



Maryland SafeZones

Work Zone Automated Speed Enforcement Program

Eric Tabacek
Deputy Director, Office of Traffic and Safety




Overview

- Program goals
- Rules and regulations
- Citation processing
- Pilot program
- Long term program
- Program results
- Challenges



Program Goals

- Change driver behavior using an integrated 3-E approach
- Promote awareness of speed-related safety issues
- Enhance worker and motorist safety by the reduction of or normalization of speeds in work zones




MARYLAND SafeZones
Automated Speed Enforcement

Safer Speeds, Safer Work Zones

Space constrictions often limit law enforcement officers' ability to perform traditional traffic stops in work zones. The Maryland SafeZones program places automated speed enforcement technology in construction work zones to encourage drivers to travel at safer speeds. The overriding goal of the SafeZones program is to change driver behavior in work zones making these areas safer for workers, drivers and their passengers.

SafeZones basics:

- The law authorizing automated speed enforcement in work zones became effective October 1, 2009.
- SafeZones mobile enforcement vehicles can be used in work zones on expressways and controlled access highways with a 45 mph or greater speed limit.
- Larger signs will be posted to give drivers adequate advance notice of work zones with automated speed enforcement.
- SafeZones mobile enforcement vehicles will rotate among eligible work zones throughout the State. The equipment will be tested for proper function at each work zone prior to deployment.
- According to a recent Insurance Institute of Highway Safety study, on Montgomery County roads with automated speed enforcement and warning signs, there was a 70 percent reduction in drivers traveling more than 10 mph over the speed limit.



For more information:
SafeZones Customer Service 1-877-578-7440
www.safezones.maryland.gov

Rules and Regulations

- Expressways and controlled access highways (45 mph and greater)
- At least 12 mph over the posted speed limit
- Conspicuous signing
 - 4 approach warning signs (2 on each side of roadway)
 - General notice signs
 - Speed limit signs
 - Speed display trailer
- ASE System continuously manned during deployment
- System tested prior to and after each deployment

Rules and Regulations

- Photos of rear license plate
- Citations reviewed, approved and signed by a law enforcement officer
- Civil penalty, with a fine of \$40 and no points
- Warning Period
 - 41 days in Pilot Program
 - 21 days for each new long-term work zone (began Oct. 2010)



CITATION

**WORK ZONE SPEED MONITORING SYSTEM
TRANSPORTATION ARTICLE §21-810**

Mail Date: 11/01/09

John Q. Citizen
1234 Main Street
Baltimore, MD 21227

Please take notice that the vehicle described and pictured herein was detected and recorded by a work zone speed monitoring system exceeding the posted speed limit by at least 12 mph in violation of Title 21, Subtitle 8 of the Transportation Article. The pictured vehicle was traveling at the speed listed below at the place, date, and time specified. Therefore, under Maryland State Law TA 21-810, as the registered owner(s) or lessee (six months or more) you are liable for the violation. Unless you elect to go to court, a civil penalty in the amount of \$40.00 must be paid by the date due shown on this notice.

PAYMENT OF THE PENALTY AMOUNT FOR THE VIOLATION IS AN ADMISSION OF LIABILITY; HOWEVER, IT WILL NOT RESULT IN POINTS ON YOUR DRIVING RECORD AND CANNOT BE USED TO INCREASE YOUR INSURANCE RATES.

WARNING: FAILURE TO PAY THE PENALTY SHOWN OR TO CONTEST LIABILITY AS DESCRIBED IN THE NEXT PARAGRAPH IS AN ADMISSION OF LIABILITY AND MAY RESULT IN THE REFUSAL OR SUSPENSION OF THE MOTOR VEHICLE REGISTRATION.

If you wish to contest this citation, your request for a court date must be received at least five days prior to the payment due date shown below. If you appear in court, the maximum amount you can be charged is a \$40.00 fine and court costs. Instructions for payment and contesting the citation are on the reverse of this notice. Recorded images are evidence of a violation of the Maryland Law prohibiting exceeding the maximum posted speed limit.

