

# SIGNALIZED INTERSECTION SAFETY STRATEGIES



## Implement Automated Enforcement of Approach Speeds (Cameras)

### WHERE TO USE

Signalized intersections with a high frequency of crashes attributed to drivers who intentionally disobey posted approach speed limits.



Photo by: FHWA

### DETAILS

Enforcement of traffic regulations is an important part of an overall intersection safety improvement strategy, but limited resources constrain the efforts police can devote to providing speed enforcement. Traffic law enforcement agencies will often select locations for targeted enforcement when crash, situation, or other sources of information suggest that the site is unusually hazardous due to illegal driving practices. Crash types that might indicate speeding as a concern include right-angle and rear-end collisions. Speed enforcement cameras (also known as photo radar) are a potential method to use in these locations.

### KEY TO SUCCESS

A key to the success of this strategy is planning the enforcement and prioritizing the intersections that need it. Such intersections should have a combination of high-speed violation rates and related crash patterns. In some cases, public input or observations by law enforcement personnel may suggest that a location should be targeted with enforcement.

It is important that both the highway agency and the local law enforcement agencies be involved jointly in planning and operating the program. Another critical key to the success of an automated enforcement program is public awareness and acceptance.

### ISSUES

There are many opponents to speed enforcement cameras. Arguments against this strategy include violation of personal privacy, violation of constitutional rights, lower effectiveness than other types of enforcement, high cost outweighing the benefits, accuracy of the devices and the settings,



and perceived implementation solely to generate revenue. Legislation may be necessary before implementing an automated enforcement program. Most enforcement agencies will allow for some tolerance before a citation is issued.

### TIME FRAME ●●○○

The time to implement speed enforcement cameras can vary somewhat, depending upon the extent of public involvement, the need to purchase new equipment, and the need for new legislation.

### COSTS ●●○○○

Costs may vary depending upon the effort put into public information and the need for additional legislation. Equipment costs can vary somewhat due to the type of camera selected (i.e., 35 mm, video, or digital), collections and records maintenance, and equipment maintenance.

### EFFECTIVENESS

**TRIED:** Automated enforcement of speeds may provide a longer-term effect than on-site enforcement by police officers. It is not feasible to provide officers to constantly enforce speed limits, but a camera is more flexible regarding the duration it can operate.

Several agencies have shown reductions in crashes after speed enforcement cameras were installed. Paradise Valley, Arizona, experienced a 40% decrease in crashes after it began using a camera mounted in a mobile vehicle. In National City, California, a 51% decrease in crashes was experienced in the six-year period following installation of a camera unit in a mobile vehicle in 1991.

However, another study claims that more than half of the 18 studies evaluating automated enforcement programs have serious methodological problems, thereby negating the validity of their positive results.

Yet another study showed that photo radar and speed display boards had about the same effectiveness, reducing mean speeds by 5.1 and 5.8 miles per hour (mph), respectively, where baseline speeds averaged 34 to 35 mph in 25-mph zones. All speed control devices produced more noteworthy results on speeds 10 mph or more over the 25-mph speed limit. At the experimental site, the photo radar reduced these excessive speeds by 30%; the speed display board reduced them by 35%, and the enforced display board by 32%. However, these significant speed reduction capabilities were not sustained after the devices were removed. Researchers noted one long-term, statistically significant effect with the unenforced display board: a 1.7-mph decrease in speed continued at the experimental site after the display board was gone.

### COMPATIBILITY

This strategy can be used in conjunction with the other strategies for improving safety at intersections.

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

#### For more information contact:

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