SAFETY COMPASS
NEWSLETTER

Safe Roads for a Safer Future
Investment in roadway safety saves lives

A Message from FHWA Associate Administrator for Safety, Tony Furst

Anthony T. Furst
Associate Administrator, Office of Safety

"It is a capital mistake to theorize before one has data." — Sherlock Holmes

"Information is the oil of the 21st century, and analytics is the combustion engine." — Peter Sondergaard, Senior VP, Gartner

"If we have data, let's look at data. If all we have are opinions, let's go with mine." Jim Barksdale, former Netscape CEO

Rather than attempt to improve upon or embellish these quotes, I'll let them stand on their own. I think they capture the message behind multiple articles in this edition of the *Safety Compass* on the criticality of the data that underpins the information upon which safety investments are made.

Absent data, it's just an opinion. So investment decisionmaking doesn't devolve into a contest of opinions along the lines of Mr. Barksdale's quote, I invite all of you to read to these articles and continue to advance and improve data acquisition and analysis so that investments are targeted where they will do the most good.

Roadway Departure: Data-Driven Strategic Planning

Authors: Ana Maria Eigen, D.Sc., FHWA Office of Safety R&D and Cathy Satterfield, P.E., FHWA Office of Safety

FHWA developed a Roadway Departure (RwD) Strategic Plan to further focus where the highway safety community can make advances in reducing these crashes that account for over half the traffic fatalities in the United States. The RwD Strategic Plan provides a data-based decision on where to focus resources for research, policy and guidance, and technical assistance. It also reveals where data improvements are needed. In 2008, FHWA standardized the criteria it used to define RwD reporting based on both concerns and questions that were raised within the States as

Safety Countermeasures Photo Contest Winners

Safety Compass would like to congratulate the winners of FHWA's Proven Countermeasures Photo Contest!

Roundabouts – Jim Norman, Connecticut DOT

Roundabouts
"Five Corners" Roundabout
2011 - Ellington, CT
Roundabout at Routes 74 & 286

Enhanced Delineation – Peter Speer, Pexco, LLC

Corridor Access Management – Jim Norman, Connecticut DOT

Corridor Access Management
2012 - Route 44 in Manchester, CT
Roadway with two signalized intersections
and pedestrian crosswalks

Backplates with Retroreflective Borders – Jeff Shaw, FHWA

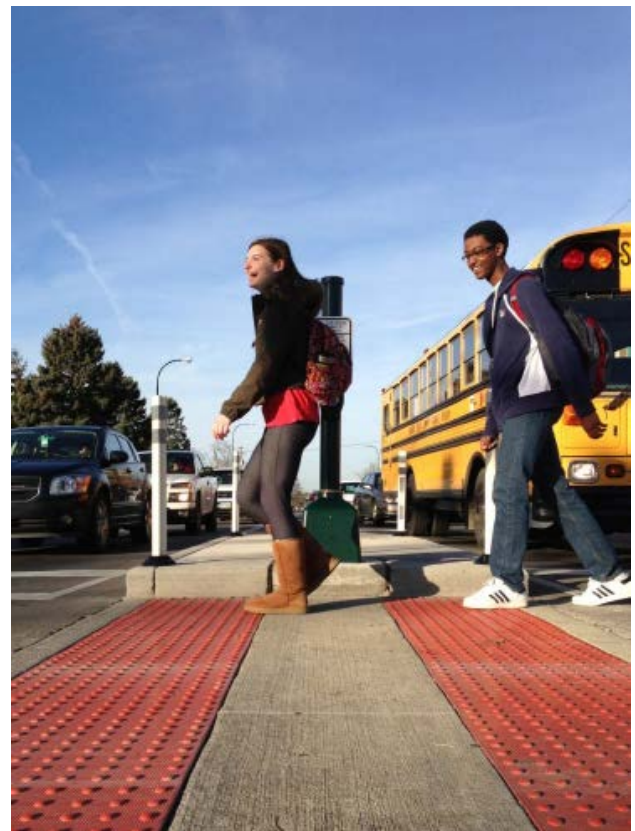**Pedestrian and Bicycle Safety – Karen Dintz Transpo Industries**