Citation Number: GB123456789	Vehicle Tag: MD 180M797
Violation Date: 10/01/09	Violation Time: 13:54:59
Vehicle Speed: 63	Posted Speed: 50
Due Date: Mail Date + 30	Amount Due: \$40
Location: Test Location	

CERTIFICATE
I am a police officer employed by the *Maryland State Police* and certify that the work zone speed monitoring system was operated in compliance with the requirements of Subsection B of TA 21-810. Based on inspection of the recorded images shown on this citation, the motor vehicle was operated in violation of Title 21, Subtitle 8 of the Transportation Article. *Sworn to or affirmed by:*

Approver: _____ ID# _____

Send Check or Money Order Payable to:
STATE OF MARYLAND
Post Office Box 10427
Rockville, Maryland 20849

NAME & ADDRESS OF REGISTERED OWNER:
J.Q. Citizen
1234 Main Street
Baltimore, MD 21227

00(SCANLINE)00



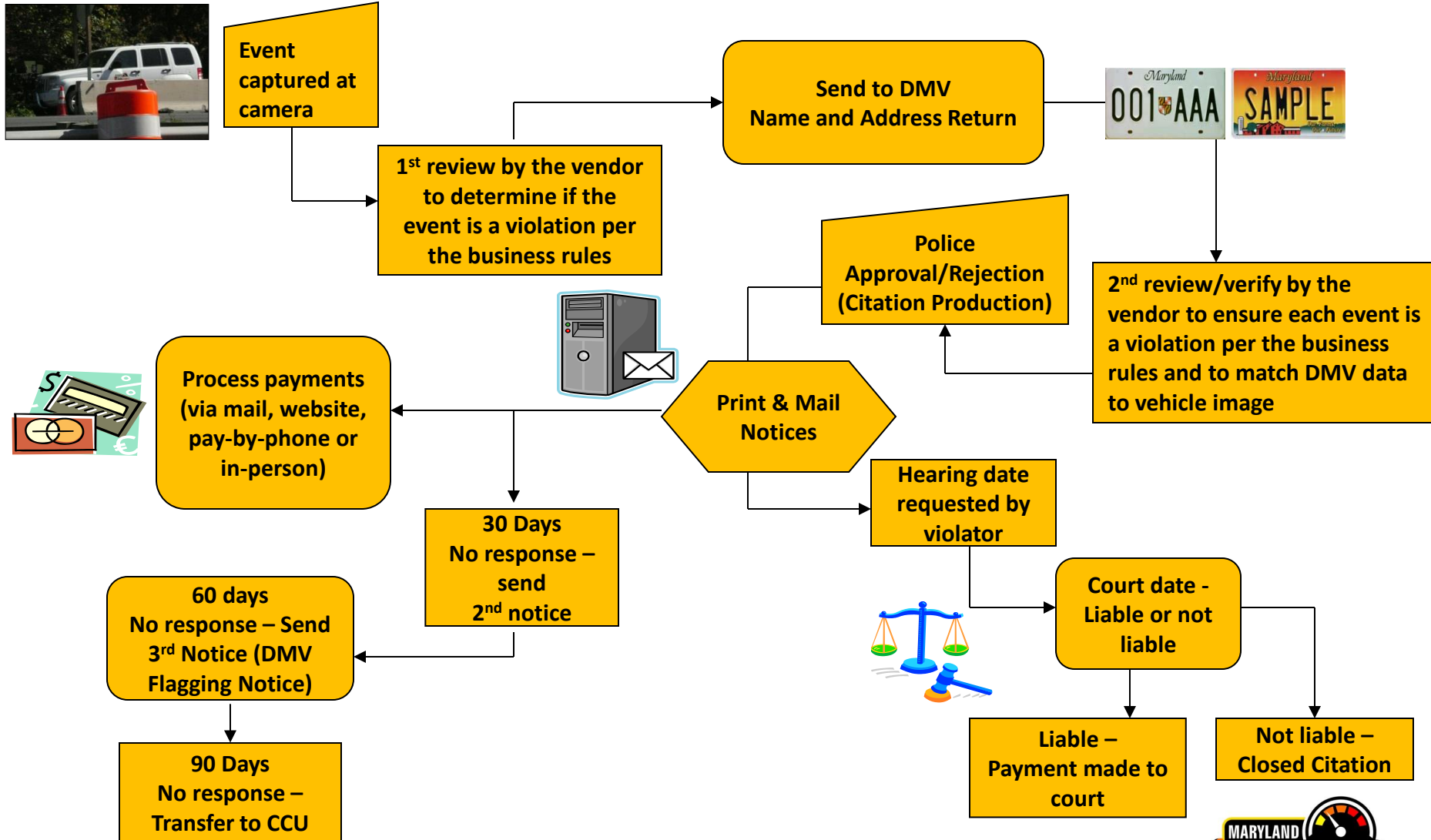

You can view full color images and pay online at:
<http://safezones.maryland.gov>
Citation Number: GB123456789 Pin Number: xxxxxxxx

