




# Speed Management & Arizona Automated Speed Enforcement Program

Arizona Division Office

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# Paradigm Shift: Safe Systems Approach

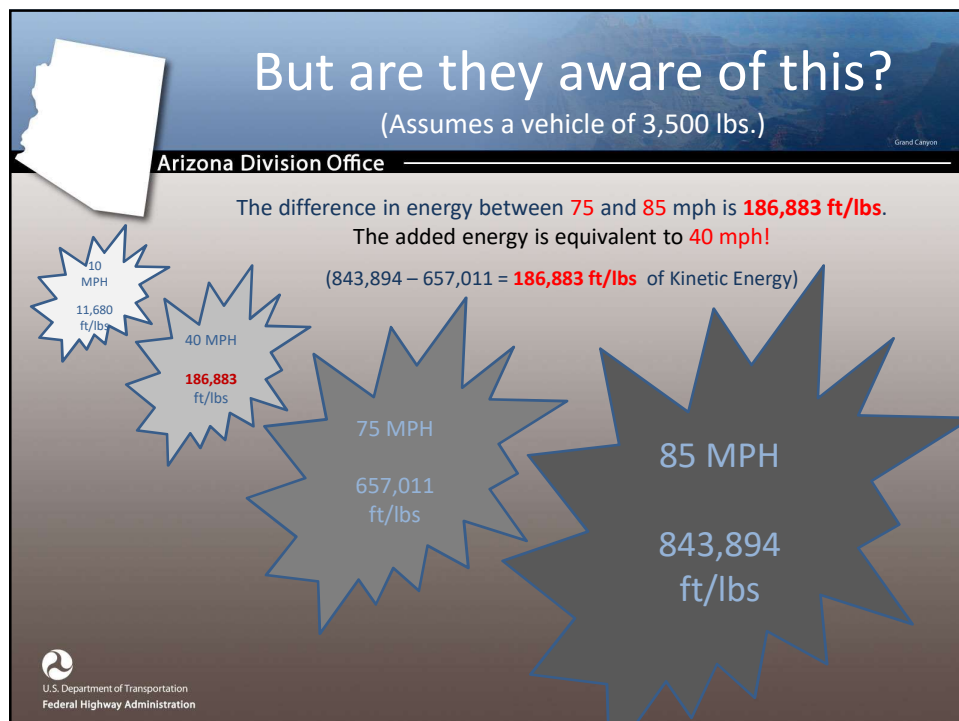