Longitudinal Rumble Strips and Stripes on 2-Lane Roads – Kurt Smith, Alaska DOT

Pedestrian Hybrid Beacon – Sylvia Mousseux, City of Scottsdale, AZ

Medians and Pedestrian Crossing Islands in Urban and Suburban Areas – Julie Walcoff, Ohio DOT
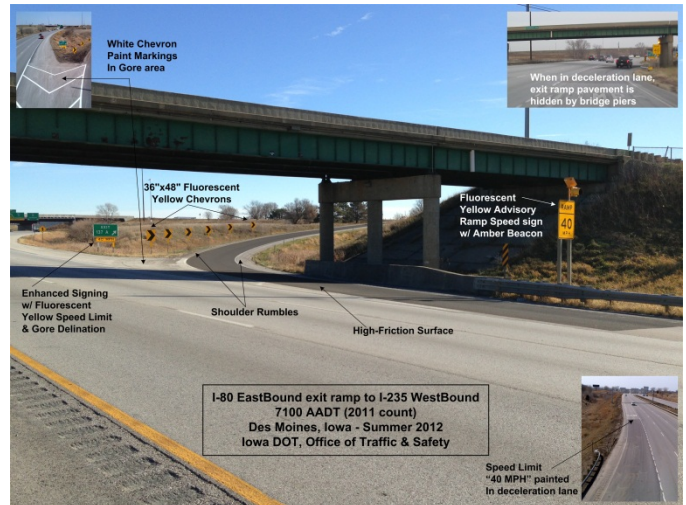
"Road Diet" (Roadway Reconfiguration) – Deborah Schreckengost Casadei, Pennsylvania DOT

Before

After

Safety Edge –
Andy Mergenmeier, FHWA

Friction for Horizontal Curves –
**Willy Sorenson, Iowa DOT**

(continued from page 1)

well as in consideration of newly available data elements in the Fatality Analysis Reporting System (FARS) database. Based on recent changes to FARS, new issues have been identified that will be reviewed by a technical working group this winter for the purpose of refining the RwD definition and criteria.

Defining a Roadway Departure

A RwD is defined as a non-intersection crash in which a vehicle crosses an edge line, a center line, or otherwise leaves the traveled way. The fatal crashes associated with these are reported using the FARS to analyze whether the first event in a

crash is a RwD, such as "run-off road" or "cross center line or median." In 2011, the three FHWA safety units (Office of Safety, Office of Safety R&D, and Resource Center Safety and Design Team) began the development of a RwD Strategic Plan. During the process, RwD crashes were analyzed based on the most harmful event, revealing that three-quarters of the RwD fatalities involve three event categories – overturns (31 percent), opposite direction crashes (24 percent), and impacts with trees and shrubs (19 percent). Four secondary areas have also been identified that account for another 21 percent of RwD fatalities: posts/poles,
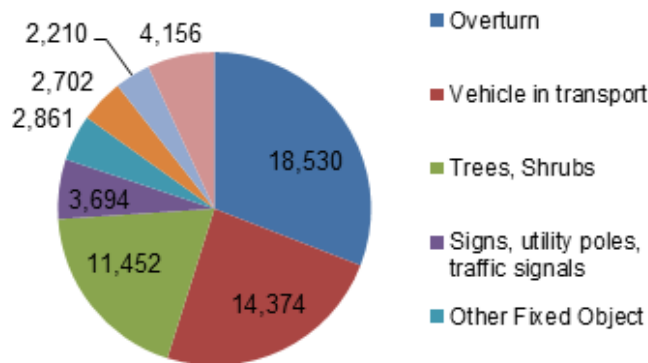
barriers, other fixed objects, and roadside geometry.
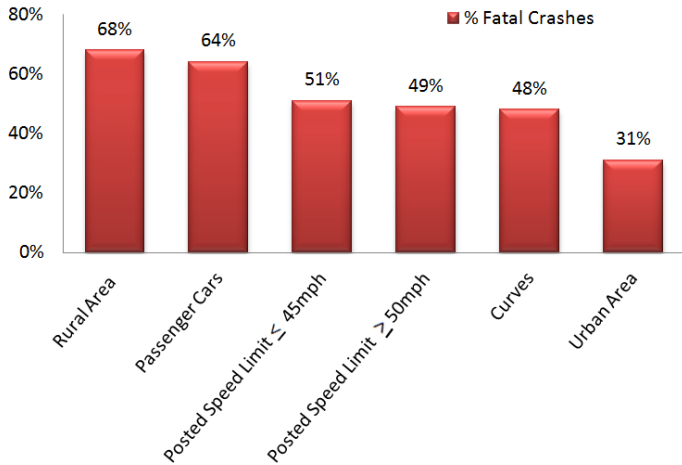
RwD Opposing Direction Crashes
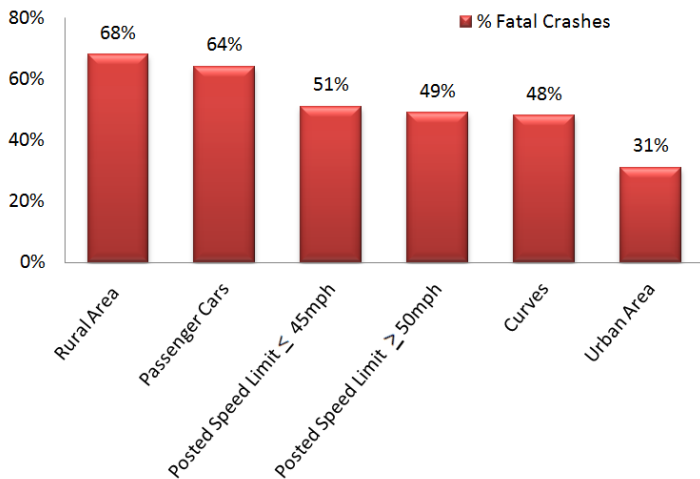
RwD Crashes with Roadside Trees