PAYMENT OPTIONS - SEE REVERSE

Maryland SafeZones: Safer Speeds. Safer Work Zones.
A Public Safety Program of the State of Maryland

Citation Number: GB123456789	
Date Due	Fine Amount Due
12/1/09	\$40

Operational Processing Flow Chart



Pilot Program

- Oct. 5, 2009 to June 30, 2010
- Issued warnings until November 15, 2009
- Two (2) mobile enforcement vehicles
- Radar-based technology
 - Integrated lidar in 1st vehicle in April 2010, 2nd vehicle in June 2010
- Five (5) work zones – nearly 55,000 citations and warnings issued
 - I-695 @ Charles Street
 - I-95 ETL (I-895 to I-695)
 - I-95 @ the ICC (MD 198 to MD 202)
 - I-695 @ Liberty Road
 - MD 295 between I-195 and I-695

Long Term Program

- Seven (7) enforcement vehicles (plus one spare)
- Laser-based enforcement technology
- Five (5) deployments per vehicle per week
- Double shifts
 - Daytime – AM (6 AM to 3 PM)
 - Nighttime – PM (8 PM to 5 AM)
- Deploy on any day of the week
- Rotate vehicles based on work zone activity



Current Projects

Location	County	Enforcement Start Date
I-70 Phase 2D in Frederick	Frederick	May 2011
I-695 at Frederick Road	Baltimore	December 2011
I-95 at Contee Road / Van Dusen Road	Prince Georges	August 2012
US 29 at US 40	Howard	April 2012
I-795, I-695 to Owings Mills Blvd	Baltimore	May 2012
I-68 over Patterson Avenue	Allegany	April 2013
I-70 over Conococheague Creek	Washington	March 2013
US 340/US 15 Interchange	Frederick	November 2013
I-95, I-695 to MD 43 (MDTA) ETL	Baltimore	December 2012

Current Projects

Location	County	Enforcement Start Date
I-70 Over MD 63	Washington	May 2011
I-95 Inter-county Connector (Phase D/E) ICC	Prince Georges	December 2012
US 15 @ Motter Avenue	Frederick	September 2012

