Maryland SafeZones
Work Zone Automated Speed Enforcement Program

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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’s SafeZones Program

- Good WZ design
- Train All workers in safety
- New products
- Motorist information thru media/ITS
- WZ inspections
- Promote safety and mobility
- Enforcement
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)
Operational Processing Flow Chart

Event captured at camera

1st review by the vendor to determine if the event is a violation per the business rules

Send to DMV Name and Address Return

Police Approval/Rejection (Citation Production)

Print & Mail Notices

Process payments (via mail, website, pay-by-phone or in-person)

2nd review/verify by the vendor to ensure each event is a violation per the business rules and to match DMV data to vehicle image

30 Days No response – send 2nd notice

Hearing date requested by violator

Court date - Liable or not liable

Liable – Payment made to court

Not liable – Closed Citation

60 days No response – Send 3rd Notice (DMV Flagging Notice)

90 Days No response – Transfer to CCU
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
ASE Work Zones – Location Map

I-695 at Liberty Road Interchange
US 29 at US 40
I-95 at Contee Road/Van Dusen Road
I-95 between I-695 and MD 43 (I-95 ETL Project)
MD 295 between I-195 and I-695

Complete
Ongoing
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
• Over 2.5 M citations issued
• Issuance rate of 75% for all violations
• Issuance rate of 94% 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
• Collected Revenue: About $82 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

Quarterly Summary from 2012~2016

% OF VEHICLES EXCEEDING THE ENFORCEMENT SPEED

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Decrease in Excessive Speeders

Enforcement Location: I-695 at Charles St

% of Violators

0-5 MPH Over Threshold

6-10 MPH Over Threshold

11-20 MPH Over Threshold

>20 MPH Over Threshold

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Reduction in number of Crashes

Crash Data For All Maryland Work Zones

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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?
Media Coverage of Speed Cameras

- County Voids Hundreds Of Speed Camera Citations
- Baltimore needs a speed camera do-over
- Charles sheriff’s office suspends use of speed cameras over sign placement issue
- Drivers' videos show Morningside speed-camera problems
- Conflicting Reports On Status Of City Speed Cameras
Other WZ ASE Programs in U.S.

- **Illinois**
  - $375 fine, 2nd Offense $1000 + 90 Day Suspension
  - Police Officer sits in vehicle
  - Citation issues at Officer’s discretion

- **Oregon**
  - 11 mph Over Speed Limit
  - Normal Speeding Fine + Points

- **Washington**
  - 11 mph Over Speed Limit
  - $137 Fine, No Points

- **Colorado**
  - 10 mph Over Speed Limit
  - $80 Fine, No Points

- **Arizona**
  - Operator Shot and Killed in 2009*
  - Program Ended When Contract Lapsed in 2010
  - Law Repealed in 2012
Fun Facts

• In 2014, only 0.36% of all citations (905/252,726) were contested
• Only 0.019% (48/252,726) were overturned
• One owner has 68 violations
• People who complain about speeding in their neighborhoods, flash their headlights to warn of a speed trap
• 85% of all drivers think they are better than average
Additional Information

• Safezones Website
  – Enforcement locations
  – Statistics
  – Online payment
  – FAQs
  – Useful resources

  http://safezones.maryland.gov

• SHA Website
  – Safety Programs --> Automated Enforcement
  – http://roads.maryland.gov
Contact Information

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