

Speed Cameras as a Tool to Reduce Road Fatalities

Prepared by Misty A. Boos, May 2009



VDOT Research Library
530 Edgemont Road
Charlottesville, VA 22903
Ph: (434) 293-1959
Fax: (434) 293-1990
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Speed Control

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Research Synthesis Bibliography No. 23

Research Synthesis Bibliographies (RSBs) are distillations of relevant transportation research on current topics of interest to researchers, engineers, and policy/decision makers. Sources cited are available for loan (or available through Interlibrary Loan) to VDOT employees through the VDOT Research Library.

Learning Lessons from Domestic and International Speed Camera Programs

Most researchers and public safety officials agree that speeding causes an increase in crashes. They generally agree that speed limit enforcement measures, including speed cameras, help catch and penalize drivers who break the speed limit. However, some questions remain unanswered. Does the use of speed cameras actually lead to a reduction in the number of speeders and crashes, or reduce crash severity overall? Are there any unintended consequences that result from using visible speed enforcement camera systems?

Some researchers have claimed that fixed, visible speed cameras may lead to dangerous traffic situations, as drivers approaching an enforcement zone suddenly decelerate, only to accelerate again after having passed it—something referred to as “the kangaroo effect. While the kangaroo effect has been observed by many, to date there is no scientific evidence to prove that it results in an increase in accidents. In addition, some research has noted that drivers aware of fixed speed cameras may resort to using alternative routes to avoid the cameras, possibly leading to an increase in crashes on other roadways.

Regression to the Mean

It is common practice to place speed cameras in locations where there have been recent high numbers of crashes. When collecting crash data in these areas, crash rate trends may appear to decrease due to “Regression To the Mean” (RTM) instead of being the result of the effectiveness of the cameras. The idea behind this phenomenon is that when cameras are placed at sites where a high number of accidents had been observed, a lower number of accidents after the placement might be expected in subsequent years simply by random chance “as the roadway returns to its normal mean crash rate after the peak.” (Thomas et al, 2008)

RTM is a well known phenomenon by which extreme examples from any set of data are likely to be followed by examples which are less extreme. RTM is recognized as a concept that can be misused easily, but also one that is critical to research and experimental design. Despite the concerns over cameras and RTM, “injury crash reductions in the range of 20% to 25% appear to be a reasonable estimate of site-specific safety benefit from conspicuous, fixed-camera, automated speed enforcement programs”. (Thomas et al., 2008)

International Speed Camera Use

Speed cameras are used extensively outside of the United States. From their international review of speed camera programs, authors Pilkington and Kinra concluded that “although the evidence is weak, the research consistently shows that speed cameras are an effective intervention in improving road safety”. (Thomas et al., 2008)

Public Acceptance

While successful speed camera programs are in place in many countries today, the use of enforcement cameras is certainly contentious. Many international programs were initially met with public resistance. This RSB includes some international sources about public concerns related to speed camera programs.

In the U.S., the constitutionality of automated speed enforcement has been repeatedly upheld, although speed camera programs have not become an established part of a nationwide, transportation safety program. There are a number of public concerns transportation professionals may want to contemplate when considering or implementing a speed camera program, including: general ticketing procedures, how ticket revenues will be distributed, privacy issues, and whether or not automated enforcement does result

in reduced crash rates. Some studies have noted that public resistance to such programs can occur if speed cameras are perceived as revenue generators rather than methods for improving safety. (Hedlund, 2007)

For a list of communities in the US with speed camera programs in place please see this website:
http://www.iihs.org/research/topics/auto_enforce_list.html

“The ultimate success of automated enforcement will not rely on the technology so much as how the technology is applied and how transportation professionals interact with state and local legislators, local judiciary, and the public when implementing automated enforcement”. (Turner 1998)

—*Misty A. Boos*

Note: This RSB does not include research regarding red-light cameras or cameras used specifically at intersections.

DATABASES SEARCHED FOR THIS RSB

OCLC WorldCat	TRANSPORT 1988-present	TRIS Online
TRISworld	NTIS	Google Coop: State DOT Search Engine
VDOT OneSearch	Research In Progress (RiP)	Google Scholar
JSTOR	LexisNexis Academic Universe	

GETTING RESOURCES LISTED HERE

Full text copies of most resources listed in this document are available in the VDOT Research Library's collections, or through interlibrary loan, through the Library. In many cases, the Library owns both virtual and hard copies of documents, as well as formats such as CD-ROM.

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Reference Questions:

Ken Winter, Director Library/Info. Services
Ken.Winter@vdot.virginia.gov
434-962-89789

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Misty Boos, Library Assistant
Misty.Boos@VDOT.Virginia.gov
434-293-1959

CONTENTS

I.	DOMESTIC PROGRAMS AND STUDIES	P. 1
II.	INTERNATIONAL PROGRAMS AND STUDIES	P. 11
III.	RESEARCH IN PROGRESS	P. 26

DOMESTIC PROGRAMS AND STUDIES

The following citations are sorted by date with the most recent articles and reports listed first.

Countermeasures That Work: A Highway Safety Countermeasure Guide For State Highway Safety Offices, Fourth Edition, 2009

ABSTRACT: The National Highway Traffic Safety Administration has released a report that explores major highway safety strategies and countermeasures that are relevant to State Highway Safety Offices; summarizes their use, effectiveness, costs, and implementation time; and provides references to safety research summaries and individual studies.

DATABASE: TRIS Online

ACCESS:

<http://www.nhtsa.gov/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811081.pdf>

Communities Using Speed Cameras

CITATION: Insurance Institute for Highway Safety

ABSTRACT: This Web site by the Insurance Institute for Highway Safety provides a comprehensive listing of domestic speed camera programs as of March 2009.

ACCESS: http://www.iihs.org/research/topics/auto_enforce_list.html

Cameras Help Lower Speeds on Arizona Freeway

CITATION: Status Report, 2008. Insurance Institute for Highway Safety. Vol. 43, No. 1.

ABSTRACT: This article reports that a campaign to limit speeding in Scottsdale, Arizona using a speed-camera enforcement program was successful. Before the pilot program, 15 percent of drivers were traveling more than 75 mph on sections posted at 65 mph. Once the signs and cameras were in place, the percentage of violators fell to one to two percent. Surveys indicated, in addition, that local drivers were pleased with the speed cameras. The article describes the nine-month pilot program and its location. By comparing speeds on similar portions of nearby freeways without cameras, researchers found that there was as much as a 95 percent decrease in the odds that drivers would travel faster than 75 mph. The article includes a short section on a similar trial in Montgomery County, Maryland, just outside Washington, D.C.

DATABASE: TRIS Online

ACCESS: <http://www.iihs.org/externaldata/srdata/docs/sr4301.pdf>

Speed Enforcement Camera Systems Operational Guidelines

CITATION: 2008. United States. Federal Highway Administration; United States. National Highway Traffic Safety Administration.

ABSTRACT: The ASE guidelines are intended to serve program managers, administrators,

law enforcement, traffic engineers, program evaluators, and other individuals responsible for the strategic vision and daily operations of the program. The guidelines are written from a U.S. perspective and emphasize U.S. contexts and best practices. However, they are also drawn from the experiences of exemplary programs internationally. Though international differences in law, history, and culture might influence best practices for ASE, the majority of these guidelines are relevant to ASE programs worldwide. The guidelines are intended to be accessible and inclusive, with an emphasis on presenting options and describing the advantages, particularly in increased traffic flow and reduced congestion, and disadvantages of each, so that an ASE program can be tailored to the needs of a particular jurisdiction. The technological state of the practice in ASE is developing rapidly. Some specific technologies are described, but rather than focus on the capabilities of current technologies, the emphasis is on identifying the functional requirements that technologies must meet so that the guidelines remain relevant as technologies evolve.

DATABASE: TRIS Online

ACCESS: <http://ntl.bts.gov/lib/30000/30100/30166/810916.pdf>

Speed Enforcement Program Guidelines

CITATION: 2008. United States. National Highway Traffic Safety Administration.

ABSTRACT: It is well-established that speeding represents a risk to public safety.

Excessive speed increases the likelihood of crashing and the risk of severe injury in a crash. In 2005, more than 13, 000 lives were lost in speeding-related crashes. Reducing speeding is a high-priority objective and effective speed enforcement is an essential countermeasure to reduce speeding and lowering crash risk. The National Highway Traffic Safety Administration and the Federal Highway Administration have developed Speed Enforcement Program Guidelines to provide law enforcement personnel and decision makers with detailed information on how to establish and maintain an effective speed enforcement program. The guidelines were developed with input from many of the most successful law enforcement agencies in the U.S. and include information that can help establish an effective speed enforcement program, including details on: program management; problem identification; enforcement countermeasures; role of engineering; public outreach/communications; legislation, regulation/policy; and program evaluation.

DATABASE: TRIS Online

ACCESS: <http://ntl.bts.gov/lib/30000/30100/30165/810915.pdf>

Analysis of Automated Speed Enforcement Cameras in Charlotte, North Carolina

CITATION: Christopher M. Cunningham, Joseph E. Hummer and Jae-Pil Moon, Transportation Research Record: Journal of the , 2008. No. 2078, Pg. 127-134.