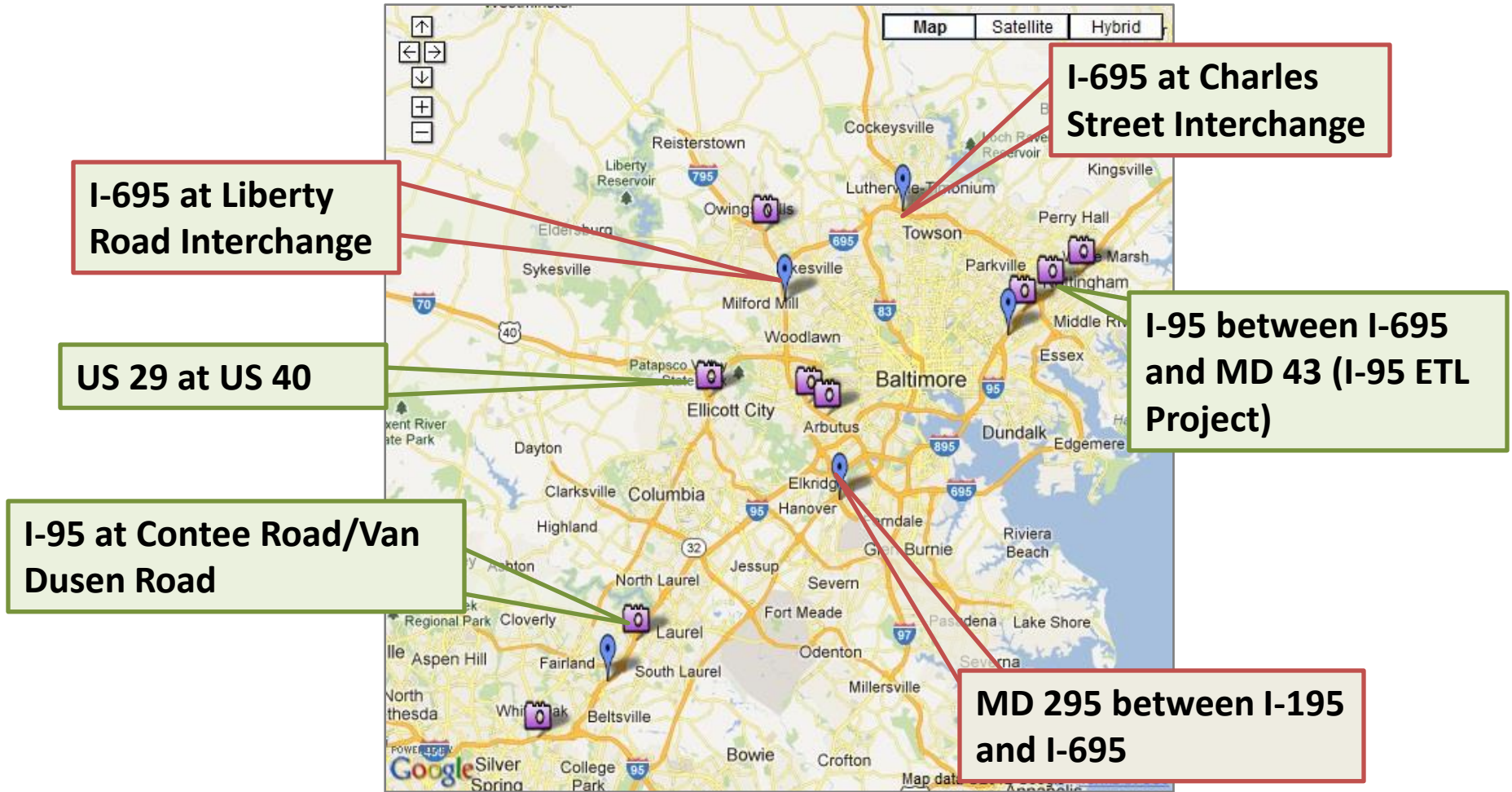
Completed Projects

Location	County	Last Deployment
I-695 at MD 26 (Liberty Road)	Baltimore	July 2012
I-95 at Millard E. Tydings Bridge	Cecil	July 2012
I-695 at Charles Street	Baltimore	May 2012
I-95 at the ICC	Prince Georges	October 2011
I-95 / I-495 SB at D'Arcy Road	Prince Georges	September 2011
MD 295 between I-195 and I-695	Anne Arundel	July 2011
US 15 SB at Hayward Road	Frederick	November 2010
I-95/I-495, Northwest Branch Overlay	Montgomery	August 2011
I-95, I-695 to MD 43 (MDTA – 3 locations)	Baltimore	April 2012
I-270, MD 80 and Bennett Creek	Frederick	December 14 2012

Completed Projects

Location	County	Last Deployment
I-95, I-695 to MD 43 (MDTA – 3 locations)	Baltimore	April 2012
I-695 at Wilkens Avenue	Baltimore	October 31 2013
I-795@ I-695 NB/SB (695 to Owings Mills Blvd.)	Baltimore	August 2012
US 29 (Deck Overlays) NB/SB @US 40	Howard	October 2012

ASE Work Zones – Location Map



Complete

Ongoing

Future Projects

Location	County	NTP Date
I-70 WB Ln over I-81	Washington	N/A
I-70 WB Ln @ Hancock over US 522 SB ramp	Washington	N/A
US 29 NB (south of Seneca dr. to South of MD 175)	Howard	N/A