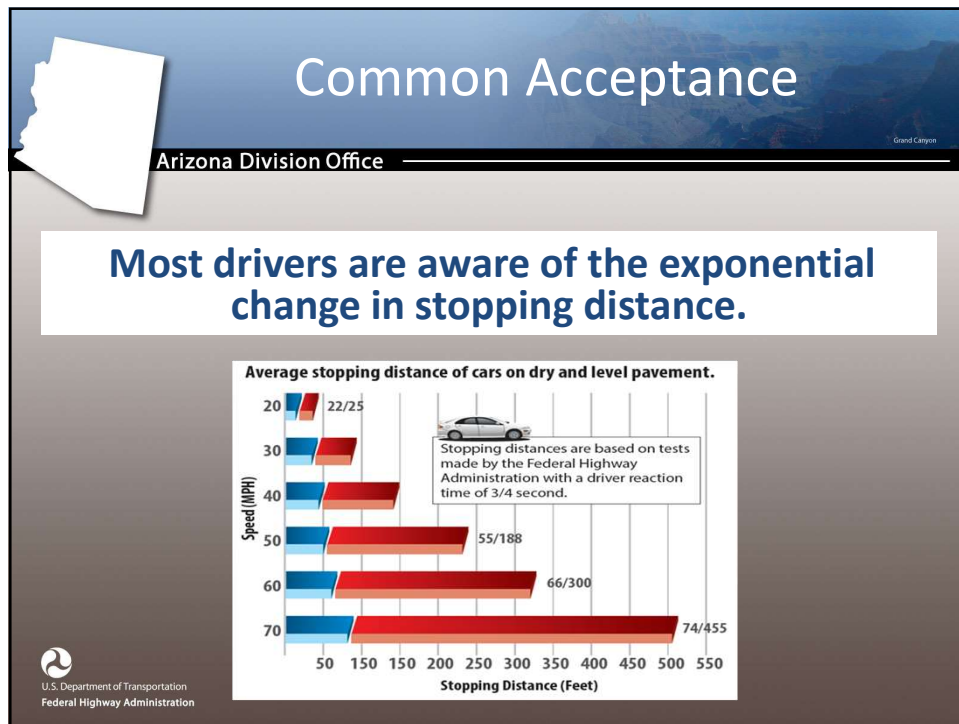
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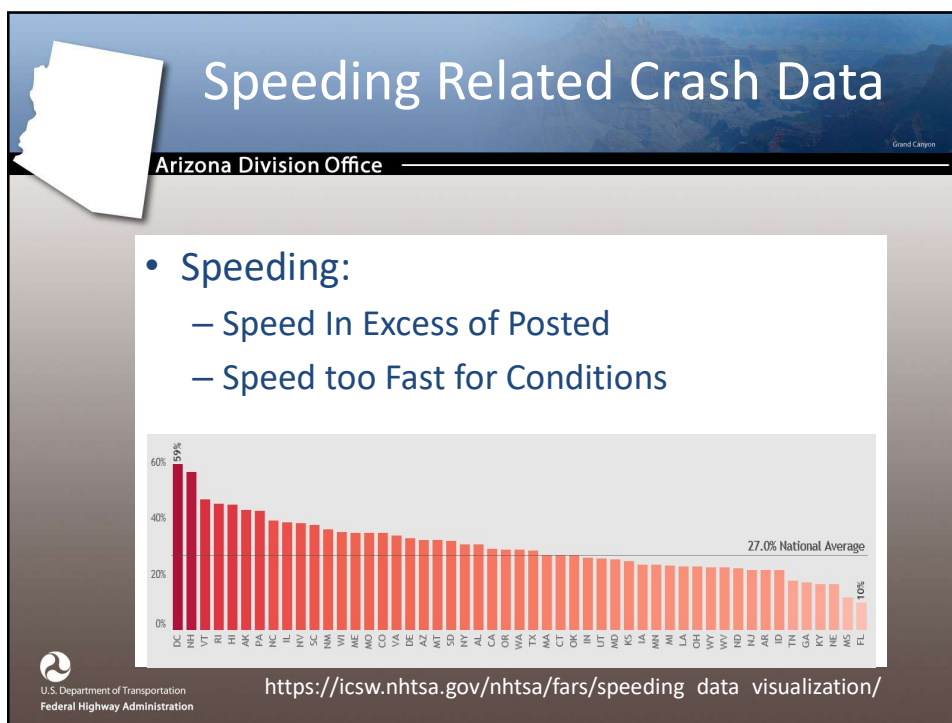
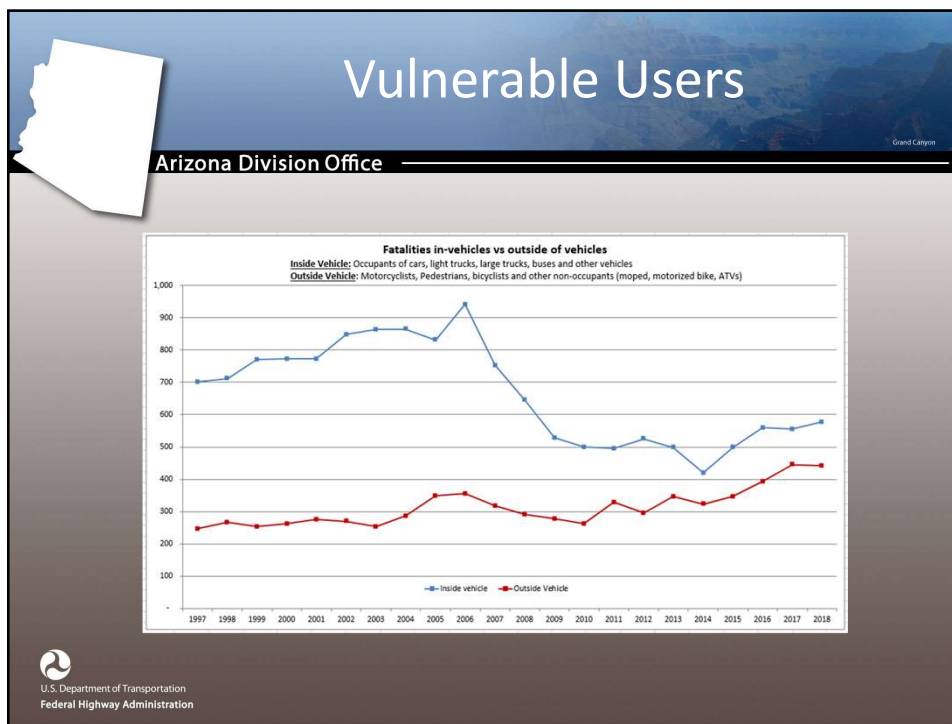
**Safety is an exercise of  
managing kinetic  
energy.**