ABSTRACT: The effects of a mobile automated speed enforcement system in Charlotte, North Carolina, were examined. Limited focus groups were conducted to characterize resident and professional attitudes, opinions, and beliefs regarding such a speed program. Overall, opinions were positive. The system, consisting of three mobile units, was implemented along 14 corridors. Two separate analyses were conducted on data collected from January 2000 to December 2005. Findings from a previous study done for the North Carolina Governor's Highway Safety Program were updated. The first, and primary, analysis was a before-and-after analysis of collisions. This study used Hauer's comparison group methodology. Three different collision data sets were analyzed: total collisions, data accounting for regression to the mean, and data for five heavily enforced corridors. On the basis of the analysis, the impact of regression to the mean appears to be negligible. The results indicate that the camera program likely reduced collisions in corridors with

automated enforcement. The second analysis observed whether compliance with posted speed limits was enhanced. Mean speeds, median speeds, 85th percentile speeds, and percentages of drivers more than 10 mph over the speed limit were analyzed. The analyses found speed reductions caused by the camera program. On the basis of these findings, it was recommended that the City of Charlotte continue the automated speed enforcement program. Other agencies considering speed camera programs can benefit from the knowledge gained in Charlotte.

DATABASE: TRIS Online

ACCESS: <http://dx.doi.org/10.3141/2078-17>

Evaluation of Automated Speed Enforcement in Montgomery County, Maryland

CITATION: Richard A. Retting, Charles M. Farmer and Anne T. McCartt. Traffic Injury Prevention, 2008. Taylor & Francis Limited. Vol. 9, No. 5, Pg. 440-445.

ABSTRACT: Almost one quarter of speeding-related fatalities occur on streets with speed limits of 35 mph or less. In 2007, Montgomery County, Maryland, implemented the state's first automated speed enforcement program, with camera use limited to residential streets with speeds limits of 35 mph or less and school zones. The study's purpose was to evaluate initial effects of camera enforcement on speeds and to assess public attitudes.

DATABASE: TRIS Online

Evaluation Of Automated Speed Enforcement On Loop 101 Freeway In Scottsdale, Arizona

CITATION: Richard A. Retting, Sergey Y. Kyrychenko and Anne T. McCartt. Accident Analysis & Prevention, 2008. Elsevier. Vol. 40, No. 4, Pg. 1506-1512.

ABSTRACT: Speed cameras can reduce speeding and injury crashes, but in many communities they are confined to low-speed settings such as residential streets and school zones. In 2006 the city of Scottsdale, Arizona, implemented a 9-month pilot program to evaluate the feasibility and effects of highly visible speed camera enforcement on a busy urban freeway. This was the first use of fixed speed cameras on a major US highway. Deployment of six cameras along an 8-mile corridor was associated with large declines in mean speeds and an 88% decrease in the odds of vehicles traveling 11 mph or more above the 65 mph limit. Traffic speeds increased soon after the pilot program was suspended. In addition to reducing speeding along the enforcement corridor, speed cameras were associated with large reductions in speeding on the same highway but 25 miles away from the camera installations. However, traffic speeds were fairly stable on urban freeways in Scottsdale that were not part of the study road. Public opinion surveys found widespread concerns about speeding on the Loop 101 freeway and high levels of support for speed camera enforcement on this road.

DATABASE: TRIS Online

Overall Impact of Speed-Related Initiatives and Factors on Crash Outcomes

CITATION: Angelo D'Elia, S. Newstead and M. Cameron. Appearing in: 51st Annual Meeting of the Association for the Advancement of Automotive Medicine, Annals of Advances in Automotive Medicine, 2007. Association for the Advancement of Automotive Medicine. Vol. 51, Pg. 465-484.

ABSTRACT: This study has evaluated the overall impact of a package of speed-related initiatives and factors on crash outcomes including more covert operations of mobile speed cameras, an increase in speed camera operating hours and lowering of cameras' speed detection threshold. The package was associated with a highly statistically significant

estimated overall reduction in casualty crashes of 3.8% which was in large part due to the estimated reduction in casualty crashes for metropolitan Melbourne rather than the rest of Victoria. In particular, disaggregation of crash outcomes showed a highly statistically significant crash reduction of 6.1% associated with casualty crashes that occurred in 40, 50 or 60 km/h speed zones which are mostly situated in metropolitan Melbourne. This result was consistent with the analysis of increased speed camera activity which indicated that in Melbourne the largest increase in camera hours occurred on 50 and 60 km/h roads. For injury severity, the analysis suggested a possible reduction in the risk of fatal outcome in reported casualty crashes over the post-implementation period with a non-statistically significant estimated relative injury severity of 0.96. In addition, a model where the post-implementation period was partitioned by time showed trends towards increased reductions in casualty crashes and in the risk of fatal outcome of those crashes over time.
DATABASE: TRIS Online

Demonstration of Automated Speed Enforcement In School Zones In Portland, Oregon

CITATION: M. Freedman, D. De Leonardis, G. Raisman, et al. 2006. United States. National Highway Traffic Safety Administration.

ABSTRACT: The use of Automated Speed Enforcement (ASE) to reduce traffic speeds in school zones was demonstrated at five neighborhood schools in Portland, OR, during a two-month period. ASE was deployed at each demonstration school zone an average of two to three times per week during this period. The program was well publicized through a public information and education campaign that was conducted prior to and during the demonstration. Speeds were measured at the five demonstration school zones and at five comparison school zones before, during, and after the demonstration. Public awareness was measured before and during the ASE demonstration. Major findings follow: (1) Mean and 85th percentile speeds at demonstration school zones were reduced by approximately 5 mph when ASE was present, and ASE still had an effect (although reduced to 1 to 2 mph) when ASE was not present. The proportion of traffic that exceeded the speed limit by more than 10 mph was reduced by about two-thirds when ASE was present, and by about one-quarter when ASE was not present. (2) Maximum speed reduction was obtained with the combination of ASE and a flashing beacon, which is used during certain hours at many Portland school zones. (3) The speed reduction effects observed at the demonstration school zones were still present one month after ASE operations ceased in May 2005. (4) Speeds at most of the comparison locations were unchanged during this test, indicating that the speed reductions at demonstration schools were attributable to the ASE program. /Abstract from report summary page.

DATABASE: TRIS Online

ACCESS: http://www.nhtsa.dot.gov/portal/nhtsa_static_file_downloader.jsp?file=/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/HS810764.pdf

Speed, Road Injury, and Public Health

CITATION: Elihu Richter, Tamar Berman, Lee Friedman, et al. Annual. Rev. Public Health, 2006. Annual Reviews Incorporated. Vol. 27, Pg. 125-152.

ABSTRACT: This article reviews milestones in the history of increases in speed limits and travel speeds and the related risks for road deaths and injury. The authors note that reduced speed limits, speed-camera networks, and speed calming substantially reduce the death and injury rates in absolute numbers. This trend is apparent in the United Kingdom, Australia, France, and other countries, but not in the United States, which has raised

speed limits and does not have speed-camera networks. The authors consider how speed adaptation and the interaction between speed and other determinants of injury risk, such as congestion and countermeasures, affect the relationships between speed and fatalities. They stress that speed-camera networks and speed calming lead to large, sustainable, and highly cost-effective drops in road deaths and injuries and should target entire populations, not only high-risk subgroups or situations. The authors propose the use of predictive models of risk for death, injury, and effects of air pollution and transportation disasters. These models are based on traffic load, expected speeds, spillover, the Newtonian relationships between speed and injury in the Nilsson model, and the protective effects of speed control and congestion. The authors conclude that the failures of speed control, particularly in the United States, result from a flawed ethical paradigm in which intangibly defined gains from saving time and marketing of the thrill of speed result in tolerating large losses of human life.

DATABASE: TRIS Online

Speed Cameras: An Effectiveness and a Policy Review

CITATION: David K. Willis. 2006. Texas Transportation Institute. Pg. 19.

ABSTRACT: The objective of this research was to: review what the research literature has to say about the role of illegal speed in traffic crashes; examine the role of speed cameras in reducing speeding; examine the safety effectiveness of speed cameras; and illuminate implementation issues that can "make or break" a speed camera program by gaining public acceptance for, or generating fierce public opposition to, photographic enforcement of speed limits. The report concludes that speeding enhances crash risk and severity and that speed cameras reduce both speeding and crash severity. Implementation issues, however, are highly problematical, and a poorly implemented automated speed enforcement program can easily undermine public support.

DATABASE: TRIS Online

ACCESS: <http://tti.tamu.edu/documents/TTI-2006-4.pdf>

An Evaluation of the Safety Effects of Speed Enforcement Cameras in Charlotte, NC

CITATION: C. Cunningham. North Carolina Governors Highway Safety Program, 2005. Institute for Transportation Research and Education, North Carolina State University.

ABSTRACT: Municipalities across the State of North Carolina are becoming more aware of the possible safety benefits that photographic enforcement cameras offer. Until recently, red light running cameras have been the only enforcement of this type in North Carolina. However, legislation passed in June 2003 allowed a pilot period to test automated speed enforcement in Charlotte, North Carolina. If the program is successful at increasing safety, it is very likely that this form of enforcement could be used in other municipalities.

ACCESS:

<http://itre.ncsu.edu/ITREmain/research/documents/SpeedEnforcementFinalRpt.pdf>

Are Speed Enforcement Cameras More Effective Than Other Speed Management Measures?: An Evaluation Of The Relationship Between Speed And Accident Reductions

CITATION: Hirst, W. M. L.J. Mountain. Accident Analysis & Prevention, 2005. Vol. 37, No. 4, Pg. 731.

ABSTRACT: In this paper, models are developed which enable a prediction of how the impact of speed management schemes on accidents varies both with speed changes and

with site and scheme characteristics. It was found that, the impact of schemes with vertical deflections is independent of the change in mean speed: an accident reduction of 44% is predicted by the model irrespective of the impact on speed. For cameras and other types of engineering schemes, a simple relationship between the change in mean speed and the consequent change in accidents is available. For the range of mean speeds typically found on 30 mph roads, the percentage accident reduction per 1mph speed reduction is around 4% for cameras and 7–8% for schemes with horizontal features. While larger percentage accident reductions are achieved per 1 mph speed reduction on lower speed roads, larger speed reductions and larger overall percentage accident reductions are obtained on roads with higher before mean speeds. It is possible to predict both changes in speeds and accidents before treatment using the models derived from this study and these models confirm that schemes with vertical deflections are most effective in reducing both speeds and accidents.

