Traffic Incident Management

Business Case Study

Co-location of Arizona Department of Public Safety and Department of Transportation

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What is Traffic Incident Management?

• TIM consists of a planned and coordinated multidisciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible.

• Effective TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims, and emergency responders.
Traffic Incident Management (TIM)

In a typical year, the following number of responders are struck and killed on a **national level**:

- **12** Law Enforcement Officers
- **5** Fire and Rescue Personnel
- **60** Towing and Recovery Professionals
- **Several** transportation professionals from DOTs, Public Works, and Safety Service Patrol Programs
TIM Training

Designed to establish the foundation for and promote consistent training of all responders to achieve the three objectives of the TIM National Unified Goal (NUG):

• Responder Safety
• Safe, Quick Clearance
• Prompt, Reliable, Interoperable Communications
Traffic Incident Management (TIM)

For every 1 minute the roadway is closed, it takes an additional 4 minutes to relieve the congestion.

- The chances for a secondary collision increase 2.8% every minute the original incident continues to be a hazard.

20% of all collisions are secondary to an original traffic incident.

- 18% of all fatalities are from secondary collisions.
- Secondary collisions are usually more severe than the original incident.
What are we doing?

- ADOT has **25 TIM Trainers**
  - ~3 trainers per district so we can co-teach with our public safety partners and cover the entire state.

- Over **1250 ADOT personnel** trained statewide
ADOT has created a Quick Clearance Policy in support of the Arizona Quick Clearance Statute (A.R.S. 28-684).
Traffic Incident Management:

- Arizona has a total of 304 TIM Trainers
- Over 1250 ADOT personnel trained statewide
- Total numbers trained in Arizona 5,128 as of July 2017
Traffic Operations Center
Co-Location Project

Public Safety Partnership

ADOT
DPS
MAG
FHWA
Benefits of Co-Location of DPS & ADOT

- Improved Responder Safety
- Improved Communication
- Situational Awareness
- Reduced Roadway and Incident Clearance Times
- Improved Incident Management
- Reduced Secondary Crashes
- Improved Efficiency and Effectiveness
Performance Measurement

Agencies Frequently Evaluate:

- Policies
- Procedures
- Training
- Equipment
- Resource Deployment
- Efficiency
- Effectiveness
2016 Collisions Totals

- Total Collisions: 35,608
- Non-Injury Collisions: 25,725
- Injury Collisions: 9,643

Thousands

Statewide
2016 Secondary Collision Totals

- Total Secondary Collisions: 1,965
- Secondary Collisions w/ Injuries: 590
- Secondary Collisions Responder Involved: 29

Thousands
Secondary Collisions 2016

• Statewide Secondary Collision Average – 6.0%
  • National Average - 20%
  • Total Secondary Collision Injuries – 590
  • 29 Secondary Collision Involving Responders
  • Even at 6% Arizona has 2.4 secondary collisions involving responders each month statewide.
  • 7 Secondary Collision Fatalities
All Freeway Crashes

Comparison:
2014 (Jan–Sept) NO DPS vs 2015 (Jan–Sept) DPS Present

Reduced by 54 minutes
Business Case

Despite a **23% increase** in the number of freeway crashes, the time to clear crashes was **reduced by 63% on average**.

Time to clear all freeway lanes at crash sites have been **reduced by nearly one-hour**, on average.

Overall savings due to reduced traffic delay during 2015 is estimated at over $112 million.

Traffic delay experienced by travelers in 2015 was reduced by nearly **8.4 million vehicle-hours**.

*Does not include potential savings from secondary crashes reduced*

Benefit : Cost = 250:1
Clearance Techniques

- PUSH
- PULL
- DRAG

Clearance Tools

- Push Bumpers
- Tow Straps
- Patrol Vehicles
- Other Agency Resources - Towing etc.
Quick Clearance - Push, Pull, or Drag
AZTech TIM Coalition

- Multi-disciplinary partnership
- Established in 2010
- Includes state and local police, fire, EMS, towing companies, transportation agencies and metropolitan planning organizations.
- Shares ideas, knowledge, lessons learned and best practices.
AZTech TIM Coalition

Overview

• Meets every other month
• Debrief traffic incidents
• Review/analyze/reduce Secondary Crashes
• Advance Action Plan Projects
• Advance TIM Training
AZTech TIM Coalition

TIM Action Plan Projects

• Outreach and Engagement
• Customize TIM Training
• Improve TIM Training Tracking and Reporting
• TIM Training Binder
• TIM Mentorship Program
• TIM Training Program Metrics
Contact Information

Arizona Department of Transportation

TSM&O Division

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