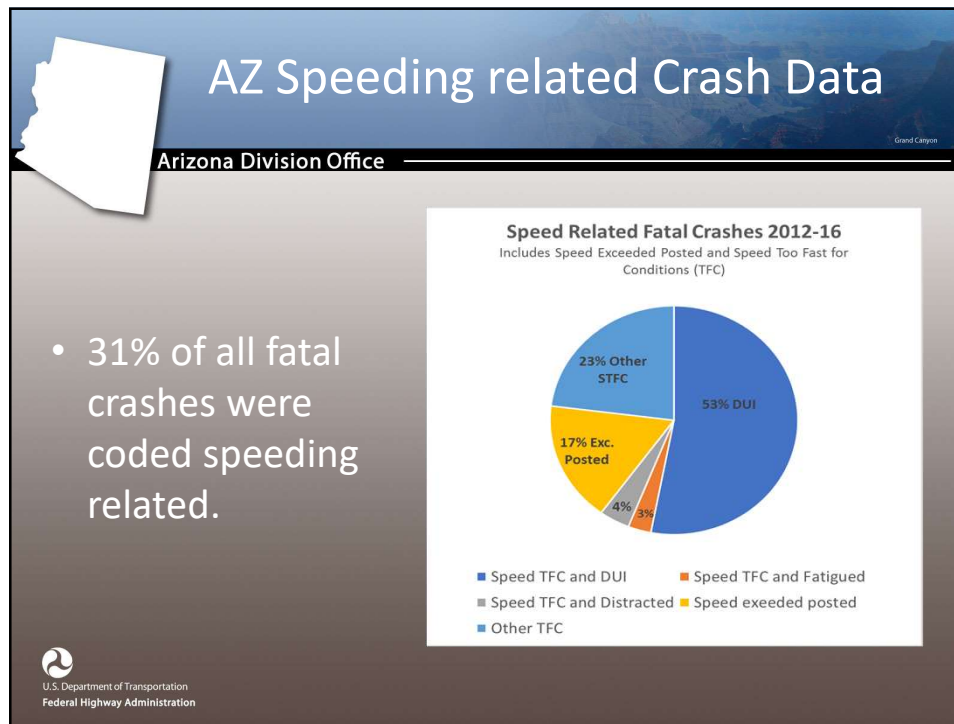


What determines the level of transferable kinetic energy in a crash?

$$K = \frac{1}{2}mv^2$$









## NTSB Speeding Safety Study ASE-Pros

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- ASE as a force multiplier
  - Frees up limited law enforcement resources to be used for other purposes.
- Can be placed where making traffic stops are too dangerous.
- A 2005 systematic review of 14 studies of ASE programs in Canada, Europe, Australia, and New Zealand found crash reductions of 5 to 69%, injury reductions of 12 to 65%, and fatality reductions of 17 to 71% at ASE locations after ASE program implementation

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## NTSB Speeding Safety Study ASE-Cons

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- ASE does not stop a driver at the time of the speeding offense, the driver may continue to speed and/or be unaware of the offense.
- Purpose: Revenue vs Safety
- Due Process
- Privacy

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## AZ Automated Speed Enforcement Programs (ASE)

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- The Arizona ASE Statewide Program
  - At the time Arizona and Washington DC were the only two with ASE specific laws “specifically allowing ASE” jurisdiction wide.
  - Arizona program was the only of its kind on high volume urban freeway applications.
  - However there were two prior pilot programs in AZ before the AZ law was enacted.
    - Scottsdale 101 Fixed Camera Sites
    - Two Mobil units deployed statewide.