DATABASE: TRIS Online

ACCESS: <http://www.sciencedirect.com/science/article/B6V5S-4G361MK-1/1/91a18dfc93d688f446f95f8eaf5b9b59>

Technical Evaluation of Photo Speed Enforcement for Freeways

CITATION: Craig A. Roberts and Jamie Brown-Esplain.2005. Northern Arizona University, Flagstaff; Arizona Department of Transportation; Federal Highway Administration. Pg. 117p.

ABSTRACT: Extreme speeding on urban-area freeways contributes to increased crashes resulting in fatalities, property damage, and increased maintenance and public safety costs. Photo speed enforcement systems (speed cameras) that automatically sense a speeding vehicle and photograph it and its driver have proven effective at reducing speeding violations, primarily on city streets and arterials. The use of this technology on high-volume, high-speed, multi-lane freeways is technically more challenging, and largely untested. This research investigates if the current vendor offerings can provide a viable solution in this freeway environment. Twelve ideal characteristics were established that are needed for a speed camera system to operate on Phoenix, Arizona, metro-area freeways. Six vendors were interviewed. Thirteen agencies that use speed camera systems were interviewed, although none were found with sufficient freeway operating experience to provide definitive information to design a field trial. Therefore, only a conceptual field trial and accompanying test plan were developed to explore the technical aspects of potential systems. Public opinion and countermeasures on speed camera systems were researched and reported. No current vendor offering meets all of the twelve ideal characteristics that were established. Advancements in speed camera systems continue, and it is logical to predict that they can be met in the future. One new technology that shows promise is "point-to-point, " which tracks average speed between two points on a roadway. This research did not address violation processing and management activities, but noted that these must be addressed before a field trial can proceed.

DATABASE: TRIS Online

ACCESS:

http://www.dot.state.az.us/TPD/ATRC/publications/project_reports/PDF/AZ596.pdf

Costing Lives Or Saving Lives: A Detailed Evaluation Of The Impact Of Speed Cameras

CITATION: Mountain, L.J. Hirst, W.M. and Maher, M.J. Traffic, Engineering and Control, 2004. Vol. 45, No. 8, Pg. 280-287.

ABSTRACT: The real problem with speeding is that it is socially acceptable. Most drivers speed but are rarely involved in crashes. Police tolerance to marginal speed limit infringements is assumed, the likelihood of detection is perceived as low and fixed penalties are not considered particularly severe. High performance vehicles with speed capabilities well in excess of maximum national speed limits are not illegal but rather are considered a symbol of personal success. The result is that speeding is not perceived as dangerous, criminal or immoral but rather is considered the norm. Attempts to enforce speed limits tend to be unpopular, being viewed more as an infringement of personal liberty than as a curb on anti-social and potentially lethal behaviour. The evidence for the safety benefits of reduced speed is, however, strong. Certainly the basic laws of physics suggest that lower speeds will reduce both accident frequency and severity: lower speeds reduce both stopping distances and the energy dissipated in a crash. Available evidence does indeed confirm that both accident frequency and severity fall with reduced speeds (see, for example, McCarthy (2001), Stuster et al. (1998) and Taylor et al. (2000). What is less clear is how best to ensure that drivers maintain safe speeds. While a wide range of approaches has been tried, speed enforcement cameras have undoubtedly attracted most public attention, frequently making headline news as, for example, happened recently following the publication of an evaluation of the UK national safety camera programme (Gains et al. 2004) Certainly for those responsible for road safety, speed enforcement cameras are seen as a way of increasing the perceived risk of prosecution for speeding and hence raising drivers awareness of the dangers, and the unacceptability, of excessive speed. However, although the rapid proliferation of cameras in recent years has undoubtedly increased the perceived risk of prosecution it has not fundamentally changed attitudes to the consequences of excessive speed. Critics have suggested that the primary objective of cameras is to raise money rather than to improve road safety and there have been claims that they may actually cost lives. While most of the criticisms of speed cameras are spurious (PACTS 2003, Mylius 2004), arising from a social climate that continues to consider the speed and the personal liberty afforded by cars desirable, the use of speed cameras continues to be controversial.

ACCESS: http://eprints.whiterose.ac.uk/3388/2/Costing_lives_saving_lives_secure.pdf

Automated Traffic Law Enforcement Model Law. Alexandria VA: National Committee on Uniform Traffic Laws and Ordinances

CITATION: NCUTLO. 2004.

ABSTRACT: The objective of automated traffic law enforcement is reduced traffic crashes and improved adherence to traffic laws through the use of photographic and electronic technology as a supplement for traditional traffic law enforcement. This type of enforcement should be used at high crash sites, at other high-risk locations, or in situations where traffic law enforcement personnel cannot be utilized, either due to the pressing needs of other law enforcement activities or where inherent on-site problems make traditional law enforcement difficult. Automated traffic law enforcement is not intended to replace traditional law enforcement personnel nor to mitigate safety problems caused by deficient road design, construction or maintenance. Rather, it provides enforcement at times and locations when police manpower is unavailable or its use raises safety concerns. The model law imposes only a civil fine for traffic law violations enforced via an automated traffic law enforcement system and relies on an initial presumption of guilt. This approach is not new as it is typically utilized for the enforcement of parking law violations. As with parking violations, traffic law violations resulting from automated traffic law enforcement are not recorded in drivers' licensing files for possible point assessment

or licensing action. Indeed, any attempt to unfavorably influence persons' driving privileges, through the use of this system, could raise due process of law concerns. This model law contains provisions to insure that automated traffic law enforcement is not used as a revenue generator. Compensation paid for an automated traffic law system is to be based only on the value of the equipment or the services provided. Compensation for services or equipment is not to be based on the revenue generated by the system. To help further this goal and improve highway safety, this model law provides that revenue derived from automated traffic law enforcement may be utilized solely to fund highway safety functions.

ACCESS: www.ncutlo.org/autoenforce622.htm

Are Mobile Speed Cameras Effective? A Controlled Before and After Study.

CITATION: S. M. Christie and R. A. Lyons. Injury Prevention, 2003. BMJ Publishing Group; BMJ Publishing Group. Vol. 9, No. 4, Pg. p. 302-306.

ABSTRACT: The purpose of this study was to identify the most meaningful measure to determine effectiveness of mobile speed cameras for reducing highway traffic related injuries. The study compared various methods, such as circles and various size routes for assessing the local effectiveness of mobile speed cameras, and then used the most effective of those methods to investigate the effectiveness of speed cameras by time after the intervention, time of day, speed limit, and type of road user injured, using a controlled before and after method of investigation. The study found that deployment of mobile speed cameras was associated with a sustained decrease in the risk of injury crashes near camera sites. The decrease was also found to be larger with a routes rather than circles method of capturing.

DATABASE: TRIS Online

Speed Cameras: Public Perceptions in the U.S

CITATION: Richard Retting. Traffic Engineering & Control. Vol. 44, no. 3, 2003. University of Leeds; Insurance Institute for Highway Safety; Kontron Embedded Modules GmbH; Curtis Cartwright Consulting Limited. Pg. 100-101.

ABSTRACT: This article describes a telephone survey that was conducted in Washington, D.C. for nine months after a speed camera enforcement program was initiated. It first discusses the methodology of the survey. This is followed by a discussion of the results, which basically showed that public awareness of speed cameras was considerable, and that overall, drivers were in favor of speed cameras rather than opposed.

DATABASE: TRIS Online

Evaluation of Laser Video Speed Measurement Equipment

CITATION: Becker, Jon. 1999. South Dakota Department of Transportation. Project SD1997-12.

ABSTRACT: Traffic accidents in construction work zones are a nationally significant problem. In urban areas, heavy traffic volumes and high speeds make construction work extremely hazardous. In rural areas, traffic volumes may be lower, but the problem of high speeds can be even more severe. Unfortunately, these results are not atypical. High vehicle speeds have contributed to accidents and fatalities.

One South Dakota study has shown that the presence of the highway patrol can reduce traffic speeds in work zones, but unless officers actually issue citations, the effect of presence alone is temporary. Sufficient numbers of officers are not available for continuous enforcement. Furthermore, intensive enforcement activities within the work

zone could aggravate congestion and traffic conflicts within the work zone. Other jurisdictions have found that the use of automated speed enforcement devices can provide similar speed reductions and substantially raise drivers' awareness of speed limits. Automated speed enforcement systems consist of a narrow-beam radar speed detection unit and one or more flash cameras that photograph vehicles exceeding a specified speed threshold. After violations are detected, the film is processed to reveal speeding vehicles' license numbers and their recorded speeds. The owner of the vehicle is mailed a citation and assessed a civil penalty, in much the same manner as a parking violation might be handled. Because the vehicle owner, not necessarily the driver, is cited, the violation is not a normal speeding violation, and the owner is not assessed points against his driving record. Similar systems have also been used to reduce red light violations. The speed enforcement system to be evaluated in this study differs from photo radar systems in both the camera and the speed detection method used. Rather than using a still camera together with a traditional radar gun, the LaVideo system uses a video camera with a Lidar unit - a very narrow beam laser unit that is capable of detecting a small target speeding within a group of larger vehicles. The LaVideo system also differs from photo radar units in that it must be manned to keep the camera and Lidar trained on the vehicle. Initial work was done during the summer of 1997 to evaluate two of the laser video units. These units were operated by a SDDOT employee along with a Highway Patrol officer. Violators videotaped while speeding through workzones received warning letters, not citations. Only five warnings were issued. Although automated speed enforcement systems have been well demonstrated in fixed speed zones, they have not been widely used in work zones. Demonstrating their ability to reduce vehicle speeds in work zones will be a worthwhile endeavor, not only for South Dakota, but also for the rest of the nation.