Roadway Departure Fatalities by Most Harmful Event (FARS 2007-2009)

The three predominant events become the primary emphasis areas in the new Strategic Plan. Based on further analysis of the overturn crashes, the safety units' focus will be on rural areas, high-speed roadways, and curves. Opposite direction crashes have the same focus as the overturns, but are also over-represented on undivided roads and under wet and icy conditions. Research and evaluation will be critical as the currently available countermeasures to address this issue are limited. The prevalence of crashes with roadside vegetation (trees/shrubs) was found to be an issue on both high- and low-speed roads and under both rural and urban conditions. Curves accounted for nearly half of the fatal crashes involving trees. The information in the draft Plan is already being used and the RwD Team intends to continue mining data within the three primary emphasis areas.

Data Challenges

Analyzing RwD data has its challenges, and there have been a few bumps in the road to quality RwD analysis. In 2004 NHTSA introduced the sequence of events for each vehicle involved in a crash, providing a direct correlation to a departure rather than the need for surrogate measures. This allowed users of the FARS online program (FARS Encyclopedia) to access RwD crashes with a single query. Previously it required obtaining single-vehicle RwDs based on where in the roadway cross-section an analyst had coded the crash location. Then a second query was required to find multi-vehicle RwDs considering the manner of collision. In 2010, there were major changes to the organization of the FARS database that make accessing RwD crash numbers from the FARS Encyclopedia impossible.

The Good

Rather than reporting the sequence of events for each vehicle individually, FARS has evolved to reporting the sequence of the crash. This is done without losing information about which vehicle is involved in each event in the sequence. There were also several new events added that provide more information useful to analyzing RwDs, such as "vehicle re-entering the roadway." Additionally, "ground," which can be the most harmful event in a motorcycle

crash, was added as a fixed object. Other event types were broken out for clarity; for example, cross-median and cross-center line crashes can now be considered separately.

The Bad

The innovation that improved the elements and structure of the data within FARS unfortunately came with some lost utility for those who use the FARS Encyclopedia. The data within FARS is now so robust and complex that the online software tool was revised with a variety of built-in options. However, one of the limits of the software is that we are unable to access the first event either for the crash or for individual vehicles, making it impossible to use this tool to select RwD crashes that are comparable to those reported for previous years. Other complexities in the new structure of FARS necessitate several extra steps in more sophisticated software packages, limiting their use as well. While we previously could analyze RwD data through a variety of tools, the only means to apply the RwD definition currently is using SAS (Statistical Analysis Software).

The Ugly

As with most data, issues cannot be appreciated fully until the data is applied to a problem. While studying intersection fatalities, it was found that a number of States' coding was in conflict with the revised coding methodology instituted by FARS 2010. This issue affected data users beyond the FHWA intersection team, as the FHWA RwD team relies upon the intersection variables and attributes to disallow those crashes from the RwD crash subset. With this inconsistent reporting, it is unclear if there was actually a steeper decline in RwD crashes than the data in FARS indicates. While NHTSA is taking steps to improve reporting consistency, this needs to be considered when using 2010 FARS data in problem identification or evaluation of countermeasures implemented when using the current data files. The data is still useful to give gross impressions on fatalities and perform many analyses, but requires using extra caution when comparing 2010 data with previous years and working around improperly reported data elements. FHWA has been working with NHTSA to report these issues and find solutions.

A fresh look at how RwDs are defined, in coordination with the intersection and pedestrian focus areas, is on the horizon. An effort to build a RwD query into the FARS Encyclopedia is also being considered.

USDOT Tests Connected Vehicle Crash Avoidance Technology

Author: Mike Schagrin, USDOT ITS Safety Program Manager

The U.S. Department of Transportation (USDOT) is conducting the world's largest real world test of a wireless communications technology for vehicles. Nearly 3,000 cars, trucks, and buses have been equipped with connected vehicle technology that enables them to "talk" to each other and to "smart" infrastructure in real time on the streets of Ann Arbor, MI as part of a year-long model deployment. This test could transform our transportation system in a way that innovations such as seatbelts and airbags have not. Connected vehicles could help people avoid crashes, not just survive them.