Program Operations

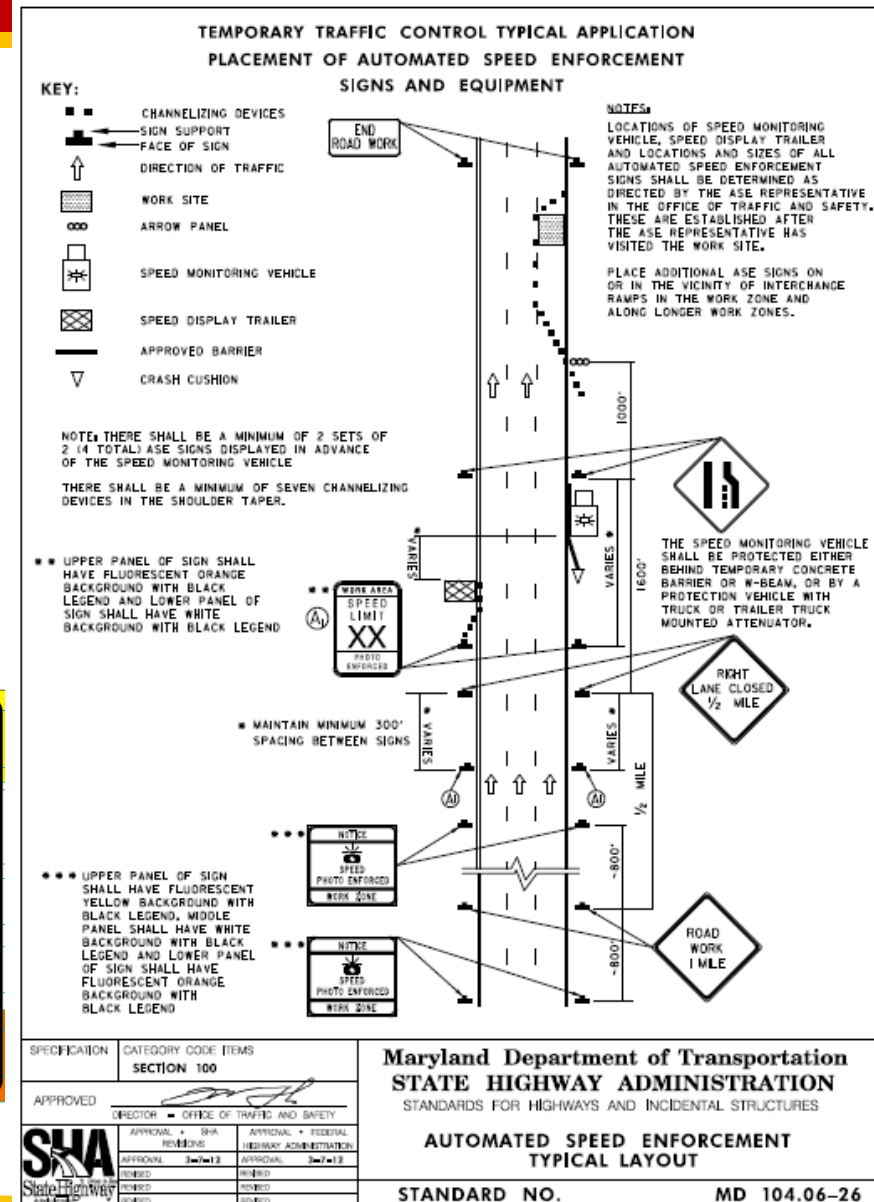
- Project Selection
 - Expressways/controlled access highway, min. posted speed 45 mph
 - Worker exposure/motorist hazards
 - Lane shifts, lane width reduction, lane splits, closed shoulders, shortened acceleration/deceleration lanes, rough pavement, etc.
- Project Coordination
 - *Construction Contractor*: Phase changes, construction activities, vehicle location
 - *ASE Contractor*: Deployment schedules, customer service, back-office work, courts
 - *Design Engineer*: Signing, vehicle location and protection, contract pay items

ASE Equipment Location

- Considerations for ASE Vehicle and Speed Display Trailer Placement:
 - Protection
 - Behind barrier/guiderail (most desirable)
 - Behind traffic control devices (TCDs) in lane closure configuration (less desirable)
 - Behind TCDs on shoulder (least desirable)
 - Location
 - Construction activities and work zone set-up impact available locations
 - Safe entry/exit
 - Functionality of ASE System
 - Grade/elevation
 - Line of sight

Advance Warning Signs

- Two sets of signs, each set comprised of two signs
- One on each side of the roadway
- Cover ALL approaches to the ASEV