ACCESS:

http://www.state.sd.us/Applications/HR19ResearchProjects/oneproject_search.asp?projectnbr=SD1997-12

An Investigation Into The Effectiveness Of The Speed Camera

CITATION: H. C. Chin and H. C. Chin. Appearing in: Proceedings of the Institution of Civil Engineers. Transport. Vol. 135, no, 1999. Pg. 93-101.

ABSTRACT: Not available.

DATABASE: Worldcat

Managing Speed: Review of Current Practice For Setting And Enforcing Speed Limits: New TRB Special Report

CITATION: N. P. Humphrey, TR News, 1998. No. 199, Pg. 34-37.

ABSTRACT: This article reviews TRB Special Report 254, "Managing Speed: Review of Current Practice for Setting and Enforcing Speed Limits" (1998), which provides guidance to decision makers who must determine appropriate speed limits and related enforcement strategies. Topics covered in include: current practice; regulation of driving speeds; speed and safety; role of enforcement and sanctions; and guidance on speed limits.

DATABASE: TRIS Online

ACCESS: <http://onlinepubs.trb.org/Onlinepubs/sr/sr254.pdf>

Expected Safety Benefits Of Implementing Intelligent Transportation Systems In Virginia: A Synthesis Of The Literature

CITATION: Jack D. Jernigan. 1998. Virginia Department of Transportation.

ABSTRACT: The purpose of this study was to identify, through a literature review, the potential safety benefits of implementing various Intelligent Transportation System (ITS) technologies through Virginia's Smart Travel Program. This study was requested by the ITS Section of the Virginia Department of Transportation to document what is believed to be an underestimated benefit of ITS: safety. Several Advanced Traffic Management Systems technologies improve safety, primarily through reducing congestion. In general, this reduces crash risk, particularly for multivehicle crashes. Advanced Traveler Information Systems (ATIS) provide information to the public by such means as the broadcast media, cable television, highway advisory radio, and the Internet. Although no studies document an impact, a simulation study showed that such a system has the potential to reduce crash risk. Commercial Vehicle Operations (CVO) applications have the potential to reduce the risk of fatalities and serious injuries. CVO are generally geared to improving the efficiency of safety inspections and reducing inconvenience to motor carriers that are not in violation. Because of greater efficiency, more hazardous vehicles and drivers can be removed from service. Much of the work on Advanced Vehicle Control and Safety Systems is in the developmental stages. Although vehicle-based warning systems would provide the driver with some warning once the vehicle enters a hazardous situation, road-based or integrated systems have the potential to warn the driver before entering the danger zone. Advanced Public Transportation Systems and Advanced Rural Transportation Systems could have a positive impact on safety through the deployment of Mayday systems and alarms and other security warning devices that notify authorities in the event of an incident.

DATABASE: TRIS Online

ACCESS: <http://ntl.bts.gov/lib/9000/9800/9878/99-r2.pdf>

Overview Of Automated Enforcement In Transportation

CITATION: Shawn Turner and Amy E. Polk. 1998. Federal Highway Administration (U.S. Department of Transportation), 10 p.

ABSTRACT: Automated enforcement is seen by some public agencies as a means to combat aggressive driving behaviors such as speeding or running red lights. Based upon a review of automated enforcement programs worldwide, several elements were found to be important in successful programs: public education and awareness, involvement of local judiciary, and passage of enabling legislation. The use of automated enforcement has met with opposition in some locations that has centered around issues such as privacy, distribution of ticket revenue, ticketing procedures, and effectiveness of enforcement. The ultimate success of automated enforcement will not rely on technology as much as how the technology is applied and how transportation professionals interact with state and local legislators, local judiciary, and the public when implementing it. Sidebars highlight a number of automated enforcement issues: using automated enforcement to reduce speeding, portable radar trailers, automated enforcement at highway rail grade crossings, automated enforcement in Australia, and the case for red light cameras.

DATABASE: TRIS Online

ACCESS: <http://ntl.bts.gov/lib/10000/10800/10887/turner.pdf>

Effects On Accidents Of Automatic Speed Enforcement In Norway

CITATION: R. Elvik, Transportation Research Record, 1997. Vol. 1595, Pg. 14-19.

ABSTRACT: Not available.

ACCESS: <http://trb.metapress.com/content/j4l16g2102181011/>

INTERNATIONAL PROGRAMS AND STUDIES

The following citations are sorted by date with the most recent articles and reports listed first.

Safety Effects of Automated Speed Enforcement Programs: Critical Review of International Literature

CITATION: Libby J. Thomas. Transportation Research Record: Journal of the, 2009. No. 1595, Highway Safety: Traffic Law Compliance, Speed Management, and Heavy Trucks, Pg. 117-126.

ABSTRACT: Automatic speed enforcement by means of photo radar was introduced in Norway in 1988. The results of a before-and-after study of the effects of automatic speed enforcement on accidents are reported in this paper. The study controlled for general trends in the number of accidents and regression to the mean. A statistically significant reduction of 20% in the number of injury accidents was found. The number of property-damage-only accidents was reduced by 12%. This change was not statistically significant at the 5% level. The effect of automatic speed enforcement on the number of injury accidents varied according to the level of conformance with official warrants for its use. The warrants refer to accident rate (accidents per vehicle kilometer) and accident density (accidents per kilometer of road). A decline of 26% in injury accidents was found on road sections conforming with both warrants. On road sections not conforming with any of the warrants, injury accidents declined by 5%. The results of this study confirm the results of previous studies of the effects of automatic speed enforcement on accidents.

DATABASE: TRISWORLD

ACCESS: <http://trb.metapress.com/content/b5k4k42jxp7t265p>

The Effects Of Mobile Speed Camera Introduction On Road Traffic Crashes And Casualties In A Rural County Of England

CITATION: Andrew P. Jones, Violet Sauerzapf and Robin Haynes. J. Saf. Res. 2008. Elsevier. Vol. 39, No. 1, Pg. 101-110.

ABSTRACT: This study assesses the impact of crash and casualty numbers in correspondence to the introduction of mobile speed cameras in the rural county of Norfolk, England. Road traffic accident casualty and crash data were collected for two years before the introduction of cameras and two years subsequently. The casualties and crashes occurring at 29 camera sites were identified and separated from those occurring in the rest of the county. Trends in crashes and casualties, and their severity, were examined graphically and comparisons were made between before and after periods. The regression to the mean effect at individual sites was estimated. After the introduction of cameras, overall crashes declined by 1% and crashes involving fatalities or serious injuries declined by 9% on the roads without cameras. At the camera sites, crashes decreased by 19% and fatal and serious crashes by 44%. The reduction in total crashes was significantly greater than that expected from the effect of regression to the mean in 12 out of 20 sites tested. The introduction of cameras appears to have resulted in real and measurable reductions in crash risk in this rural county. Our results suggest the deployment of mobile speed cameras is an effective tool for organizations wishing to reduce road traffic casualties in areas where high crash rates have been associated with excessive vehicle speeds.

DATABASE: TRIS Online

Automated Enforcement: A Compendium Of Worldwide Evaluations Of Results

CITATION: L. E. (Larry E.). Decina, Libby Thomas, Raghavan Srinivasan, et al. 2007.

United States. National Highway Traffic Safety Administration.

ABSTRACT: This compendium details automated enforcement systems (AES) implemented around the world and characterizes the safety impacts of such deployments, based on available scientific evaluations of the outcome measures. A systematic literature search was conducted.

DATABASE: TRIS ONLINE

ACCESS:

<http://www.nhtsa.dot.gov/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/HS810763.pdf>

Overall Impact During 2001-2004 Of Victorian Speed-Related Package

CITATION: Angelo D'Elia, Stuart Newstead and Max Cameron.2007. Monash University Accident Research Centre. Pg. 56p.

ABSTRACT: From December 2000 until July 2002, three new speed enforcement initiatives were implemented in Victoria. These initiatives were introduced in stages and involved the following key components: More covert operations of mobile speed cameras, including flash-less operations; 50% increase in speed camera operating hours; and lowering of cameras' speed detection threshold. In addition, during the period 2001 to 2002, the 50 km/h General Urban Speed Limit (GUSL) was introduced (January 2001), there was an increase in speed-related advertising including the "Wipe Off 5" campaign, media announcements were made related to the above enforcement initiatives and there was a speeding penalty restructure. The above elements combine to make up a package of speed-related initiatives and factors. The broad aim of this study was to evaluate the overall effectiveness of the speed-related package.

DATABASE: TRIS Online

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc267.pdf>

Use Of Speed And Red-Light Cameras For Traffic Enforcement - Guidance On Deployment, Visibility And Signing

CITATION: Department for Transport. 2007. TSO.

ABSTRACT: In 2005 the National Safety Camera Programme and netting-off funding arrangements for cameras in England and Wales were ended. Camera funding, activities and partnerships are being integrated into the wider road safety delivery process from 1 April 2007. This Circular provides guidance and best practice advice on the deployment of speed and red-light cameras in the UK after 1 April 2007. The legal framework is set out and guidance is given on the identification of the appropriate solution at a specific location and the deployment of cameras to reduce deaths and injuries on roads. The four main types of equipment and the circumstances in which they may be appropriate are described: fixed speed camera sites, mobile speed camera sites, average speed camera sites (fixed) and red-light camera sites. Guidance is given on pre-enforcement checks, signing, visibility, conspicuity, communications and publicity, and monitoring effectiveness. An annex presents a table showing the site selection criteria that applied at the end of the National Safety Camera Programme.