Highway crashes account for more than 32,000 deaths each year and are the leading cause of death for Americans between the ages of 4 and 35 years, according to the Centers for Disease Control. The USDOT is committed to reducing this number and the negative impacts of transportation on American's lives, and connected vehicle technology shows great promise in improving the safety of our Nation's roadways. Through wireless technology, connected vehicles feature safety warnings that alert drivers of potentially dangerous conditions—such as impending collisions, icy roads, and dangerous curves—before the driver is aware of them. National Highway Traffic Safety Administration (NHTSA) research found that connected vehicle technology could potentially address approximately 80 percent of the crash scenarios involving non-impaired drivers, but more research needs to be done to understand the true effectiveness of the technology.

Researching Connected Vehicle Technology through the Safety Pilot Program

Through the Connected Vehicle Safety Pilot Program, the USDOT is collaborating with some of the world's largest automobile manufacturers, public agencies, and academia to research the effectiveness of connected vehicle technology at reducing crashes and to show how real-world drivers will respond to the technology in their

vehicles. The vision for the Connected Vehicle Safety Pilot is to provide the world with a model deployment that demonstrates the transformative nature and benefits of connected vehicle technologies for safety and that can be further extended to support non-safety needs relating to mobility and environmental impacts.

In the first phase of the Safety Pilot, the USDOT conducted a series of driver acceptance clinics to test connected vehicle-to-vehicle (V2V) safety applications with ordinary drivers in controlled roadway situations. The data from those clinics revealed that an overwhelming majority of drivers (9 out of 10) who have experienced V2V technology have a highly favorable opinion of its safety benefits and would like to have V2V safety features in their personal vehicles.

The University of Michigan Transportation Research Institute (UMTRI) is conducting the second phase of the safety pilot—the model deployment, which uses connected vehicle technology in a real-world environment to gather extensive data about system operability, effectiveness, and security.

How the Safety Pilot Model Deployment Works

Connected vehicle systems are based on dedicated short-range communications (DSRC)—a technology similar to Wi-Fi—which is fast, secure, reliable, and unlikely to be vulnerable to interference. The model deployment involves installation of DSRC devices to send and receive data in approximately 3,000 cars, trucks, and buses, as well as at 29 infrastructure locations along 73 lane-miles of roadway in northeast Ann Arbor. A geographic area and drivers with certain travel patterns was selected so as to create the effect of a highly concentrated area of equipped vehicles in a naturalistic environment. This will maximize the number of vehicle interactions, making it possible for researchers to collect enough data to evaluate the technology's effectiveness on different road types and under various driving conditions.

The DSRC devices being tested in the model deployment include integrated safety devices (ISDs), aftermarket safety devices (ASDs), retrofit safety devices (RSDs), and vehicle awareness devices (VADs). Each of these devices broadcasts a basic safety message (BSM) 10 times per second, forming the data stream that vehicles and infrastructure use to determine when a potential traffic hazard exists. Such hazards include an impending

collision at an intersection, a vehicle changing lanes in another vehicle's blind spot, a rear collision with a vehicle stopped ahead, or a vehicle traveling too fast to safely navigate a curve, among others.

Most of the everyday drivers participating in the model deployment are using their own vehicles that have been equipped with the DSRC devices. The majority of these devices are VADs, which are the most simple. VADs focus only on emitting the BSM. They do not receive messages from other vehicles nor do they provide warnings. The large number of VAD-equipped vehicles will provide the connected vehicle penetration rate necessary to generate vast amounts of data for evaluation of the technology.

Vehicles equipped with ASDs are capable of sending and receiving safety messages via a DSRC wireless communications link. The device has a driver interface, runs V2V and vehicle-to-infrastructure safety applications, and issues audible or visual warnings and/or alerts to the driver of the vehicle. This option could provide the means for increasing user adoption, and hence benefits, especially in the existing U.S. fleet of over 250 million vehicles.

RSDs have been installed on a limited number of trucks and buses for the model deployment. Unlike ASDs, this type of device connects to the vehicle's data bus and can provide highly accurate information from in-vehicle sensors. An RSD includes a driver interface, can both broadcast and receive BSMs, and can process the content of received messages to provide warnings to the driver.

In addition, some participants are driving new vehicles equipped with ISD for 6 months. Installed by the manufacturer, these devices integrate directly with the vehicle's computers. In addition to emitting and receiving the BSM, vehicles with integrated devices can further communicate data on speed, acceleration and deceleration, turning movements, wiper activity, and more.

The Results of the Research

NHTSA will use the information collected from both phases of the Safety Pilot, and other key research projects, to determine by the end of 2013 whether to proceed with additional activities involving

connected vehicle technology, including possible rulemaking—a decision that could help save lives, prevent injuries, ease traffic congestion, and reduce the environmental impact. For more information on the USDOT's connected vehicle research initiative, visit www.safetypilot.us.