Statistics – July 1, 2010 to December 31, 2013

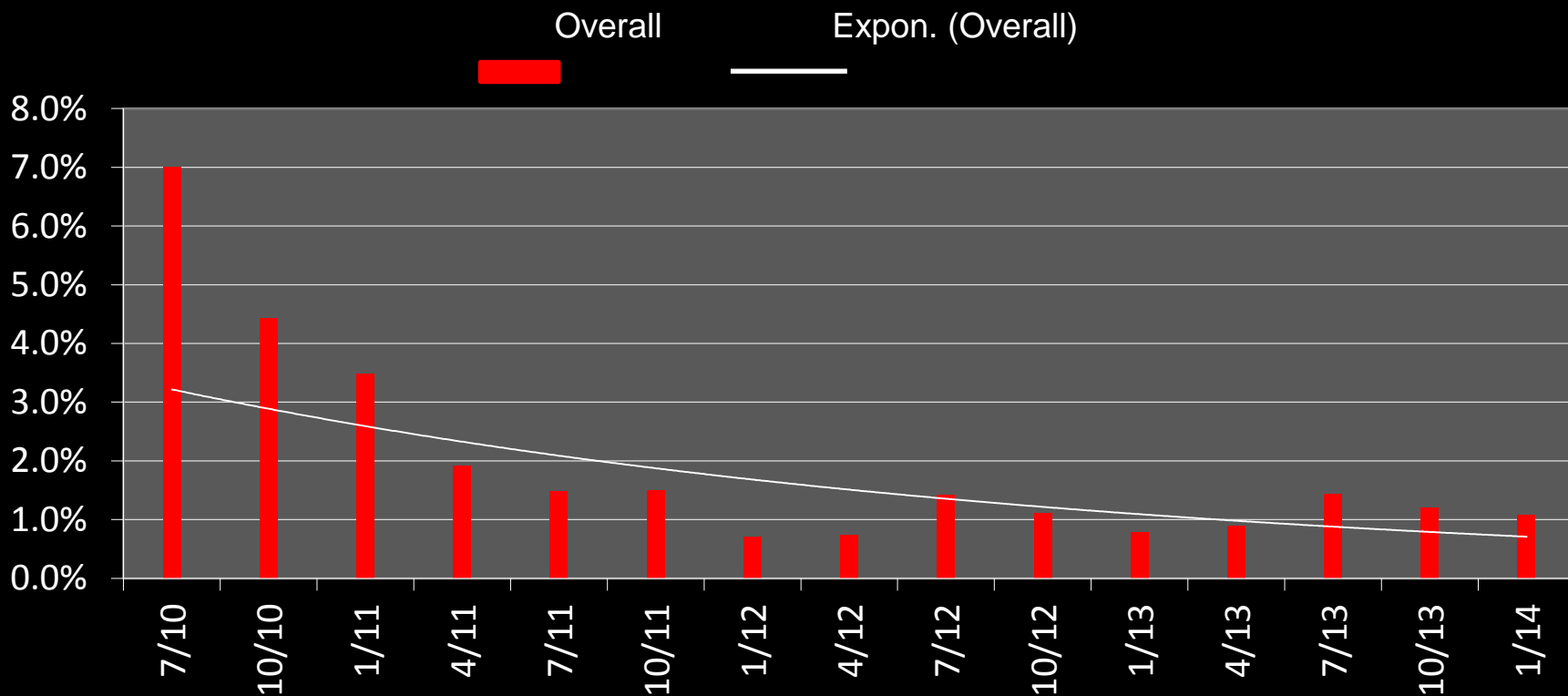
- Over 1,738,634 citations issued
- Issuance rate of 74.7% for all violations
- Issuance rate of 95.1% for controllable citations
- Reject reasons:
 - Controllable: clarity of plate, dark environment
 - Uncontrollable: DMV does not return an address, obstructed plate, rentals/leases, unknown vehicle make
- Approx. 83% of citations have been paid
- Revenue: About \$49.5 million
 - Program administrative and operating costs have not been subtracted from this total

Program Results

- Reduction in the percentage of drivers exceeding the enforcement speed
- Reduction in the percentage of drivers excessively speeding over the enforcement threshold
- Reduction in number of crashes