DATABASE: TRANSPORT

ACCESS:

www.checkyourspeed.org.uk/fe/fileupload_getfile.asp?filePathPrefix=631&fileLanguage=e.rtf

The Automated Speed Enforcement System In Great Britain: Between A Technical Revolution And Administrative Continuity

CITATION: Carnis, Laurent. International Review of Administrative Sciences, Vol. 73, No. 4, 597-610 (2007).

ABSTRACT: The introduction of automatic speed checks in Great Britain is a practical example of the implementation of automatic equipment replacing roles previously provided by other organizations, which will attract the interest of practitioners working on institutional change. It also allows us to discern the consequences of the introduction of a tool arising from new technologies, to understand its implementation into existing administrative practices and the change in relations with users. Finally, the operating methods for the equipment organization, divided between a centre responsible for strategy and local partnerships responsible for operational implementation within a financial framework requiring self-financing, are an original example of taking over an activity traditionally devolved to police organizations.

ACCESS: <http://ras.sagepub.com/cgi/content/refs/73/4/597>

Safety Applications Of Intelligent Transportation Systems In Europe And Japan

CITATION: John Njord, Joseph Peters, Michael Freitas, et al. 2006. United States. Federal Highway Administration. Office of International Programs.

ABSTRACT: With nearly 43,000 deaths a year on U.S. roads, a need exists for countermeasures to reduce the number and severity of crashes. The Federal Highway Administration, American Association of State Highway and Transportation Officials, and National Cooperative Highway Research Program sponsored a scanning study of intelligent transportation systems (ITS) applications deployed in France, Germany, and Japan to mitigate traffic safety problems. Among the safety applications of ITS technologies the scan team observed were changeable message signs to manage traffic flow, automated speed management and control efforts to reduce crashes, video incident detection and an eCall system to improve emergency personnel response times, and driver assistance initiatives such as adaptive cruise control, lane keeping, and assisted braking. The team's recommendations for U.S. implementation include projects to increase support for and document benefits of automated enforcement systems, evaluate advanced video detection and incident analysis technology, deploy dynamic sign technologies, and conduct variable speed limit pilots. The team also recommends an initiative to encourage top-down leadership commitment to fatality reduction throughout the country.

DATABASE: TRIS Online

ACCESS: http://ntl.bts.gov/lib/jpodocs/reports/14286_files/14286.pdf

Automatic Speed Cameras 2002-2003 in Sweden

CITATION: Gunnar Andersson and Jorgen Larsson. Appearing in: Road Safety on Four Continents: 13th International Conference, 2005. VTI, Swedish National Road and Transport Research Institute. Pg. 8.

ABSTRACT: The automatic speed camera activity has resulted in a considerable reduction of personal injury accidents and injured persons. The change is statistically significant. The greatest reduction, approximately 50%, is in fatal accidents and fatalities. The effects of camera enforcement on the average speed have been estimated using the speed measurements before and after the installation of the camera boxes. The enforcement method has resulted in significant speed reductions on the camera monitored sections of road. Great speed reductions are shown both at and between the camera boxes. Speeds can be expected to be reduced at the boxes by just over 8 km/hr and between the boxes

by nearly 5 km/hr if the average speed before speed camera enforcement began was 95 km/hr. The basis for the effect estimates is comprised of the total result from the 14 research stretches that have been in operation in 2002/2003 and the four stretches that were monitored by cameras for all of 2003. The combined road distance is about 340 kilometers. The study shows socioeconomic savings of 164 million SEK per year. The costs in the form of investments, operations, and increased travel time total nearly 60 million SEK and savings in the form of reduced costs for personal injuries, vehicles, and the environment make up about 244 million SEK.

DATABASE: TRIS Online

Country Report - Sweden

CITATION: Torsten Bergh and Jan Moberg. Appearing in: 3rd International Symposium on Highway Geometric Design, 2005. Pg. 15.

ABSTRACT: The objective of this paper is to give an overview of the Swedish road system, highway policies and guidelines. Other objectives are to give an overview of research projects and some issues of special interest. The Swedish state owns major rural roads and major urban through roads. These roads are managed by the Swedish National Road Administration (SNRA) formally independent of the state government. Investment projects on national state highways, some 8000 km, are included in the present national plan for 2004-2015 for 42 Billion SEK (1 US\$=7 SEK) including safety and environmental improvements. 17 Billion SEK are designated to improve bearing capacity on many of the roads that are a part of the entire state road network, especially in the north of Sweden. Investments on regional state roads during the same period will be 24 Billion SEK. Some 550 persons are killed every year in road traffic, 400 of them on state roads (mainly in rural areas). Head-on, now some 350 only in rural areas and only part-time equipped. Full scale tests with speed cameras have produced very promising results. There is now a program to establish 700 cameras in rural and urban areas to be more efficient than the present generation of cameras.

DATABASE: TRIS Online

The History and Development Of Speed Camera Use

CITATION: Amanda Delaney, Heather Ward and Max Cameron. Appearing in: Report Monash University Accident Research Centre no. 242; Variation: Report (Monash University. Accident Research Centre) no. 242. 2005. Monash University Accident Research Centre. Clayton, Vic. Pg. 56.

ABSTRACT: The use of automated speed enforcement technologies is now wide spread throughout many parts of the world and research has consistently demonstrated the positive road safety benefits achieved through the use of these technologies. However, there is wide variation in the nature, extent of use and perceived acceptability of automated enforcement technology, particularly as the primary form of speed enforcement. Despite these differences controversies associated with the use of speed enforcement technology have arisen in each jurisdiction and some common elements across jurisdictions are evident. This report examines the controversies experienced in Australia, North America and Britain in terms of one of the four dilemmas identified by Goldenbeld (2002).

DATABASE: Worldcat

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc242.pdf>

Controversies and Speed Cameras: Lessons Learnt Internationally

CITATION: Amanda Delaney, Heather Ward, Max Cameron, et al. J. Public Health Policy, 2005, Vol. 26, No. 4, Pg. 404-415.

ABSTRACT: Research has shown that speed cameras reduce motor vehicle speeds and crashes. Cameras have been used extensively in jurisdictions such as Victoria, Australia, and Great Britain, and much less often in the United States and Canada. They have been controversial wherever used. We describe the development of camera programs in Victoria and Britain and discuss the types of controversies that have arisen, the techniques used to address them, and what others can learn from this experience.

DATABASE: JSTOR

Effectiveness of Speed Cameras in Preventing Road Traffic Collisions and Related Casualties: Systematic Review

CITATION: P. Pilkington and S. Kinra. Br. Med. J. 2005. British Medical Association. Vol. 330, No. 7487, Pg. 331-334.

ABSTRACT: This systematic review assesses the evidence for the effectiveness of speed cameras in reducing road traffic collisions and related casualties. The literature was reviewed for controlled trials and observation studies that assessed the impact of fixed or mobile speed cameras on road traffic collisions, injuries and deaths. Fourteen observational studies that met the inclusion criteria were found. Most studies were before-after studies without controls. No randomized controlled trials were found. All but one of the studies showed effectiveness of cameras up to three years or less after their introduction, while one study showed sustained longer term effects. Reductions in outcomes across studies ranged from 5% to 69% for collisions, 12% to 65% for injuries, and 17% to 71% for fatalities in the immediate vicinity of camera sites. The reductions over wider geographical areas were of a similar order of magnitude. These studies consistently show that speed cameras are an effective intervention in reducing road traffic collisions and related casualties. However, the level of evidence is relatively poor since most studies did not have adequate control for potential confounders or satisfactory comparison groups.

DATABASE: TRIS Online

ACCESS: <http://www.bmj.com/cgi/content/full/330/7487/331>

Controversies and Speed Cameras: Lessons Learnt Internationally

CITATION: Amanda Delaney, Heather Ward, Max Cameron, et al, 2004. Insurance Institute for Highway Safety. Pg. 8.

ABSTRACT: Research has shown that speed cameras reduce motor vehicle speeds and crashes. Cameras have been used extensively in jurisdictions such as Victoria, Australia and Great Britain, and much less often in the United States and Canada. They have been controversial wherever used. The authors describe the development of camera programs in Victoria and Great Britain and discuss the types of controversies that have arisen, the techniques used to address them, and what North America can learn from this experience.

DATABASE: TRISWORLD

ACCESS: <http://alltrafficsolutions.com/pdf/research/3Controversies-Speed-Cameras-Lessons-Learn.pdf>

The National Safety Camera Programme - Three Year Evaluation Report.

CITATION: Adrian Gains.2004. PA Consulting Group. Pg. 114.

ABSTRACT: A system was introduced in the United Kingdom in 2000 that allowed eight

pilot areas to recover the costs of operating speed and red-light cameras from fines resulting from enforcement. In 2001, the system was extended to other areas, followed by a national programme. This report provides an analysis of the 24 areas that had been operating safety cameras under the system for over a year. This showed that vehicle speeds had been reduced by about 7% at speed camera sites. At new sites, there was a 32% reduction in vehicles breaking the speed limit. At fixed sites, there was a 71% reduction in vehicles breaking the speed limit and at mobile sites there was a 21% reduction. After allowing for the long-term trend there was a 33% reduction in personal injury collisions at sites where cameras were introduced. There was a clear correlation between reductions in speed and reductions in personal injury collisions. There was a positive cost benefit ratio of 4:1. Public attitude surveys supported the use of safety cameras for targeted enforcement.

DATABASE: TRISWORLD

ACCESS: http://eprints.ucl.ac.uk/1338/1/2004_31.pdf

Analysis of the Effects of Speed Limit Enforcement Cameras: Differentiation By Road Type and Catchment Area

CITATION: S. Hess. Transp. Res. Rec. 2004. No. 1865, Pg. 28-34.