Accessing, Visualizing, and Discussing National Safety Data: FHWA's Roadway Safety Data Community of Practice

Author: Heather Rothenberg, Transportation Specialist, FHWA Office of Safety

Introduction

MAP-21 is the most recent in a series of programmatic and policy efforts aimed at improving the ability of the State and Federal governments to collect, access, and use data as a key element of decisionmaking processes. Safety data has been a key focus of these efforts. Whether it is deciding how to allocate limited resources or measuring the overall effectiveness of a safety program in reaching fatality reduction goals, data is playing an increasingly important role in the development, implementation, and evaluation of safety programs.

US Department of Transportation agencies have long been collecting State data for inclusion in national databases. For example, the National Highway Transportation Safety Administration (NHTSA) is responsible for collecting and providing access to information about all fatal crashes in the United States. Their Fatality Analysis Reporting System (FARS) collects information from States, conducts a series of data quality checks, and provides access to that data through an online query system or by downloading the data. Similarly, the Federal Highway Administration (FHWA) collects vehicle miles traveled (VMT) information from the States as part of the Highway Performance Monitoring System (HPMS). This information is made available online in tables that can be downloaded. The combination of these datasets provides a foundation for a data-driven discussion of safety efforts at the national level.

The FHWA Safety Data Community of Practice was launched earlier this year as a user-friendly platform that is geared toward those interested specifically in roadway safety data. The web-based system allows a variety of users interested in highway safety to combine the data, set parameters for the data they want to access, and select how to view the information.

What is the Safety Data Community of Practice?

The Safety Data Community of Practice (COP) is an online community of transportation professionals with a common interest in promoting and sharing approaches to effective roadway safety data collection, analysis, management, and expandability. The COP brings those audiences together to a common place to access information and interact with each other.

While traditional information sharing has been in one direction—from the source to the audience—the Safety Data COP provides opportunities for multi-directional exchange and serves as a single access point for transportation safety professionals to engage in three types of exchange:

- **Source to audience**. FHWA will provide descriptions of new programs, resources, data, and other relevant information to be accessed in a single, familiar, user-friendly platform.
- **Audience to source.** FWHA can pose questions to the COP, post draft documents for commenting by the COP, etc.
- **Peer to peer.** Members of the COP can ask questions, seek solutions to problems, and provide insight based on their own experiences and perspective.

The Safety Data COP includes two major components: the data dashboard and the discussion forum. Both are accessible from the COP landing page.

The data dashboard displays visual representations (maps, tables, charts, and graphs) of safety data., incorporating fatality and VMT data in a single place. Users may select their dashboard focus, limiting data viewed by:

- **Area of interest**: Roadway departure, intersections, pedestrians, urban/rural, etc.
- **Geography**: US, region, or State(s)
- **Type**: Fatality frequency or rate, 5 year rolling averages, etc.

Once parameters have been selected, users can move the resulting data visualizations around to create a dashboard that meets their individual preferences. The dashboard created can then be shared with others. There is also a video demonstration of the dashboard to assist users available from the landing page.

The discussion forum is a place for community members to exchange information and solutions about roadway safety data issues and challenges. The forum is structured along four areas that have been identified as critical to the development of robust and effective roadway data systems: collection, analysis, management, and expandability. Users can start their own thread, respond to threads started by others, and subscribe to threads.

What's Next for the Safety Data COP?

FHWA will continue to improve the COP's utility. Based on information gathered during launch webinars, and the data likely to be useful to States in response to MAP-21, a list of improvements has been developed and will be prioritized based on need and available resources. These include adding county-level data, fatality breakdown by functional classification, more national-regional side-by-side comparisons, and adding injury information from NHTSA's General Estimates System.

Your next step is to visit the Safety Data COP website, create and share your own dashboard, and contribute to the conversations on the discussion forum. You can also provide any feedback you might have about additional data you

would like to see included on the dashboard or any other ways you think the COP could be improved. The Safety Data COP is accessible at http://rspcb.safety.fhwa.dot.gov/SafetyCOP.aspx

Roadway Safety Data Capabilities: Baseline and Action Plan

Authors: Esther Strawder, Transportation Specialist, Office of Safety, FHWA; Ray Krammes, Lead Transportation Specialist, Office of Safety, FHWA; Heather Rothenberg, Transportation Specialist, Office of Safety, FHWA

Introduction

MAP-21 Section 1112 has a lot to say about improving State safety data systems as a means to the end of reducing fatalities and serious injuries on the nation's highways. In short, improved data collection and analysis enables more informed decisionmaking, which produces better targeted safety investments and yields larger reductions in fatalities and serious injuries per dollar invested.

