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raffic incidents cause 25 percent of delay on highways (1). These incidents can be dangerous for responders. From 2010 through 2012, at least 10 firefighters (2, 3, 4), 4 paramedics (5, 6, 7), and 7 law enforcement personnel (8) died after being struck by vehicles while responding to incidents. Data on towing and recovery industry occupational fatalities are not well tracked, but the Towing and Recovery Association of America anecdotally reports losses nearing 100 towing operators in the line of service annually (9). A strong interdisciplinary traffic incident management program can improve responder safety; significantly decrease incident duration; and when combined with traveler information, can increase peak-period freeway speeds, reduce crash rates, and improve trip time reliability.

To improve traffic incident management (TIM), the "National TIM Training Course" for TIM responders and managers was developed and refined through a series of SHRP 2 projects. Improving Traffic Incident Scene Management (SHRP 2 Project L12) and Train-the-Trainer Pilot Courses for Incident Responders and Managers (SHRP 2 Project L32A) are completed while two others are under way—e-Learning for Training Traffic Incident Responders and Managers (SHRP 2 Project L32B) and Post-Course Assessment and Reporting Tool for Trainers and TIM Responders Using the SHRP 2 Interdisciplinary Traffic Incident Management Curriculum (SHRP 2 Project L32C). This brief provides an overview of the SHRP 2 TIM series of projects.

Improving Traffic Incident Scene Management (SHRP 2 Project L12)

This project developed the National TIM Training Course for TIM responders and managers. The course was designed to establish the foundation for and promote certification of responders to achieve the three objectives of the TIM national unified goal: responder safety; safe, quick clearance; and prompt, reliable, and interoperable communications. The intent is to establish a common set of core competencies in order to promote a shared understanding of TIM goals among responders from different stakeholder groups—law enforcement, fire and rescue, emergency medical services, the U.S. Department of Transportation, towing and recovery, and notification and dispatch.

The multiagency and multidisciplinary course uses a variety of adult-learning techniques, including interactive seminar, case study analysis, tabletop role-play and scenario, and field practicum. The training was developed for delivery through a two-day intensive format or a



Figure 1. Field demonstration of exiting a response vehicle at an incident scene



modular (single lesson per session) format. A train-the-trainer curriculum also was developed to facilitate cost-effective cultivation of qualified trainers across the country. Core multidisciplinary competencies were identified with input from a group of experts in TIM. These competencies provided a framework from which the curriculum was built and design documents created. After development of the course materials, an evaluation was conducted by holding two pilot training sessions, and the input from participants was incorporated into the final materials.

The first two pilot training courses were delivered in Indianapolis, Indiana, and in Atlanta, Georgia, in the spring of 2010. Both of the pilot training courses were delivered by a multidisciplinary training team that combined practical TIM experience with extensive training experience. Participants received the training program well and viewed it as beneficial. When surveyed in a post-course evaluation, all

Figure 2. Hands-on tabletop activity



of the participants said they would recommend the training to others.

Status: This project is complete.

Product Availability: Training of Traffic Incident Responders (SHRP 2 Report S2-L12-RW-1) is available at http://www.trb.org/Main/Blurbs/166877.aspx.

SHRP 2 Contact: David Plazak, dplazak@nas.edu

Train-the-Trainer Pilot Courses for Incident Responders and Managers (SHRP 2 Reliability Project L32A)

To validate the National TIM Responder Training course, five additional pilot courses were funded through Reliability project L32A. The project conducted four pilot trainthe-trainer workshops, which trained nearly 200 new TIM responders in four states. Student-trainers from a diverse mix of primary TIM disciplines participated in the four train-the-trainer pilot workshops as shown in Figure 3. An alumni-led workshop was also held to evaluate the delivery of the National TIM Responder Training by first-generation graduates of the train-the-trainer course.

The L32A pilots were conducted at the following locations on the following dates:

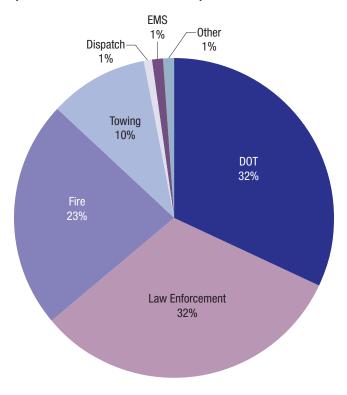
- Pilot 1: Nashville, Tennessee—June 19–20, 2012
- Pilot 2: Richmond, Virginia—June 27–28, 2012
- Pilot 3: Helena, Montana—July 11–12, 2012
- Pilot 4: Fort Lauderdale, Florida—August 8–9, 2012
- Alumni Pilot: Knoxville, Tennessee—September 12–13, 2012

Feedback from the five pilot workshops conducted through the L32A project resulted in nearly 1,500 discrete improvements to the curriculum, as well as materials enhancements, including a Pacer Guide to help instructors pace themselves throughout the training, materials checklists, and photographic enhancements to activity setup instructions.