ABSTRACT: A detailed statistical analysis is presented of the effects of speed limit enforcement cameras on injury accident numbers. The approach used is constructed in such a way that it is possible to differentiate not only between the effects of the cameras and the effects of trend and seasonality but actually to produce estimates that are independent of any other overall time-dependent effects. Crucially, the estimates produced are also net of the effects of regression to the mean. To allow for the simultaneous treatment of the different levels of severity, weights are used that reflect the frequency of the different types of accidents. This approach is then used on a data set for all injury accidents in Cambridgeshire between 1990 and 2002, which also contains data from 49 camera sites. To quantify the range of effectiveness of the cameras, estimates of the changes in accident numbers are produced for different distances from the camera site. The analysis shows that, overall, in the immediate vicinity of the camera sites, the installation of a camera can be expected to lead to decreases in weighted injury accident numbers by an astounding 45.74%. Lower, but still significant, decreases are observed in the wider surrounding area. Finally, to provide further insight into the differences in performance on different road types, the sites are grouped together according to road category. This analysis shows that the biggest reduction in accident numbers can be obtained on roads with a higher incidence of speeding offenses.

DATABASE: TRIS Online

ACCESS: <http://dx.doi.org/10.3141/1865-05>

Fixed, Digital Speed Cameras in NSW: Impacts on Vehicle Speeds and Crashes

Road Safety Research, Policing and Education Conference, 2003, Sydney, New South Wales, Australia, 2003. Vol. 2, Pg. 131-137.

ABSTRACT: Not available.

DATABASE: TRISWORLD

ACCESS: <http://www.rsconference.com/pdf/RS030027.pdf?check=1>

Scientific Basis For The Strategic Directions Of The Safety Camera Program In Victoria

CITATION: Cameron M Monash University Accident Research Centre Muarc, Delaney A.

Monash University Accident Research Centre.

ABSTRACT: The objective of this project was to provide a scientific base for the development of a safety camera strategy that will: maximize the road safety benefit of the safety camera program, and continue to build on the positive outcomes achieved by enforcement programs in Victoria over the last ten years. A review of previous evaluation research concerning Victorian, interstate and international automated enforcement programs was conducted. The review concentrated on the way in which this research can inform the future use of new and existing safety camera technologies in Victoria. This report provides a valuable scientific base for developing a strategy for the future directions of the safety camera program, but the report is not that strategy. The limited information available about the effects of the new technologies, and recent changes to the mobile speed camera operations, precludes that step from a scientific point of view.

DATABASE: TRANSPORT

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc202.pdf>

The Interaction Between Speed Camera Enforcement And Speed-Related Mass Media Publicity In Victoria.

CITATION: Max Cameron, Monash University. Appearing in: Report Monash University Accident Research Centre no. 201, 2003. Monash University Accident Research Centre. Clayton, Vic. Pg. 116.

ABSTRACT: Not available.

DATABASE: Worldcat

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc201.pdf>

Factors Affecting Driver Speed Choices

CITATION: Campbell M. Napier University Transport Research Inst, UK and Stradling SG. Napier Univ. Transport Research Inst, UK. 2003. Department for Transport, London.

ABSTRACT: 1121 drivers completed a 20-minute in-home interview in the Strathclyde Police Area, UK. Of this sample, 28% had been stopped by the police for speeding during their driving career and 20% has been flashed by a speed camera in the past three years. Almost half of the male drivers and a quarter of the female drivers had been caught speeding. Most speeders were in the 25-64 age range. Recent road traffic accident involvement was higher for speeders than non-speeders. 52% of the drivers said that they would speed up if late and 27% said that they would drive faster if the traffic around them was driving faster than they would normally drive. Some drivers indicated that they would drive more slowly if stressed whereas others indicated that they would drive faster. 12% would speed up if being tailgated whereas 34% said that they would slow down. 17- to 24-year-old drivers were more likely to drive slowly if there were children or old people in the car, yet they were also more likely to drive faster if listening to music. 17- to 44-year-olds were more likely to drive faster if late for a meeting or if the weather was hot. 17- to 54-year-olds were more likely to drive slowly near speed cameras or signs for speed cameras. 45- to 64-year-olds were more likely to drive at slower speeds after dark. High mileage drivers were least likely to slow down when driving on unfamiliar roads. Most male drivers who reported having been involved in a road traffic accident said they slowed down when they spotted a speed camera, when driving with children in the car, and when being close-followed; they also drove faster when running late, when feeling stressed, when listening to music and when the weather is hot. No significant differences in response frequency were found for women drivers who had or had not had accidents.

DATABASE: TRANSPORT

Fixed, Digital Speed Cameras In NSW: Impacts On Vehicle Speeds And Crashes

CITATION: Carseldine D Roads And Traffic Authority, 2003. Roads and Traffic Authority, Po Box K198, Haymarket, New South Wales, 1238, Australia.

ABSTRACT: The policy for fixed speed camera installation in NSW calls for cameras to be located only at sites meeting speed and crash history criteria or hazardous sites such as road tunnels, and for those sites to be clearly marked by prominent advisory signage. In mid-2000, the RTA initiated a comprehensive three-year evaluation program of the cameras. The conduct of the evaluation program was contracted to a respected transport research company. The evaluation consisted of a number of major components: measured speeds pre-installation and at specified time intervals post-installation; crash records three years pre-installation and two years post-installation; four waves of community questionnaire survey on knowledge, attitudes, beliefs and reported behaviours of drivers in relation to the fixed speed cameras and speeding. This paper deals with the results of the speed surveys and crash data and discusses the design of the speed survey and crash data components of the evaluation program and the major road safety outcomes.

DATABASE: TRANSPORT

The Impact Of Speed Cameras On Speed-Related Crashes Over Time

CITATION: Champness P. Queensland University of Technology. Centre for Accident Research and Road Safety. Queensland Police Service. State Traffic Support Branch, 2003. Roads and Traffic Authority, PO Box K198, Haymarket, New South Wales, 1238, Australia.

ABSTRACT: Since speed cameras were introduced in Queensland in May 1997 there has been a steady increase in the number of speed camera sites and the number of operational hours. However, infringements have not risen in line with this increase in speed enforcement. Superficially this data suggests that speed cameras are effective in reducing speeding. An alternative interpretation is that motorists are reducing their speed at known camera locations, thus avoiding detection, but still speeding at locations where they do not expect to encounter any speed enforcement. If the infringement to vehicles monitored ratio is a system wide indication of the number of motorists speeding, then a decline in this infringement ratio should be roughly paralleled by a corresponding reduction in speed related crashes. This paper will analyse infringement data, speed camera deployment data and speed related crash data in order to clarify the effects that speed cameras are having on speeding and crashes.

DATABASE: TRANSPORT

A Cost Recovery System For Speed And Red Light Cameras - Two Year Pilot Evaluation

CITATION: Gains A PA Consulting Group, UK, Humble R Pa Consulting Group, UK, Heydecker B London Univ, Univ Coll, UK Et Al.2003. Department for Transport, Road Safety Division, London.

ABSTRACT: In April 2000, a cost recovery system for speed and red-light cameras was introduced in eight pilot areas in England, Wales and Scotland. The eight areas were selected to represent a range of geographies, casualty reduction strategies and enforcement technologies. In the first two years of operations, the following three results have been achieved: (1) Speed is down - Based on a large number of speed surveys vehicle speeds have dropped following the introduction of both fixed site and mobile speed cameras and the reduction in speed has been greatest in urban areas, (2) Casualties are down - Where cameras were introduced, there has been a statistically significant reduction in casualties. The greatest reduction has been in killed and serious casualties. The number

of pedestrian casualties has also fallen significantly. In the last two years, killed and serious casualties at camera sites have fallen by 35% compared to the long-term trend. In terms of enforcement technology, fixed site cameras have had the greatest impact (65% reduction) and mobile speed cameras have also proved effective (29% reduction). Cameras appear to be equally effective in urban and rural areas, and (3) Public reaction has been positive - Public attitude surveys indicated that the majority of the public support targeted camera enforcement. There has been significant demand locally for enforcement. In the two years of the pilot operation there have been important lessons learned that should inform future decisions on camera enforcement. In this report, we set out the results from the pilot areas and assess the implications for speed and red-light camera enforcement in the future.

DATABASE: TRANSPORT

Effects of Speed Limit Enforcement Cameras on Accident Rates

CITATION: S. Hess and J. Polak. Transp. Res. Rec. 2003. No. 1830, Pg. 25-33.

ABSTRACT: Speed limit enforcement cameras SLECs have been in operation in Great Britain since 1991. However, there is still considerable dispute regarding their effectiveness in reducing accident rates. The aim of this research was to analyze the effects of SLECs on accident rates in Cambridgeshire, United Kingdom, using time series data collected over an 11-year period. A time series analysis of the accident data revealed the presence of both trend and seasonality components. A method was developed to remove the influence of these two components from the data and compare mean accident levels before and after installation of the camera. The method was also constructed in such a way that it would be able to distinguish between the actual effects of the camera installation and the effects of regression to the mean. The initial investigation into the effects of SLECs showed an average decrease over sites in the monthly accident frequency by around 18%; a more detailed analysis suggested that the best approximation of the effect of the introduction of a SLEC is a decrease in injury accidents by 31.26%, thus giving evidence that SLECs do contribute to a significant decrease in accident numbers.

DATABASE: TRIS Online

ACCESS: <http://dx.doi.org/10.3141/1830-04>

Speed Cameras - Measuring The Impact On Driver Behaviour

CITATION: Uk Keenan D Faber Maunsell. 2003. Association For European Transport, London.