The 2010 AASHTO Highway Safety Manual established the need for and benefit of roadway inventory and traffic data, which provide valuable

Roadway Safety Data Program

context for under-standing and interpreting crash data; e.g., whether the number of crashes at a particular location is more or less than one would expect on that type of roadway.

Fortunately, for FHWA and the States, the recently completed United States Roadway Safety Data Capabilities Assessment (available at http://safety.fhwa.dot.gov/rsdp/downloads/rsdp_usr sdca_final.pdf) provides an excellent baseline and list of potential actions for improving safety data systems.

This article highlights key findings of the Capability Assessment final report and invites feedback on the "key preliminary actions" identified in the final report, which FHWA considers candidates for a National Action Plan being developed to document

FHWA's role in encouraging and assisting States in improving their roadway safety data and analysis capabilities.

Capability Assessment Findings

The capability assessment used a capability maturity model to provide a consistent, repeatable, and systematic process to assess States' roadway safety data capabilities. The model involved assessing the level of maturity (from 1—initial/ad hoc—to 5—optimizing) in four areas:

- **Roadway Inventory Data Collection / Technical Standards –** What roadway inventory data are collected? How are they collected? What standards must they meet?

- **Data Analysis Tools and Uses –** How does roadway safety data relate to analysis processes including tools such as HSM, IHSDM, Safety Analyst, etc.?

- **Data Management –** What policies and procedures exist for collecting, maintaining, using, and updating roadway safety data?
- **Data Interoperability and Expandability –** How does roadway inventory data relate to other data including, but not limited to, crash data, citation data, etc.? Can the existing data be expanded as new technologies and tools are developed in the future?

Each State received an action plan that summarized both their current capability maturity level and the level they indicated they wanted to achieve. It also included suggested actions that the State might take to improve from their current to their desired level. The results were also rolled up to a national average baseline summarized in Figure 1. The baseline shows the highest capability levels in areas including accuracy and uniformity of data and expandability and accessibility of databases. The lowest capability levels included the completeness of data (generally due to the lack of roadway inventory and traffic data on locally maintained roads) and for policies and technologies supporting effective data management.

Key findings of the assessment include:

- States want to improve their roadway safety data capabilities and take the necessary steps to achieve their desired level.
- States need a focused USDOT effort to increase awareness of available resources to improve their roadway safety data.
- In some States, organizational structure and relationships across State agencies and with localities impede integration and data use.
- In several States, capturing data from locally maintained roads is an issue.
- Within States, individual divisions, districts, and regions maintain separate databases from centralized database.
- States need better coordination among Federal agencies on data reporting requirements.
- States want to better support their analyses by improving their roadway safety data and believe the capability assessment results will assist them.

To assist States in implementing their action plans, FHWA is hosting a series of peer exchanges to provide a forum to share information on both challenges and good practices for improving roadway safety data systems. Each State has been or will be invited to participate in one of the four peer exchanges.

What Roles Should FHWA Play?

One objective of the Capability Assessment was to identify roles FHWA could and should play. Toward that end, possible key preliminary actions FHWA could take include:

Roadway Inventory Data Collection/Technical Standards:

- Conduct case studies to move cost-effective, accurate, and innovative data collection practices forward. States need examples of how to fund, process, and extract roadway inventory items.
- Pilot and conduct case studies to demonstrate a robust process for States to include locally owned roadway safety data.
- Develop a best or noteworthy practices guide for collecting intersection, curve, and grade inventory data.
- Research a priority list of data elements to improve accuracy through external verification and validation.

Data Analysis Tools and Uses:

