the stop line of the intersection. The offending vehicle is then videotaped and photographed.

There are several major benefits associated with the installation of a red light camera system in high traffic intersections. Some of these benefits include the following:

- *Reduction of vehicular accidents* – A January 2007 report by the Insurance Institute for Highway Safety stated, “Analyses of police reported crashes in seven U.S. cities found that, overall, right-angle crashes decreased by 25 percent following the introduction of red light cameras.” The same report determined from a review of international red light camera studies that red light cameras reduce right-angle crashes by 24 percent and injury crashes by 25 to 30 percent. Two different studies noted within the Insurance Institute for Highway Safety report indicate there is about a 25 percent reduction in right-angle crashes after red light cameras are installed.
- *Reallocation of Police Department resources* – The installation of a red light camera system should allow for the reallocation of Police Department resources by allowing patrol officers to spend additional time on tasks other than traffic enforcement at intersections. If police officers are responding to fewer accidents at a particular intersection they, in turn, will be able to utilize that time savings to perform other tasks. With each accident requiring a little over an hour of staff time, even a minimal reduction in accidents will result in significant time-savings for Village staff. Officers not responding to and handling accidents can spend that time conducting traffic enforcement in other areas of town, conducting neighborhood patrol or following up on other reports.

- *Enhanced enforcement at key intersections* – The cameras can perform a function safely and more efficiently than an officer can. Many of the high accident intersections are too difficult or unsafe to police. One such example would be the intersection of Finley and Butterfield, where if an officer observed a red light violation he or she would have to enter the intersection and attempt to maneuver through traffic against the light in an effort to catch the violator. This circumstance is common throughout many of the high accident intersections within the Village. The use of this technology would allow 24-hour enforcement at no risk to an individual employee.

As with any project, there are several potential shortcomings with the use of a red light camera enforcement system, including:

- *Public Perception* – Public perception of this type of program is that it is only used to generate revenue. Although some revenue can be derived from such a program, the safety-related benefits noted above provide a strong incentive for implementing a red light camera enforcement program. One way to combat the revenue-generating perception is to conduct a thorough public relations campaign touting the reasons for implementing a red light photo enforcement program.
- *Customer Service Issues* – Another issue arising from the implementation of the enforcement system is the lack of human contact when such a ticket is issued. The citations are mailed to the violator, an action that lacks the element of customer service. All programs allow violators to contact a call center for assistance. Most vendors also operate websites that provide video of the violation as well as FAQs.
- *Legal Concerns* – The new law allowing the use of red light camera systems has several requirements, some of which are as follows:
 - There must be a 30-day grace or warning period before actual citations are issued and the appropriate warning signs must be posted near the intersection warning motorists.
 - Citations are issued to the registered owner of the vehicle, not the driver.
 - Violation is considered a civil penalty and the initial fine is not to exceed \$100; the fine can be increased up to \$200 for late payment. The citation does not count as a moving violation.
 - Municipalities must pass a local ordinance prior to installing a camera system.
 - Municipalities must have a means to administratively adjudicate the violations.
- *Inter-Jurisdictional Agreements* – Any red light camera system being placed at a State or County controlled intersection would require authorization by those respective agencies. Permit applications are submitted post-contract by the vendor and the municipality. The application requires justification for installation, including crash data and a summary of current traffic safety enforcement. Final determination of any red light camera system will be dependent upon permit approval. IDOT requires that signals be upgraded to a 12-inch signal head and LED lights as part of the permit approval. Upgrade costs are estimated at \$200 per light. Most vendors will incur the cost of the upgrade if it is required. No DuPage County permits have been issued to date.
- *Administrative Hearing Process* – The Village would have to expand its administrative hearing process for use with any red light camera enforcement program. Presently, the Village uses an administrative hearing system for adjudication of its Administrative Tow program. Staff is confident that these red light camera tickets could be managed in one or two hearing dates per month. The Village Council Chambers would be the most logical place for the hearing. However, due to the lack of available daytime parking, the hearings may have to be held in the evening. Staff expects that there would be approximately 50 to 100 violators appearing at each hearing. Assuming that each hearing would take approximately five minutes, which is similar to traffic court, the hearings would require four to eight hours of staff time per month.

Almost all of the vendors providing red light camera systems offer two procurement options. The first is to purchase the equipment outright and enter into a maintenance agreement with the vendor and the

second is to lease the equipment and enter into what is commonly referred to as a “turn-key” agreement. A fiscal analysis of both options is provided below.

Village-Managed Program

The Village could purchase a red light camera system outright and manage the program internally. The Village would then contract with a specific vendor to install and maintain the equipment. This option has considerable up front costs for the Village and would also require a significant investment of staff hours to administer. The Village-incurred costs for software, cameras and installation by the vendor would be in excess of \$400,000.

COST TO PURCHASE & INSTALL EQUIPMENT

Fee	RedSpeed	Gatso	Traffipax
Cost per camera	\$80,000	\$55,000	\$75,000
Cost for cameras for full intersection (4)	\$320,000	\$220,000	\$300,000
Installation per camera	\$20,000	\$35,000	\$25,000
Cost for installation for full intersection (4)	\$80,000	\$140,000	\$100,000
Cost of Software	\$605,870	\$75,000	\$25,000
Maintenance cost for software (per year)	\$57,996	\$10,500	\$4,000
Total:	\$1,063,866	\$445,500	\$429,000

If the Village were to purchase such a system outright, there would be additional staffing costs associated with administering the entire process. Staff contacted RedSpeed Illinois based in Lombard to make this determination. A summary of the weekly administrative tasks associated with the program is provided below.