ABSTRACT: The history of speed camera deployment in the UK is described briefly. A discrepancy often raised in the debate is that despite an increase in the number of cameras, the overall accident statistics across all roads (i.e. both with and without cameras) have not produced the expected improvements. Research to thoroughly examine the effectiveness of various methods of speed camera enforcement by analysing impacts on driver behaviour and accident statistics, thus allowing conclusions to be drawn about which methods are the most effective, is outlined. The approach adopted aimed to determine the "sphere of influence" of speed camera systems, and addressed the question of how they are affecting driver behaviour today, along the routes in question. Digital and video speed cameras were included in the study. The work proposed assesses speed camera effectiveness at each site firstly by measurement of the speeds of a random sample of 200 drivers at key locations around the speed enforcement systems and secondly by analysis of accident data for time-periods of equal length before and after the

installation of the cameras. Plans for extending the study are given.

DATABASE: TRANSPORT

Evaluation Of The Crash Effects Of The Queensland Speed Camera Program.

CITATION: Newstead S and Cameron M. 2003. Monash University. Accident Research Centre MUARC Victoria, Australia.

ABSTRACT: A speed camera program was introduced in Queensland from 1 May 1997 utilizing overt deployment of cameras in white commercial vans marked as a speed camera unit at sites chosen on the basis of crash history. Sites at which cameras operate on a particular day are chosen using randomized scheduling and have grown in number from 500 at program commencement to over 2, 500 by June 2001. This study has investigated the crash effects of the speed camera program in Queensland over the period from its introduction in May 1997 to the end of June 2001 in areas within 6 kilometer of speed camera sites that had been used up to the end of the study period. When operating at maximum coverage, the Queensland speed camera program was estimated to have produced a reduction in fatal crashes of around 45 per cent in areas within 2km of speed camera sites. The benefit cost ratio estimated for the program over the period from its introduction to June 2001 was 47.

DATABASE: TRANSPORT

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc204.pdf>

Speed Cameras Under Attack In The United Kingdom

CITATION: P Pilkington, Injury Prevention, 2003. Vol. 9, Pg. 293-294.

ABSTRACT: This commentary examines the campaign against speed cameras in the United Kingdom. It reveals how a health intervention, even when shown to be effective at reducing deaths and injuries, can be subject to sustained attacks from highly organized anti-health forces. It calls for health professionals to respond to the increasingly vocal motorist lobby groups. Health professionals have a duty to defend effective interventions from unwarranted attacks. They should communicate with the general public about the role of such interventions in improving health and takes steps to ensure that vocal lobby groups do not threaten evidence based injury prevention initiatives.

ACCESS: <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1731043&blobtype=pdf>

An Investigation of the Relationship Between Speed Enforcement, Vehicle Speeds, and Injury Crashes in New Zealand

CITATION: Lynley J. Povey, William J. Frith and Michael D. Keall. Appearing in: Institution of Professional Engineers New Zealand (IPENZ) Transportation Group. Technical Conference Papers 2003, 2003. Institution of Professional Engineers New Zealand. Pg. 12.

ABSTRACT: This paper reports on a study undertaken to investigate the relationship between speed enforcement, vehicle speeds, and injury crashes in New Zealand (1996 - 2002). Enforcement activity taken into account includes speeding infringements (camera and non-camera), visible speed camera activity, and the introduction of marked State Highway Patrol cars. The study showed estimated reductions in open road mean speeds of 0.7% and 0.8%, associated with each increase of 10, 000 speed camera infringements and 10, 000 other speed infringements, respectively. Higher reductions, of 1.1% and 1.6%, were found in the 85th percentile speeds. An estimated injury crash reduction of 12% was found to be associated with a 1 km/h reduction in mean open road speed during low alcohol hours. The authors conclude that New Zealand's enforcement program has been associated with significant reductions in open road speeds and injury crashes. The

effect of enforcement is a function of many factors, including the number of enforcement hours taken to issue tickets, locations on the network where the activity takes place, and the speed thresholds at which tickets may be issued.

DATABASE: TRIS Online

ACCESS: <http://www.rsconference.com/pdf/RS030064.pdf>

Evaluation Of Speed Camera Enforcement In The District Of Columbia

CITATION: Richard A. Retting and Charles M. Farmer, *Transp. Res. Rec.* 2003. No. 1830.

ABSTRACT: Not available.

DATABASE: Worldcat

New Speed Enforcement Initiatives: Changing Attitudes And Behaviour

CITATION: SMITH G (Monash University. Accident Research Centre (MUARC) and SENSERRICK TM (Monash University. Accident Research Centre (MUARC).2003. Roads and Traffic Authority (Rta), Po Box K198, Haymarket, New South Wales, 1238, Australia.

ABSTRACT: In 1999, new speed enforcement initiatives were planned for introduction in Victoria in following years. In order to assess public response to these initiatives, a baseline telephone survey was conducted in Melbourne during 1999 in order to record related attitudes and behaviors under the speed camera program in operation at that time. Since then several new speed camera technologies have been introduced, the number of camera hours per month has also been increased, and both the speed camera tolerance and the residential speed limit have been lowered. A revised survey to address these changes was conducted in Melbourne in 2002 to ascertain any changes in self-reported attitudes and behaviors in the period following the introduction of the new initiatives. Overall respondents indicated continuing strong agreement that speed enforcement measures contribute to lowering the road toll. Preliminary analysis indicates in general that efforts of Victoria Police and the changes in speed camera technology are proving to be effective in changing people's attitudes towards speeding and self-reported speeding behavior.

DATABASE: TRANSPORT

Evaluation of Crash Effects of the Queensland Speed Camera Program

CITATION: Max Cameron Stuart Newstead, Victoria, Australia: Monash University, Accident Research, 2003. Vol. Report No. 204.

ABSTRACT: A speed camera program was introduced in Queensland from 1 May 1997 utilizing overt deployment of cameras in marked white commercial vans at sites chosen on the basis of crash history. Sites at which cameras are operated have grown in number from 500 at program commencement to over 2, 500 by June 2001. Operations are scheduled using a randomized approach. This study has investigated the crash effects of the Queensland speed camera program over the period from its introduction to the end of June 2001 in areas within 6km of speed camera sites that had been used up to the end of the study period. When operating at maximum coverage, the Queensland speed camera program was estimated to have produced a reduction in fatal crashes of around 45% in areas within 2km of speed camera sites. Corresponding reductions of 31%, 39% 19% and 21% were estimated for hospitalization, medically treated, other injury and non-injury crashes respectively. This translates to an annual crash saving in the order of 110 fatal, 1100 hospitalization, 2200 medically treated, 500 other injury and 1600 non-injury crashes. In terms of total annual road trauma in Queensland, these savings represent a 32% reduction in fatal crashes, a 26% reduction in fatal to medically treated crashes

combined and a 21% reduction in all reported casualty crashes. The benefit cost ratio estimated for the program over the period from its introduction to June 2001 was 47. Comparison of the estimated crash reductions and program operational measures showed variations in estimated crash reduction over time were strongly related to the size of the overall program and the density of enforcement. Periods of program growth were also associated with larger crash reductions beyond that expected from the increasing size of the program alone. Higher levels of true randomness in selection of speed camera sites for operation was also associated with higher levels of crash reduction when comparing differential performance of the program across police regions in Queensland.

DATABASE: TRISWORLD

ACCESS: <http://www.rsconference.com/pdf/RS030116.pdf?check=1>

Traffic Camera Office

2002. Victoria Police. Traffic Camera Office.

ABSTRACT: This website from the Government of Victoria, Australia, describes the Traffic Camera Office which is responsible for the administration and management of speed, red light and bus lane camera initiatives. It also includes a technical description of the radar speed camera set-up, how the Gatso Type 24 slant radar operates and determining the speed and travel direction of the vehicle. National Transportation Library

DATABASE: TRIS Online

Further Results from a Trial Comparing a Hidden Speed Camera Programme with Visible Camera Operation

CITATION: M. D. Keall, L. J. Povey and W. J. Frith. Accident Analysis & Prevention, 2002. Vol. 34, No. 6, Pg. 773-777.

ABSTRACT: As described in a previous paper, the hidden camera program in New Zealand was associated with significant net falls in speeds, crashes, and casualties both in 'speed camera areas' and on 100 km/h speed limit roads generally. These changes in speeds, crashes and casualties were identified in the trial area in comparison with a control area where generally highly visible speed camera enforcement continued to be used (and was used in the trial area prior to the commencement of the trial). There were initial changes in public attitudes associated with the trial that later reverted largely to pre-trial levels. Analysis of 2 years of data of the trial showed that falls in crash and casualty rates and speeds associated with the hidden camera program were being sustained. It is not possible to separate out the effects of the concealment of the cameras from other aspects of the hidden speed camera program, such as the four-fold increase in ticketing. This increase in speed camera tickets issued was an expected consequence of hiding the cameras and as such, an integral part of the hidden camera program being evaluated.

DATABASE: TRIS Online

Bringing Down The Road Toll: The Speed Camera Programme: Report Of The Controller And Auditor-General, Tumuaki o te Mana Arotake.

CITATION: New Zealand. Audit Office. 2002. Audit Office. Wellington, N.Z. Pg. 99.

ABSTRACT: Not available.

DATABASE: Worldcat

The Relative Effectiveness of a Hidden Versus a Visible Speed Camera Programme

CITATION: Michael D. Keall, Lynley J. Povey and William J. Frith. Accident Analysis &

Prevention, 2001. Vol. 33, No. 2, Pg. p.-277-284.

ABSTRACT: Overtly operated mobile speed cameras have been used in New Zealand since late 1993. Their operation has been confined to specific sites which are mainly road sections with a record of speed related crashes. A trial of hidden speed cameras began in mid 1997 in 100 km/h speed limit areas in one of New Zealand's four police regions. The trial was still in progress at the time of this writing, and the current paper reports the results of the evaluation of the first year of the trial.