- Continue to develop training for non-technical users in the use of the HSM methods and more rigorous analysis methods (e.g., empirical Bayes method).
- Develop advanced training and support in SafetyAnalyst to map and link data input needs.
- Develop a best practices and/or peer exchange related to data analysis tools and techniques at the State and national level.
- Develop a return on investment to provide additional guidance related to collecting inventory and traffic data on local roads with very low crash histories. The research would determine the value and provide guidance as to where it is beneficial.
- Determine specific policies or resource constraints that may limit the retention of historic data and develop guidance to address them.
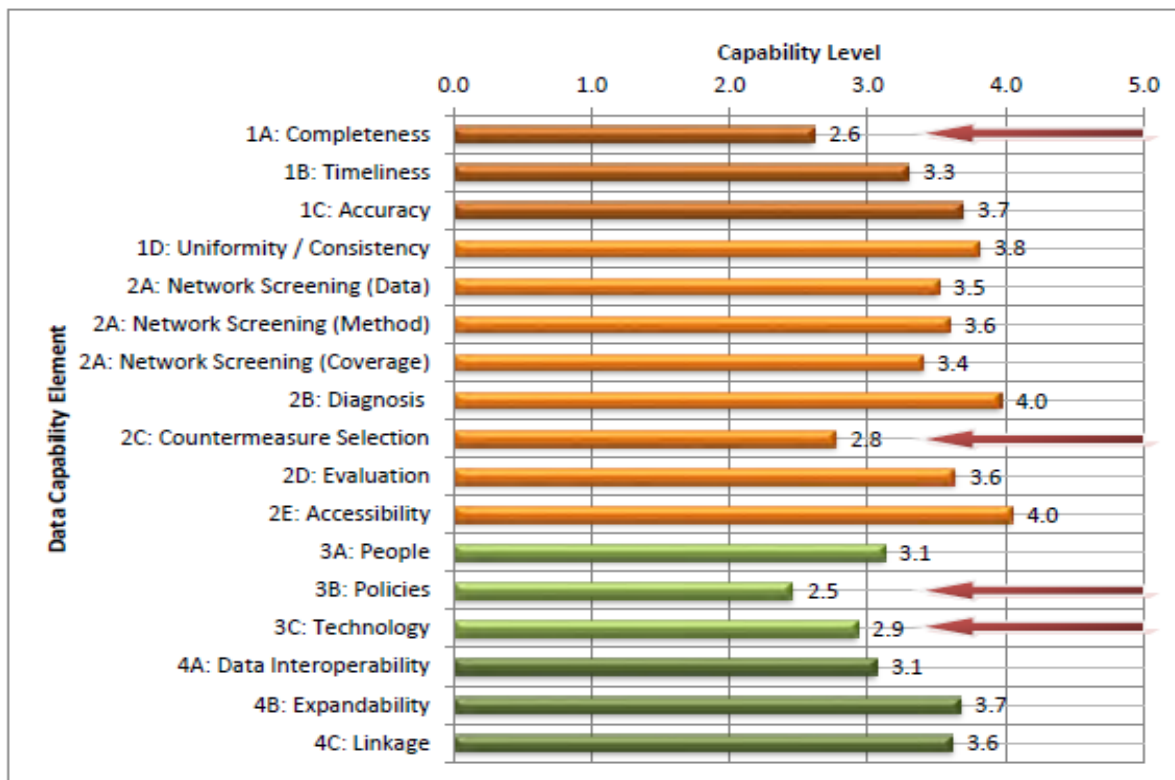
Figure 1. National Average Baseline for State Data Capability
Note: Element definitions can be found in Roadway Safety Data Capabilities Assessment final report

Data Management:

- Conduct pilots and case studies to identify best and noteworthy practices from highly ranked data management States.
- Develop a common glossary of terms and training for safety professionals to understand IT terminology and vice versa. Develop guidance on structuring or integrating data from various agencies and sources into a comprehensive data clearinghouse.

- Develop guidance on expectations for roadway safety data to be made available to the public and shared between agencies.

Data Interoperability and Expandability:

- Vet potential focus States for improving roadway safety data capabilities to support the vision and goals of the Focused Approach to Safety.
- Pilot an effort to link citation, injury, and driver data to other safety data to determine the possible safety benefits.

- Provide national roadway safety data training modules to enhance the program's visibility, consistency, and effectiveness.

FHWA is considering these as candidates for its national data action plan for improving State safety data systems and welcomes input on which of these should be priorities and what other actions FHWA should consider.

Products of two recently completed FHWA projects are already addressing some of these proposed actions as part of a more comprehensive Roadway Safety Data Program. For details, see related articles in this issue on the *Model Inventory of Roadway Elements Management Information System* and *Benefit-Cost Analysis of Investing in Data Systems*. Additional information about the Roadway Safety Data Program is also available at http://safety.fhwa.dot.gov/rsdp. For more information, contact Esther Strawder (esther.strawder@dot.gov, 202-366-6836), Ray Krammes (ray.krammes@dot.gov, 202-366-2175), or Heather Rothenberg (heather.rothenberg@dot.gov, 202-366-2193).

The Model Inventory of Roadway Elements-Management Information System (MIRE-MIS) Project: How to Effectively Use MIRE

Author: Bob Pollack, Transportation Specialist, FHWA Office of Safety

The last decade has seen a marked increase in the emphasis placed on data-driven decisionmaking in managing the safety programs of State and local agencies. A number of state-of-the-art analytical tools and resources to analyze and evaluate safety data have emerged that rely not only on crash data, but also on roadway inventory and traffic data. For this reason, safety data of various types are becoming increasingly important in safety management efforts across the United States.