**WEEKLY ADMINISTRATIVE TASKS ASSOCIATED WITH AN “IN-HOUSE”
Red Light Camera System and Cost**

Task	Number	Minutes	Total Minutes	Hours	Hourly Rate	Total
Review violations (video)	1,375	1.5	2062.5	34.375	\$33.29	\$1,144.34
Registration check	275	60	60	1	\$33.29	\$33.29
Expanded Registration Check (rental cars)	15	5	75	1.25	\$33.29	\$41.61
Printing citations, stuffing of envelopes and mailing	275	5	1375	22.92	\$25.00	\$572.92
Phone Inquiries	60	5	300	5.00	\$25.00	\$125.00
TOTAL				64.54		\$1,917.16

Three cameras can generate images of up to 1,375 violations per week but once these images are reviewed, generally only 275 are considered actual violations. The camera system will capture images of drivers stopping past the white stop line while still stopping short of the intersection or making a safe right turn. These images still have to be reviewed to make a determination if a citation will be issued. Once the violators have been identified, staff would have to determine who the registered owner is. Finally, citations and envelopes have to be printed and mailed. These tasks would require 1.5 fulltime equivalent employees to accomplish and would cost approximately \$1,900 per week. It should be noted that more cameras would require more time to complete these tasks.

Lease / “Turn-Key” Agreement

With the “turn-key” option, the contracted company does the majority of the work, including installing the equipment. In most cases the company will review the initial violation, determine if the violations will be pursued, obtain the registered owner’s information, mail out the citation, process the citation and even handle telephone inquires. The company will send the Village digital recordings of all potential violations so that a sworn officer can review them for approval. The “reviewing” officer will let the company know which violations he or she wants citations issued for and the company then proceeds with the ticketing/money collection process. This is all completed electronically.

Most companies that offer this option will bill the Village based on the number of transactions involved in the process. Each step of the process is generally considered a transaction and the transaction fees are deducted from the total fine amount. Under this system, the Village is sent a check, minus the transaction fees, at the end of each month. This option requires minimal administrative work on the part of the Village and requires the agency to review all alleged violations for approval as to whether or not they should proceed through the ticketing process. Some vendors offer the lease option based on a flat monthly fee (per camera), but those are the minority.

Five vendors provided figures for the lease/”turn-key” option. Below is a comparison of what the lease options would cost the Village.

COST FOR A LEASE OR “TURN-KEY” OPTION

Fee	RedSpeed	Gatso	Traffipax	Laser Craft	ATS
Cost per camera	\$0	\$0	\$0	\$0	\$0
Installation per camera	\$0	\$0	\$0	\$0	\$0
Maintenance per camera per month	\$1,499	\$0	\$4,200	\$4,395	\$4,750
Maintenance per month for four cameras	\$5,996	\$0	\$16,800	\$17,580	\$19,000
Average fee per ticket	\$29.95	\$30	\$28	\$0	\$0

It should be noted that Laser Craft and ATS will provide the lease option at a flat monthly fee per camera and will not charge a per ticket fee.

Revenue Analysis

The overall purpose of the red light camera enforcement program is to enhance the safety of motorists traveling through various intersections within the Village. Ideally, such a program would be self-sufficient and continued funding for the project would be generated from any revenues produced by the program. Utilizing the costs associated with the lease option for the five different vendors identified in the “Cost Analysis,” the Village would generate an average of \$24,909 per month in revenue for one intersection. This figure was generated utilizing an assumption of 15 violations per day (at one intersection) at \$100 per violation.

With time, drivers will become aware of the camera enforcement program, which will lead to a reduction in violations. The City of West Chicago provided staff with an approximate breakdown of that reduction. This information was obtained from RedSpeed Illinois, which is the vendor West Chicago is currently utilizing for their red light camera enforcement program. West Chicago stated that for the first two months after the 30-day grace period, the number of violations will remain constant. In months three and four an agency will typically see a 30 percent decrease in the overall violations. After month four, violations tend to increase approximately 15 percent or to about 85 percent of the original numbers and remain somewhat

stable from that point forward. Ideally, the Village would want to see red light violations cease but that may not be the case. If that does occur, the equipment can be relocated to another intersection where it is needed.

REVENUES AND ONGOING OPERATING COSTS ASSOCIATED WITH A RED LIGHT ENFORCEMENT PROGRAM

	HIGH PROJECTION	LOW PROJECTION	MID-RANGE PROJECTION
Estimated Revenues			
Estimated Annual Collectable Citations	4590	4590	4590
Estimated Annual Gross Revenue – Year 1	\$ 459,000	\$ 459,000	\$ 459,000
Estimated Costs			
Estimated Annual Costs – Year 1	\$ 141,300	\$ 333,720	\$ 231,600
Estimated Net Revenue – Year 1	\$ 317,700	\$ 125,280	\$ 227,400
Projected Net Revenue for three years @ 75% of Year 1 Revenue/Cost for Years 2 & 3	\$ 756,000	\$ 176,580	\$ 452,700