Sources of Congestion

- Traffic Incidents (25%)
- Bottlenecks (40%)
- Work Zones (10%)
- Bad Weather (15%)
- Poor Signal Timing (5%)
- Special Events/Other (5%)

Traditionally transportation agencies address recurring Bottlenecks.

What about non-recurring congestion caused by Traffic Incidents?

What about addressing TIM?

Traffic Congestion and Reliability. FHWA (September 2005)
Vigo County—At 8:03 this evening, Indiana State Police troopers and Vigo County emergency agencies responded to a two-vehicle crash in the eastbound lanes of Interstate 70 near the 10 mile marker. Preliminary investigation revealed eastbound I-70 traffic was slowing for a prior crash.
• Reduced or eliminated injuries and fatalities among both responders and motorists

• Rapid clearance of incidents, greatly reducing traffic congestion and risk of secondary crashes

• Formal TIM programs that benefit corridors, regions, and States

• Adoption of TIM as a core mission for all State and local responders and DOTs
Training Objectives:

- Improved responder safety
- Improved reliability (reduced incident duration)
- Improved motorist safety (reduced secondary crashes)
TIM Training Program Implementation Progress
Total Responders to Be Trained
SIP 16 Goal of 20% - As of February 22, 2016

12.8% Percent Trained
(1,243,341) Total Responders To Be Trained
TIM Training Program Implementation Progress
Total To Be Trained By Discipline
- As of February 22, 2016

- As of February 22, 2016

- Web-Based Training totals are included in Other

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Total Trained</th>
<th>Total To Be Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire/Rescue</td>
<td>56,348</td>
<td>405,645</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>49,277</td>
<td>404,675</td>
</tr>
<tr>
<td>EMS</td>
<td>7,578 (3.4%)</td>
<td>226,094</td>
</tr>
<tr>
<td>Transportation/Public Works</td>
<td>20,247 (24.2%)</td>
<td>83,516</td>
</tr>
<tr>
<td>Towing and Recovery</td>
<td>13,838 (17.4%)</td>
<td>79,376</td>
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<tr>
<td>Other Disciplines*</td>
<td>11,936 (27.1%)</td>
<td>44,035</td>
</tr>
</tbody>
</table>

* Web-Based Training totals are included in Other
IN-TIME
INdiana’s – Traffic Incident Management Effort

Lt. Mike Lepper
Indiana State Police
Steve Harney
Indiana DOT
NATIONAL TRAFFIC INCIDENT MANAGEMENT (TIM) RESPONDER TRAINING PROGRAM

LAW ENFORCEMENT | FIRE | EMS | TRANSPORTATION TOWING & RECOVERY | COMMUNICATIONS

4-HOUR COURSE
Target Audience

**Law Enforcement**
- Patrol Officers, Supervisors, Accident Investigators, Reconstructionists

**Fire Department**
- Fire Department personnel, Fire Officers, Rescue/Extrication crews, Hazardous Materials Teams

**Emergency Medical**
- Duty personnel, Supervisors, Air Medical crews

**Medical Examiners/Coroners**

**Tow & Recovery Operators**
- Light-, Medium-, & Heavy-duty Operators, Supervisors

**Transportation**
- Municipal, County, State DOT, Courtesy Patrol, HOV, Toll Road Operators, Transit System Operators

**Communications Centers**
- PSAP 911 Centers, Traffic Operations Centers, Transportation Management Centers

**News Media**
Initial Step:
Train the Trainer (TtT) course for Responders

Next Step:
Classroom Training in regions throughout Indiana
Taught by Responder instructors to multidiscipline groups of responders.
4 hours
TIM Responder Training Evaluations

• I would recommend this to others:
  95% positive response

• I gained an understanding of the need for coordinated incident management
  – 95% positive response
Traffic congestion costs American motorists $87.2 billion per year in wasted time and fuel costs—more than $757 for every U.S. traveler.

The total amount of wasted fuel topped 2.8 billion gallons 24 gallons of gas for every traveler.