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# AZ Pilot Programs for ASE

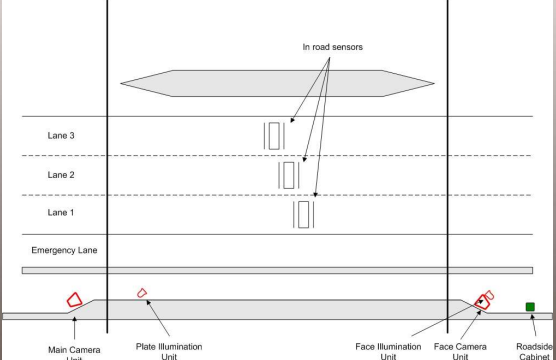
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- Pilot programs operated using existing speed laws.
  - Depending on speed, citations were either issued under criminal or civil law.
  - All citations carried points on license
  - ASE collected the evidence, Officers handled the cases as a normal speed citations under existing laws.

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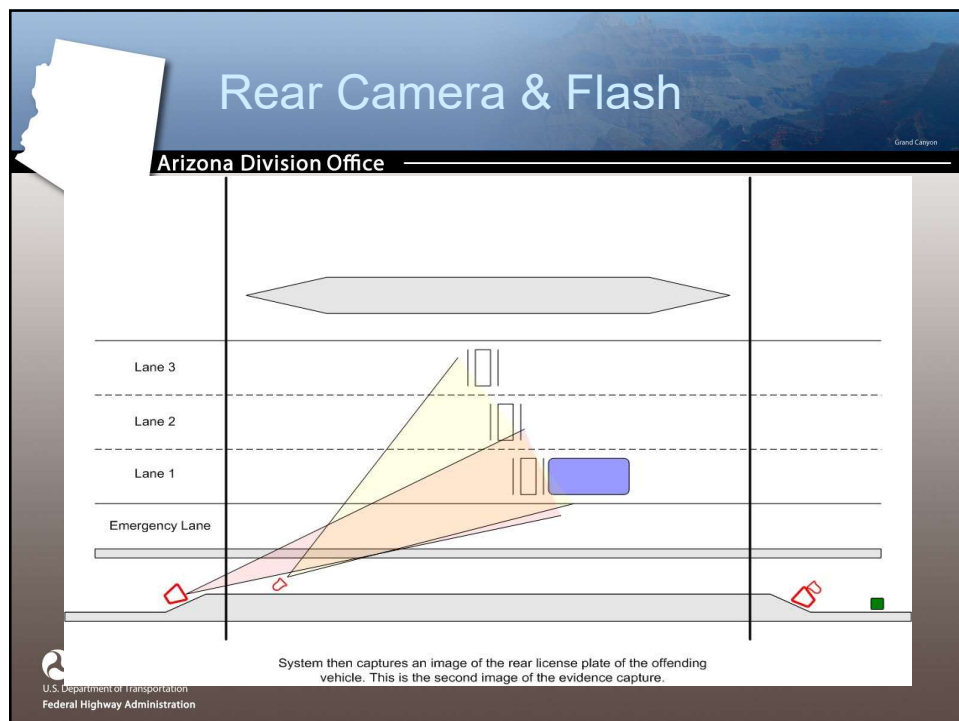
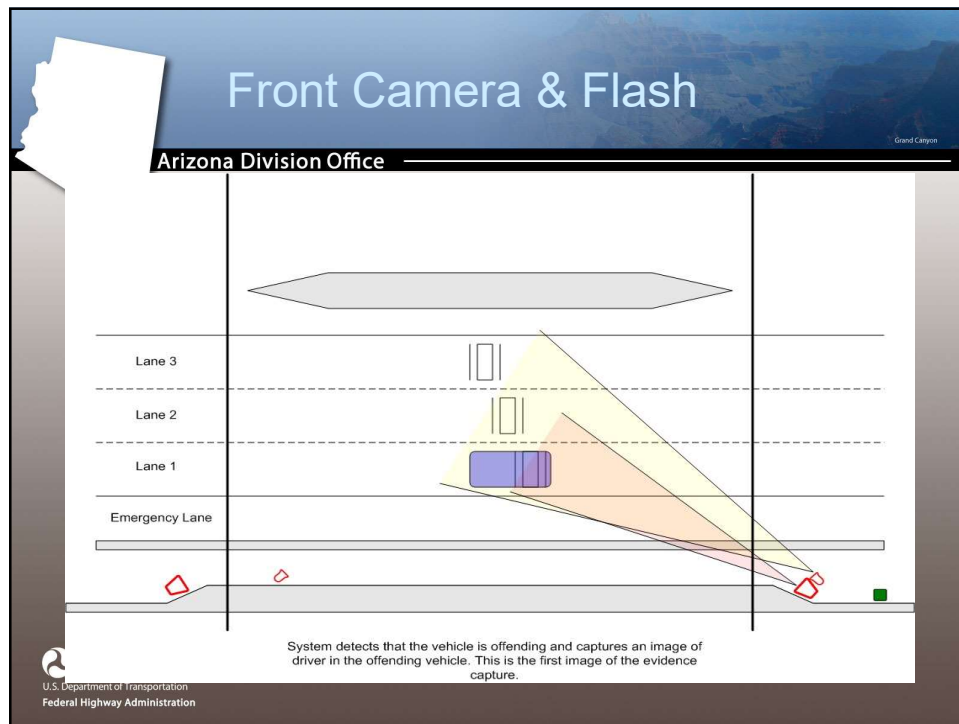
# Equipment Set Up - Fixed