DATABASE: TRIS Online

Speed-Camera Funding: Eight Pilot Schemes Announced

CITATION: ITE J. 2000. Institute of Transportation Engineers. Vol. 70, No. 2, Pg. 2.

ABSTRACT: Eight pilot schemes are to be established nationwide in the United Kingdom to make better use of the revenues raised through speed-camera fines. The pilot schemes, which go into effect on April 1, 2000, will allow the money raised from fines to go directly into the funding and maintenance of speed cameras, with the ultimate aim of improving the safety of roads. At present all fine revenue raised from speed-camera fines goes to the Consolidated Fund of the Exchequer. The monies raised from the eight pilots will be ring-fenced, with no income raised to be used other than for the costs of running the scheme.

DATABASE: TRIS Online

Evaluation of Photo Radar Program in British Columbia

CITATION: G. Chen, J. Wilson, W. Meckle, et al. Accident Analysis & Prevention, 2000. Vol. 32, No. 4, Pg. 517-526.

ABSTRACT: This article presents the results of an evaluation of the speed and traffic safety effects of the photo radar program in British Columbia (BC) after 1 year of full operation. Traffic speed data were collected from the photo radar units and from induction loops installed across the province. Traffic collision and injury data were obtained from police investigation reports and from BC ambulance services records. The study employed a number of analytical frameworks, including simple before and after comparison, time-series cross-sectional analysis, and interrupted time series analysis. The study revealed a dramatic reduction of speed at photo radar deployment sites. A reduction of 2.4 km/h in mean speed was also observed at selected monitoring sites where enforcement was not likely to be present. The reduction of speed was accompanied by a decrease in collisions, injuries and fatalities. The analysis found a 25% reduction in daytime unsafe speed related collisions, an 11% reduction in daytime traffic collision victims carried by ambulances and a 17% reduction in daytime traffic collision fatalities.

DATABASE: TRIS Online

Innovations In Photographic Enforcement

CITATION: Horton, RF. 2000. Ottawa Transportation Association of Canada.

ABSTRACT: This paper was presented at the session titled 'New technologies in traffic engineering'. Strathcona County, Alberta has taken a number of initiatives to improve the safety at signalized intersections. The first installation in Alberta of a red light camera was in Strathcona County in 1998 and subsequently 5 other intersections have been added. Data shows that intersection collisions have decreased from 1.690 rate per million vehicles entering the intersection (RMVE) in 1995 to 1.475 in 1999. Since the introduction of red light cameras in 1998, the RMVE has dropped from 1.600 to 1.475. Photo radar is another means of photo enforcement that has been utilized in Strathcona County in areas of high speed, work zones, playground zones, school zones and high collision areas. Although not

as well accepted by the public as the red light cameras it is believed that motorists are paying more attention to their speed. The most recent initiative, a first in North America, is to use the technology at a red light camera site to share the same high-speed camera for both enforcing the red light and monitoring the speed when vehicles are traveling through the intersection on a green or amber light. Although there is currently no legislation in place, warning notices will be issued to violators on an interim basis. The paper covers history on the red light camera and statistics relative to speeding through amber and green lights.

DATABASE: Worldcat

UK Perspective On Cost-Benefit Assessment Of Intelligent Transportation Systems

CITATION: Alan Stevens. 2000. United States. Joint Program Office for Intelligent Transportation Systems.

ABSTRACT: In 1996 the results of a major government funded study into the costs and benefits of Intelligent Transport Systems in the UK was published. This paper outlines the results of that study and discusses the extent to which the most beneficial applications have been promoted and deployed. Progress is explained with reference to development in technology and in government policy. Institutional and deployment issues that need to be considered in parallel with costs and benefits are highlighted.

DATABASE: TRIS Online

ACCESS: http://ntl.bts.gov/lib/jpodocs/repts_te/13307.pdf

The Effects of Speed Cameras: How Drivers Respond

CITATION: Claire Corbett and Frances Simon, Road safety research report, no.11, 1999. Brunel University. Centre for Criminal Justice Research; Great Britain. Department of the Environment, Transport and the Regions. Pg. 105.

ABSTRACT: In this report, the authors examine the effects and effectiveness of different strategies related to the deployment of speed cameras. The analysis also includes studying how different types of drivers responded to the cameras and perceived their operation. A survey of close to 7000 drivers was conducted, with the following aspects of speed camera deployment: camera signing alone; two kinds of publicity campaigns linked with speed camera deployment; prosecution following detection by speed camera; and, the effects of cameras when first installed and over time.

DATABASE: TRIS Online

ACCESS:

<http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme4/theeffectsofspeedcamerashowd4779>

Digital Deterrent: In Trials, a New Speed Camera System Reduced Speeding By 30%.

CITATION: Tim Palmer, Highways (Croydon, London, England) 1999. Highways. Vol. 68. No. 6, Pg. 20-21.

ABSTRACT: Not available.

DATABASE: Worldcat

FHWA Study Tour for Highway Safety Management Practices in Japan, Australia, and New Zealand

CITATION: Joseph Bared, Nelson Evans, Ronald W. Hill, et al. 1995.

ABSTRACT: This report presents the findings of a U.S. study team that examined safety management practices in Japan, Australia, and New Zealand. Sponsored by the Federal Highway Administration (FHWA), this trip was conducted between June 10 and June 24, 1994. The purpose of the trip was "to assess Safety Management Systems (SMS) in the three countries, their programs or components and technologies of SMS activities, including people, vehicles, and roads; compile the information; and identify effective strategies for implementation in the United States of America". The team met with a variety of officials who were responsible for or involved in major highway safety activities in their countries. While considerable diversity exists in the highway transportation environment within and among the three countries, each has programs that approach highway safety in similar philosophical and managerial styles. Each embarked on aggressive national safety campaigns in the 1990s, employing some level of strategic planning in formulating their safety programs. National Transportation Library
DATABASE: TRIS Online
ACCESS: <http://ntl.bts.gov/DOCS/sms.html>

FHWA International Technology Scanning Program: Summary Report Of The FHWA Study Tour For Speed Management And Enforcement Technology

CITATION: J. A. Coleman, R. D. Cotton, M. R. Parker, et al, 1995. Federal Highway Administration (U.S. Department of Transportation).

ABSTRACT: This report documents the findings of a study team from the United States which conducted a scanning tour in the Netherlands, Germany, Sweden, and Australia during the period April 21 through May 5, 1995. The purpose of the tour was to obtain firsthand knowledge about the practices and policies concerning speed management and enforcement technology. A brief overview of the speed management and enforcement policies, as well as individual speed-related projects that were reviewed by the study team, are presented for each country visited. The material is taken from the formal presentations, as well as from reports and other information given to the team. At the conclusion of each country summary is a brief discussion of the findings and their transferability to the United States. The major findings of the study team are outlined in the final section of the report and are repeated in the executive summary. The specific speed management methods discussed include realistic speed limits, variable speed limits, differential speed limits by vehicle type, speed governors on heavy vehicles, traffic calming techniques, speed limits based on driver perception, and public education and information. Specific enforcement technology and deployment methodologies discussed that may be applicable in the United States are VASCAR (Visual Average Speed Computer and Recorder), Radar (Radio Distance And Ranging), Lidar (Light Distance And Ranging), Photo Radar, and Red Light Camera. National Transportation Library
DATABASE: TRIS Online
ACCESS: <http://ntl.bts.gov/DOCS/speed06.html>

Crash-based evaluation of the speed camera program in Victoria 1990-1991. Phase 1, General effects. Phase 2, Effects of program mechanisms

CITATION: M. H. Cameron, Antoniette Cavallo, Adrian Gilbert, et al. Appearing in: Report no. 42; Report no. 42. 1992. Monash University Accident Research Centre. Clayton, Vic.

ABSTRACT: Not available.

DATABASE: Worldcat

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc042.pdf>

Evaluation of the speed camera program in Victoria, 1990-1991 : phase 3, localised effects on casualty crashes and crash severity, phase 4, general effects on speed

CITATION: Pat Rogerson, S. V. Newstead, Maxwell H. Cameron, et al. Appearing in: Report no. 54; Variation: Report (Monash University. Accident Research Centre) no. 54. 1994. Monash University, Accident Research Centre. Melbourne.

ABSTRACT: Not available.

DATABASE: Worldcat

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc054.html>

Evaluation of the speed camera program in Victoria 1990-1993. Phase 5, Further investigations of localised effects on casualty crash frequency

CITATION: S. V. Newstead, Narelle Mullan, M. H. Cameron, et al. Appearing in: Report no. 78; Variation: Report (Monash University. Accident Research Centre) no. 78. 1995. Monash University Accident Research Centre. Clayton, Vic. Pg. 27.

DATABASE: Worldcat

ACCESS: <http://www.monash.edu.au/muarc/reports/muarc078.pdf>

RESEARCH IN PROGRESS

Feasibility of Camera-Based Enforcement of Speed and Red Light Running: An Investigation of Operational, Ethical, and Legal Issues Related to Camera-Based Speed and Traffic Signal Enforcement

Speed enforcement in work zones and other locations on highways is a very important strategy for reducing crashes and saving lives, and the use of cameras can be very effective in certain situations. Similarly, camera-based enforcement can be an effective countermeasure against red light running at intersections. However, there are several difficulties and issues that prevent many states and cities from pursuing automated enforcement. These organizations can benefit greatly by learning how other similar organizations have been able to overcome these difficulties and implement camera-based enforcement. This proposed study will gather information from literature and face to face interviews on how the common difficulties and issues can be addressed and also how effective existing programs have been.

Start date: 2007/7/1

End date: 2008/7/31

Sponsor Organization

Southeastern Transportation Center
309 Conference Center Bldg
Knoxville, TN 37996
USA