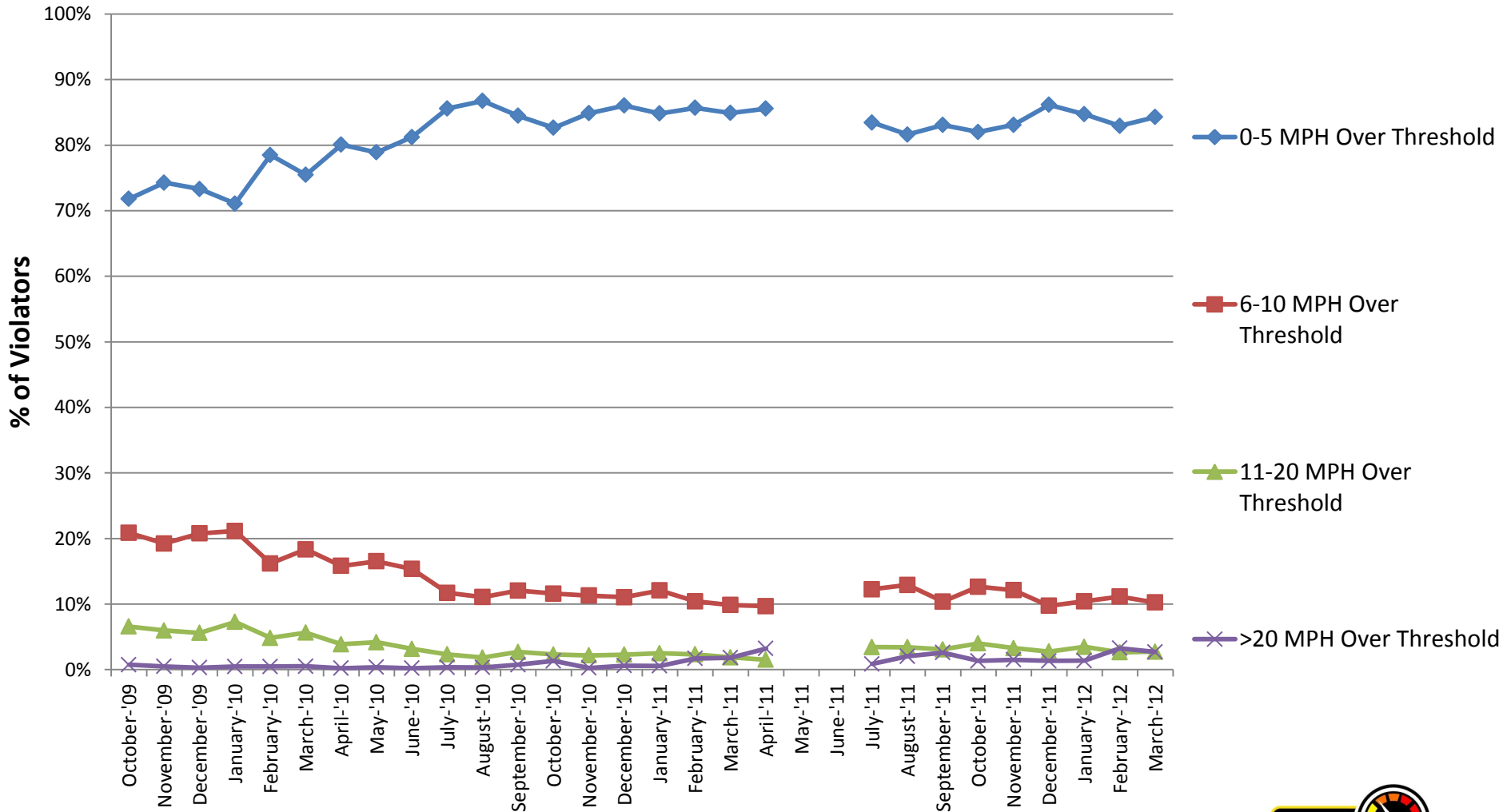
Decrease in Violation Percentages

**Overall Violation Percentages
(% of vehicles exceeding the enforcement speed)**



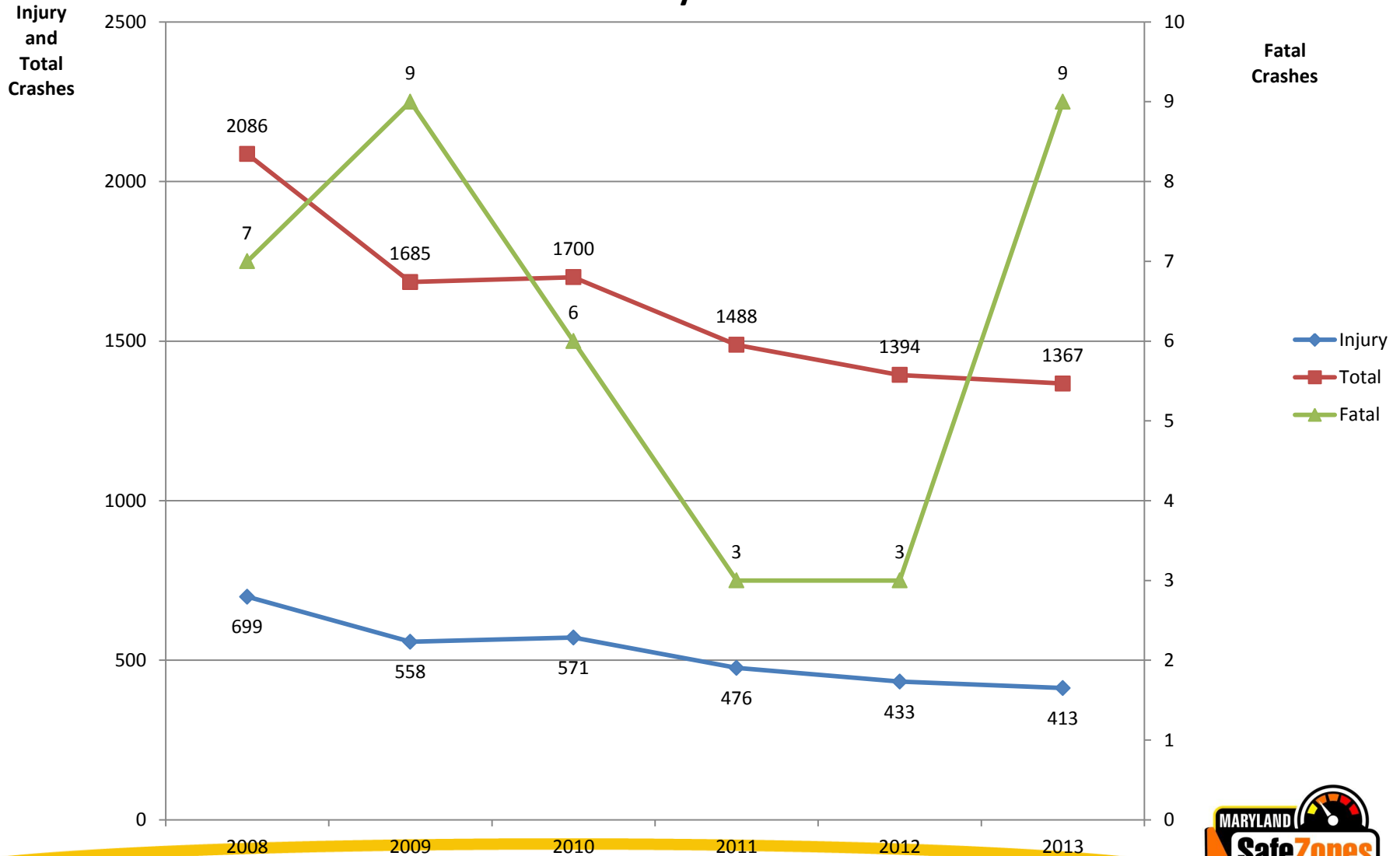
Decrease in Excessive Speeders

Enforcement Location: I-695 at Charles St



Reduction in number of Crashes

Crash Data For All Maryland Work Zones



Challenges

- Customer inquiries
 - Emails, phone calls, FOIA requests, reporter requests, etc.
- Customer curiosity
 - “Friendly” drive-bys or stop-bys
- Operations coordination
 - Scheduling deployments, changing on-the-fly, weather, etc.

Next Steps

- Continue evaluating projects for eligibility
- Continue evaluating efforts to improve operator safety
- Continue to collect and analyze before and after data for program evaluation and improvement
- Potential future legislation?

Additional Information

- Safezones Website
 - Enforcement locations
 - Statistics
 - Online payment
 - FAQs
 - Useful resources

<http://safezones.maryland.gov>