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The diagram illustrates the fixed equipment setup for ASE on a multi-lane highway. It shows four lanes: Lane 3, Lane 2, Lane 1, and an Emergency Lane. In road sensors are positioned across all lanes. A Main Camera Unit is located on the left side of the road, and a Plate Illumination Unit is positioned in the Emergency Lane. A Face Illumination Unit and a Face Camera Unit are located on the right side of the road. A Roadside Cabinet is also shown on the right side. A photograph of a highway at night with light trails from vehicles is included on the right side of the diagram.

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# Mobile Units

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# Mobile Units

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# Required Signage

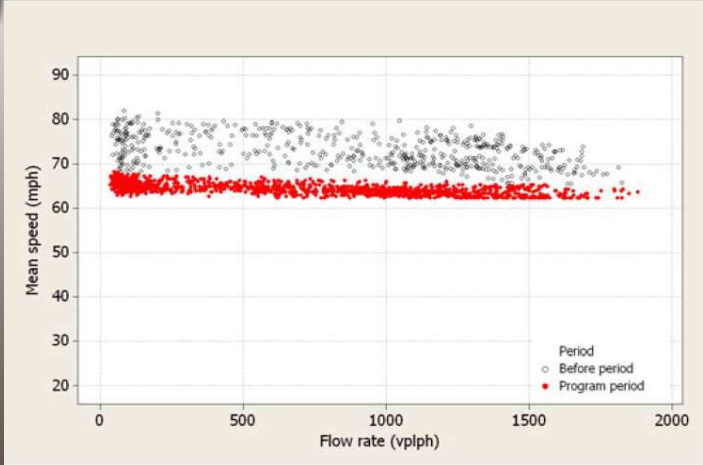
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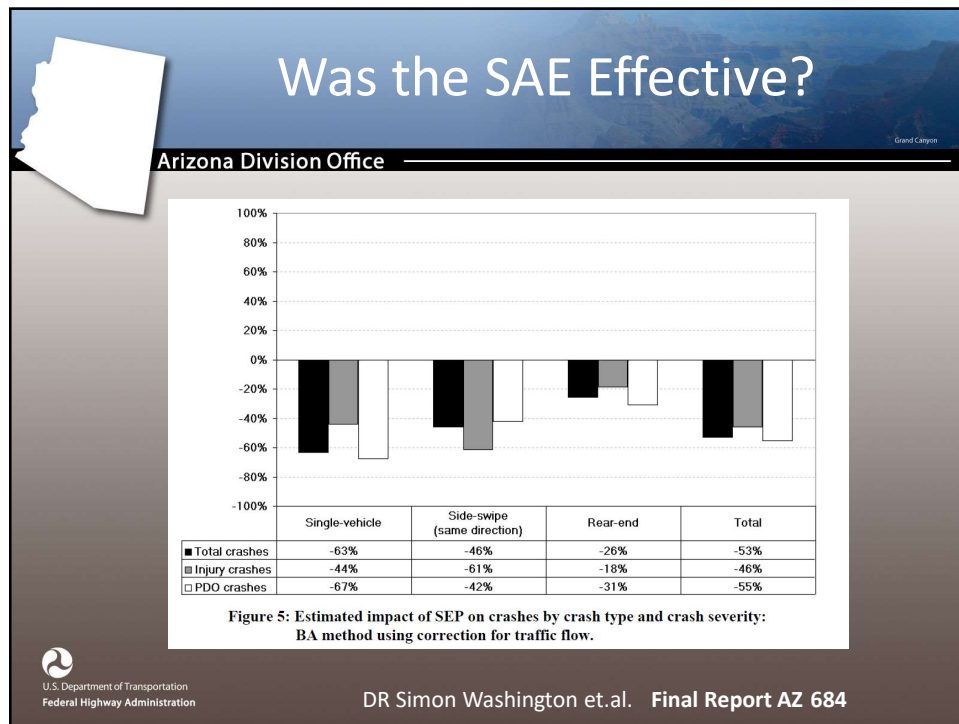
# Was the SAE Effective?

