Scotts Crossing Rd
Colshire Dr
NEXT SIGNAL

BE
PREPARED
TO STOP

U.S.Department
of Transportation

**Federal Highway
Administration**

Implement Automated Enforcement of Red-Light Running (Cameras)

WHERE TO USE
Signalized intersections with a high frequency of right-angle and rear-end crashes attributed to drivers who intentionally disobey red signal indications.

These photos show the front and rear of a typical red light camera installation.
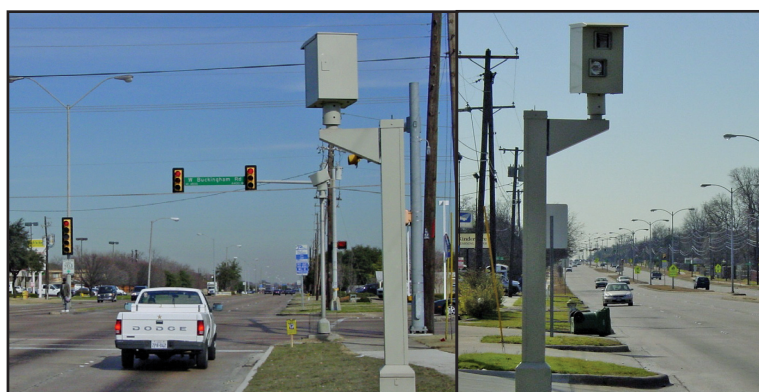
Photos by: Texas Transportation Institute

DETAILS

Red-light running is a well-documented traffic safety problem. Various engineering countermeasures can address some occurrences of red-light running. Such countermeasures are discussed in *Making Intersections Safer: A Toolbox of Engineering Countermeasures to Reduce Red-Light Running* (available from safety.fhwa.dot.gov). In some instances, inappropriate driver behavior is the primary problem. Because police officers cannot enforce traffic signals as often or as widely as an agency might need, automated enforcement is an attractive alternative.

Automated enforcement refers to the use of photo and video camera systems connected to the signal control. Such systems record vehicles proceeding through the intersection after the signal displays red. Red-light running cameras turn on after the signal turns red. A detector senses approaching vehicles and sends a signal to the camera, which photographs vehicles as they enter the intersection. Data on the violation are printed on the photograph. Police officers review the photos to verify a violation occurred prior to mailing the citation. More information in the operational aspects of such systems can be found in *Red-Light Camera Systems Operational Guidelines* (available from safety.fhwa.dot.gov).

KEY TO SUCCESS

Acceptance by local stakeholders—including officials, the public, and local law enforcement — is key to successful red-light running programs. A public information campaign explaining the program, the need for it, how the cameras work, and the potential benefits are key to successful implementation. Signs informing the public that automated enforcement is being used are frequently used.

Successful red-light camera programs have generally begun as safety improvement programs. Programs that are perceived as revenue generators are generally not well accepted.

Both the highway and law enforcement agencies in the jurisdiction should jointly plan and operate the program. Moreover, where private contractors are used to implement parts of the program, their contract and compensation should not be directly linked to revenue or tickets issued. Some programs have lost public support because it was perceived that a private company was profiting from traffic ticket revenue.

ISSUES

Arguments against this strategy include violation of personal privacy or constitutional rights, lower effectiveness than other types of enforcement, cost outweighing the benefits, and implementation solely to generate revenue. Recent challenges also include questioning the precision and proper setting of the cameras. The Institute of Transportation Engineer's *Automated Enforcement in Transportation* addresses these arguments. Timeliness of the citation is important. Minimize the time between the violation and the mailing of the citation. The issue of tolerance (as it relates to time into the red interval that the violation occurred) must also be addressed.

TIME FRAME ●●○

The need for new legislation and the extent of public involvement can affect implementation time.

COSTS ●●○○

Costs may vary, depending upon the public information effort and the need for additional legislation. Equipment costs can vary due to the type of camera used. Costs also include monitoring the videotapes, issuing citations, maintaining collections and records, maintaining equipment, maintaining quality control, and rotating or moving the equipment from location to location.

EFFECTIVENESS

PROVEN: Several studies have shown the effectiveness of automated red-light enforcement in reducing red-light violations and crashes related to those violations. Fairfax, Virginia, experienced a 44% reduction in violations during the first year of operation. Two other sites in the city that did not have cameras experienced decreases in violations of 34%. Control sites in nearby counties experienced little change. Oxnard, California, experienced approximately 41% fewer red-light violations within a few months of installation. FHWA has made a general estimate of a 15% reduction in red-light running incidents resulting from these programs.

The ITE report *Automated Enforcement in Transportation* (available from www.ite.org) contains information on experiences with red-light running cameras in other jurisdictions. The programs experienced a range of reduction in violations of 23 to 83%. Another study concluded that red-light camera enforcement can reduce crashes at urban signalized intersections up to 11% and left-turn crashes by up to 45%.

COMPATIBILITY

This strategy can be used in conjunction with the other strategies for improving safety at intersections and should be accompanied by a public information or outreach campaign to explain the program.

For more details on this and other countermeasures: http://safety.transportation.org

For more information contact:

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