More than 95% of graduates of the train-the-trainer course affirmed they would recommend this course to others. Of equal importance, 95% of graduates reported the course left them with a greater appreciation of the importance of safe, quick clearance principles, and 98% reported believing the course saved them research time when preparing to teach their own course.

Status: This project is complete. Project L32A prepared the TIM course to be delivered to the Federal Highway Administration (FHWA) for national implementation. FHWA is

Figure 3. Attendance by Discipline (Four Train-the-Trainer Pilots)



conducting workshops across all 50 states in addition to Puerto Rico and District of Columbia, and they will complete these workshops by December 2014. As of June 2013, FHWA has already held 32 training courses in 22 states, which trained more than 11,000 responders.

Product Availability: The final report for Train-the-Trainer Pilot Courses for Incident Responders and Managers (SHRP 2 Project L32A) is available at http://www.trb.org/main/blurbs/168921.aspx. For information on how to enroll in the training course, contact Paul Jodoin (paul.jodoin@dot.gov) at FHWA or Gummada Murthy (gmurthy@aashto.org) at AASHTO.

SHRP 2 Contact: David Plazak, dplazak@nas.edu

e-Learning for Training Traffic Incident Responders and Managers (SHRP 2 Project L32B)

To help disseminate the National TIM Training Course, SHRP 2 Project L32B is developing an e-learning system for the course that will be available in a modular format, based on modules developed in SHRP 2 Project L12 and refined by SHRP 2 Project L32A. The targeted learning will focus on law enforcement, fire and rescue, EMS, towing and

Testimonials from Participants in the L32A Pilots

"All of our participants came away with [a] new perspective of our job at the scene and a new understanding of how all the players need to work together to be safe."

—Towing Attendee (Montana Pilot)

"The main thing I've learned taking this course is there's more than just the law enforcement aspect of it. Actually also having the fire and rescue, and being able to use those as one big component, instead of you trying to do everything yourself."

—Law Enforcement Attendee (Tennessee Pilot)

"This course has driven home the importance of agencies working together toward a common goal—'Quick Clearance'—to prevent further incidents."

—Attendee (Virginia Pilot)

"I now understand that by communicating to the other departments that are responding to a scene will greatly reduce the time my guys and I will spend on the pavement in harm's way."

—Law Enforcement Attendee (Montana Pilot)

recovery, transportation and service patrol, and notification and dispatch. The project will also develop tools such as videos and animations that are 2–6 minutes long.

Status: This project is active. The final report will be available in 2014.

SHRP 2 Contact: Reena Mathews, rmathews@nas.edu

Post-Course Assessment and Reporting Tool for Trainers and TIM Responders Using the SHRP 2 Interdisciplinary Traffic Incident Management Curriculum (SHRP 2 Project L32C)

The objective of the National TIM Training Course is to ensure that students leave with a common set of core competencies that promote a shared understanding of TIM goals. In order to help make certain that these objectives are being met, SHRP 2 Project L32C is developing a post-course assessment and reporting tool. The tool will have two compo-

nents. The first is an assessment tool that trainers can use to assess the effectiveness of the training materials in helping students achieve the learning objectives of the curriculum. The second component is designed to help agencies identify resources or improved processes that may be needed to support successful TIM practices. The post-course assessment and reporting tool will apply across multiple target groups within incident response agencies and organizations at all levels, including executives, mid-level program managers, field responders, and trainers conducting the subject training.

Status: This project is active. The final report will be available in 2014.

SHRP 2 Contact: Reena Mathews, rmathews@nas.edu

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SHRP 2 RELIABILITY STAFF

Stephen J. Andrle, SHRP 2 Deputy Director; William Hyman, Senior Program Officer; David J. Plazak, Senior Program Officer; Jo Allen Gause, Senior Program Officer; Reena Mathews, Senior Program Officer; Matthew Miller, Program Officer; Ralph Hessian, Special Consultant; Abdelmename Hedhli, Visiting Professional; Onno Tool, Visiting Professional; Michael Miller, Senior Program Assistant