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DR Simon Washington et.al. Final Report AZ 684




## Comprehensive Statewide Program Legislation

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- Funding source provided by new legislation
  - \$165 fine for civil violations
  - No points for civil violations
  - Criminal violations (20 over and School zones) to be cited the same as non-photo enforcement violations
  - Provision for vendor to review and certify civil citations
  - Allows for use of Administrative Office of the Courts contract vendor to collect fines to reduce court load
  - Notice of violation vs. citations



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## Comprehensive Statewide Program

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- 36 Fixed Speed Systems
  - Primarily in Phoenix Metro area
  - Deployment locations determined in partnership with ADOT
  - Initial emphasis on major junction areas based on speed related collision statistics
  - Three cameras per approach
    - Spaced ½ mile apart, beginning ¼ mile from major interchanges.



## Comprehensive Statewide Program

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- 40 Mobile Speed Enforcement Units
  - 2-3 assigned to each District Commander
  - Deployment scheduled by District Officer/Sgt
  - Units originally staffed by vendor as Agents of Department (later automated).
  - Deployed based upon collision statistics
    - Locations determined by PE District officers and ADOT Traffic Safety Engineer
    - Detailed site maps provided to vender for setup



# Unexpected Support for ASE

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AAST 2013 PLENARY PAPER

## Impact of speed cameras on trauma centers

Jeffrey Skubic, DO, Steven Vanhoy, Chengcheng Hu, PhD, Nirav Patel, MD, Steven B. Johnson, MD, and Christopher Salvino, MD, Phoenix, Arizona

**BACKGROUND:** While studies, mostly from Europe and Australia, have examined the effect of speed cameras on motor vehicle collisions, limited data exist regarding their impact on charges and number of patients taken to Level 1 trauma centers (LTCs). Because of conflicting perceptions and data on their value, speed cameras were implemented along select Arizona highways in 2008 but then removed.

Figure 1. Admissions in experimental segment.

Figure 2. Admissions in control segment.

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<https://trid.trb.org/view/1320388>

# Lessons Learned

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- **ASE is a tool for, rather than a replacement of patrol officers**
- Need for policy regarding responder, "activations."
- Staff to follow-up on major violators and crimes.
- Fall out related to perceived privacy issues

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A presentation slide for the Arizona Division Office. The top features a blue header with a map of Arizona on the left and a landscape image on the right. The text "Arizona Division Office" is centered in the header. The main body is white with a large "Thank You!" message in blue script. Below this, contact information for Safety Specialist Jeff King is listed in blue text. The bottom left corner contains the U.S. Department of Transportation Federal Highway Administration logo.

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*Thank You!*

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