The screenshot shows the homepage of the Maryland SafeZones website. At the top, it identifies itself as a joint program of the Maryland State Police, Maryland Transportation Authority, and Maryland State Highway Administration. The main heading is "Automated Speed Enforcement in Work Zones". Navigation tabs include HOME, LOCATIONS, FAQs, VIOLATION INQUIRY, PAY A TICKET, and RELATED INFO. A central banner features a white enforcement vehicle and a "NOTICE SPEED PHOTO ENFORCED WORK ZONE" sign, with the text "Safer Speeds, Safer Work Zones." Below this, a paragraph explains that Automated Speed Enforcement (ASE) systems are used to manage speed and reduce crashes in work zones. The footer contains links for FAQs, Accessibility, Privacy Notice, Contact Us, and Login, along with the address: PD Box 10427, Rockville - MD 20849 - (877) 578-7440.

- SHA Website
 - Safety Programs -> Automated Enforcement
 - <http://roads.maryland.gov>

Contact Information



Eric Tabacek

Deputy Director, Office of Traffic and Safety

410.787.5805

etabacek@sha.state.md.us

Saed Rahwanji

Asst. Division Chief, Traffic Development & Support
Division

410.787.5870

srahwanji@sha.state.md.us

Kayode Adenaiya

SafeZones Team Leader

410.787.5864

kadenaiya@sha.state.md.us