Wisconsin Traffic Engineering Council
Issue Paper 1 – Red Light Running Video Enforcement
What you need to know before it comes to a neighborhood near you

Background / Overview
Red light running video enforcement (RLRVE) systems are aimed at helping reduce a major safety problem at urban and rural intersections, a problem that is estimated to produce more than 100,000 crashes and approximately 1,000 deaths per year in the United States. The size of the problem, the promise shown from the use of RLRVE systems in other countries and a variety of positive study results in the United States suggest that RLRVE systems will be installed in Wisconsin sometime in the near future. One of the main reasons the United States was, and continues to be, slow to embrace this technology is because of questions and concerns surrounding the legality of these systems. However, there has been interest by some leaders in the Milwaukee and Madison areas to initiate a pilot project. It is imperative traffic engineers across the state understand basic functionality of RLRVE systems prior to possible mass adoption by government units based on tentative approval of pilot initiatives.

Current National Practices
Orange County, CA
A 2005 Orange County, California government report found that one year after red light camera installation, accidents dropped by 46.7 percent in Garden Grove, 28.2 percent in Costa Mesa, 16.2 percent in Santa Ana, 12.1 percent in San Juan Capistrano and 5.7 percent in Fullerton.

Savannah, GA
Savannah, Georgia has seen a 20 percent reduction in crashes and a 60 percent reduction in violations at intersections with red light cameras since Oct. 2003. Less than 1 percent of the 21,000 tickets issued have been appealed.

Raleigh, NC
The Institute for Transportation Research and Education at North Carolina State University compared the number of red-light related accidents in Raleigh between camera and non-camera intersections. The result: right-angle crashes were reduced by 42 percent at red-light camera intersections, rear-end crashes went down 25 percent and total red-light related crashes decreased by 22 percent.

Columbus, OH
The city has seen the number of intersection crashes drop 47 percent at the eight intersections equipped with red light cameras in 2006. Red light running violations have dropped by nearly 63 percent.

Knoxville, TN
Traffic accidents at 13 high-volume Knoxville intersections dropped 17 percent after the installation of red light cameras in 2006. Right-angle crashes were down 45 percent and rear-end crashes were down 1 percent.

Garland, TX
A 2006 study of the red light camera program in Garland, Texas, found that crashes caused by red light runners decreased by 56 percent at intersections with cameras; crashes at intersections without cameras decreased by 38 percent. Injuries at the locations with cameras decreased by 27 percent, from 95 to 69 injuries.

Current Wisconsin Practices
No current Wisconsin practices. State statutes need to be modified to allow ticketing of vehicles versus motorists.

Technical Issues
Procedural:
- Authentication of photographs
- Chain of evidence of photographs
- Compliance with enabling statutes
- Foundation: Device reliability (maintenance, checks for accuracy, training of personnel involved in the process)
- Misuse or dissemination of photographs
- Notice – compliance with applicable state rules for service
- Proper notice of use of photo red light enforcement (signs)
- Standing – who can bring an action, when, and where

Substantive:
- Administration of the program violates Fourteenth Amendment Due Process rights
- Confrontation rights (6th Amendment right)
- Equal Protection (disparate treatment for public, police, rental, corporate, out-of-state vehicles, motorists cited by police)
- Fifth Amendment right to remain silent (for statutes requiring affidavit as to who was driving)
- Mailing a citation that requires appearance is a seizure subject to the Fourth Amendment
- Photographing a motorist is a search subject to the Fourth Amendment
- Pre-charging delay (delay between the violation’s occurrence and receipt of notice) – Fourteenth Amendment Due Process
- Presumption that the registered owner is the driver impermissibly shifts the burden of proof
- Privacy – violation of State privacy laws
- Revenue generation: selection criteria for photo red light enforcement, light phase timing
- Substantive Due Process - Privacy

Additional Resources
- Insurance Institute for Highway Safety: http://www.iihs.org/research/topics/rlr.html
- The National Campaign to Stop Red Light Running: http://www.stopredlightrunning.com/

Wisconsin Traffic Operations and Safety (TOPS) Laboratory
Institute of Transportation Engineers-Wisconsin Section

www.topslab.wisc.edu
www.itewisconsin.org