Americans spend 4.2 billion hours a year stuck in traffic.

Nationally, in 2007, the average driver languished in rush-hour traffic for 36 hours—nearly one full work week for every traveler.
Important TIM Concepts

- **Crashes, disabled vehicles, and debris** on the road cause roughly half of non-recurring **congestion** and are the most important factors affecting travel time reliability.

- **Incidents negatively impact businesses that depend on on-time deliveries.**
Important TIM Concepts

• Unplanned incidents pose two major challenges that need to be addressed without sacrificing one or the other:
  1) Protecting the safety of incident responders plus the safety of the motoring public
  2) Minimizing the impact on traffic flow.

• A significant number of responders are killed or seriously injured every year while dealing with unplanned incidents.

• Secondary collisions occur due to motorists coming upon an incident that is already affecting traffic.
Defining TIM

- TIM consists of a **planned** and **coordinated multi-disciplinary** 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**.
Each injury crash can require...
- 2 LE
- 4 F/R
- 2 EMS
- 1 T&R

9 Responders
That’s potentially 27 responders “working in or near moving traffic” every minute of every hour, 24/7/365!
“D” Drivers Are Killing Us...

✓ Drunk,
✓ Drugged,
✓ Drowsy,
✓ Distracted, or
✓ Just plain... Dumb
• Indiana’s quick clearance program is designed to get first responders to work together to quickly and safely open lanes blocked by an incident

• Why?
  – Twenty (20) percent of all crashes are secondary crashes
  – Eighteen (18) of those secondary crashes involve a fatality
  – For every one (1) minute a traffic lane is closed it takes four (4) minutes to get that traffic flow back to normal

• When one lane of a three lane road is blocked, what is the percentage reduction of traffic flow capability on that segment of roadway?
The Importance of Good Communication
Responder Struck-By Fatalities

In a typical year, the following number of responders are struck and killed:

- 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
A “Routine” Incident

- March 9, 1998 at 2:10 p.m. – Raining, wet roadways
- Vehicle on PA Turnpike lost control and slid into a drainage ditch... 911 is called
A “Routine” Incident – Aftermath

Photo Courtesy of the Lionville Fire Company (PA)
A “Routine” Incident – Aftermath

• Eight firefighters and two EMTs were struck by the 18-wheeler as it slid into the incident scene
  – One firefighter killed
  – Nine other responders seriously injured

Photo Courtesy of the Lionville Fire Company (PA)
Traffic Incident Management Area

Advance Warning Area

Transition Area

Buffer Space

Incident Space

Activity Area

Termination Area
blocking vehicle struck-by

02771 4:27 MPD 189
07/05/2007 L 13:05:43

Mesquite Fire Department
Avoiding the Zero Buffer
Vehicle Fires
“... provide a common framework for development of traffic incident management policies and training programs across the various responder disciplines.”
Local Drivers for TIM

Only two bridges across the Wabash River

Increase in Serious Accidents
Local TIM Initiatives

Designation & Marking of US 150 as I-70 Emergency Route

Laser/Radar Detection and Tracking

E911 Center

Emergency Services Rail Monitoring System
Local TIM Initiatives

Multi-jurisdictional Serious/Fatal Accident Investigation Team

- Photogrammetry Equipped
- Specialized Training

Certified TIM Training

- Senior Leader Introductory Course
- Four Traffic Incident Responder Courses
- 120+ Individuals Trained in 2013
Local TIM Initiatives

Local Implementation of INDOT DamageWise Program

Alternate I-70 Route Plan Development – Clay & Vigo Counties
Summary

• IN-TIME is dedicated to reducing secondary crashes by restoring traffic flow as quickly as can be safely done

• Anyone that might respond to an incident on the roadway is encouraged to take this class

• Communication & Relationships are a necessity!

• Questions?
  – Contact:
    • Steve Harney at sharney@indot.in.gov
    • Mike Lepper at mlepper@isp.in.gov