In 2010, FHWA released the Model Inventory of Roadway Elements (MIRE) Version 1.0 (http://safety.fhwa.dot.gov/tools/data_tools/mirereport/). MIRE is a recommended listing of roadway and traffic data elements critical to safety management. A critical step toward acceptance and implementation of MIRE is the conversion of MIRE, which is now a listing of data elements, into a Management Information System (MIS). To assist States in developing and integrating the

MIRE into an MIS structure that will provide greater utility in collecting, maintaining, and using MIRE data, FHWA undertook the MIRE- MIS project. The MIRE-MIS included:

- Mechanisms for data collection
- Identification of performance metrics to assess MIRE data quality
- A process for data handling and storage
- Details of a database structure for the MIS

The MIRE-MIS effort has resulted in a series of reports that can benefit State and local agencies by helping them to better adopt and use MIRE data:

- *MIRE Element Collection Mechanisms and Gap Analysis* presents the findings of the effort to explore existing and emerging data collection technologies to narrow the gaps between the elements in the MIRE listing and the current data available from agencies' inventories and supplemental databases. This report provides data managers and collectors with techniques for advancing future data collection of roadway and traffic inventory data.

- *Performance Metrics for Roadway Inventory Data* report builds upon NHTSA's *Model Performance Measures for State Traffic Records Systems* and identifies issues to be considered and performance measures used to assess the quality of roadway and traffic data. It provides data managers and collectors with refined techniques for assessing the quality of the roadway and traffic data inventory data they collect and maintain.

- *MIRE Pilot Data Collection* identifies how technical assistance provided through the MIRE-MIS assisted two "Lead Agency" or pilot States—New Hampshire and Washington—to collect additional MIRE data elements to develop an intersection inventory. The report identifies two different methods of data collection using existing data sources and the level of effort necessary to collect this data. These techniques may assist other states to collect and maintain additional MIRE data.

- *Development of a Structure for a MIRE Management Information System* explores the development of a conceptual structure for MIRE-MIS. It presents a prototype

structure based on the findings from one of the Lead Agency states and identifies lessons learned from the Lead Agency pilot effort.

- Another report as part of the MIRE-MIS is a *MIRE Data Collection Guidebook.* This report examines mechanisms that states may wish to consider to collect additional MIRE data elements or to more efficiently collect MIRE data elements.

Links to these reports and additional information about the MIRE-MIS project are available at: http://safety.fhwa.dot.gov/rsdp/. For more information, contact Bob Pollack at Robert.Pollack@dot.gov, 202-366-5019.

Benefit-Cost Methodology for Safety Data Investments

Authors: Heather Rothenberg, Transportation Specialist, FHWA Office of Safety; Ray Krammes, Lead Transportation Specialist, FHWA Office of Safety

Safety analyses have expanded beyond just crash data with the development of sophisticated analysis tools and methods. The need for improved crash, roadway, and traffic data is vital. Using roadway and traffic data together with crash data can help agencies make decisions that are fiscally responsible and improve the safety of the roadways for all users.

Deciding to invest in data is often a challenge for transportation agencies. Data investments frequently compete for funding with safety improvements to the infrastructure and roadway projects. These tangible infrastructure improvements are visible to the driving public and often have immediate safety impacts; the impact of data investments may not be as obvious to decision-makers and to the public.

Agencies often consider the costs and benefits of competing priorities when making investment decisions. Crash modification factors (CMFs) enable agencies to calculate the expected benefits of safety infrastructure improvements. The same methods for estimating the benefits of investing in safety data are not available. To fill this gap, FHWA developed a methodology that agencies can apply to determine the benefits of investing in data and data systems and processes for achieving a data-driven safety program.

A Guidebook for the methodology is posted at http://safety.fhwa.dot.gov/rsdp/downloads/guidebook.pdf. The Guidebook demonstrates how to apply the methodologies to a generally acceptable state-of-practice decision-making process. It provides a step-by-step approach for representatives of State transportation agencies to follow and includes a checklist of key elements required for analysis.

Details on development of the methodology are provided in the Final Report at http://safety.fhwa.dot.gov/rsdp/downloads/bcareport.pdf. For more information, contact Heather Rothenberg (heather.rothenberg@dot.gov, 202-366-2193) or Ray Krammes (ray.krammes@dot.gov, 202-366-2175).

Arkansas' Virtual Integrated Safety User Assisted Location Tool (VISUAL-T)

Authors: Sharon Hawkins, Arkansas State Highway and Transportation Department, Section Head for Mapping and Graphics and Jessie Jones, Assistant Division Head for Planning and Research

As technology advances and more reliable data is needed quickly to perform analysis and support data driven investment decisions, the Arkansas State Highway and Transportation Department (AHTD) realized that the crash location methodology needed to be updated to improve the timeliness and accuracy of traffic records in the State of Arkansas.

THEN (1970's through June 2011)

Previously, law enforcement agencies that are responsible for collecting crash data were provided with printed County Highway Route and Section Maps. The law enforcement officers were asked to report crash locations based on the route, section and log mile shown on the map or physical mile markers on the highway right of way. Major drawbacks to this old methodology included:

1. Law enforcement officers were unfamiliar with the route, section, and log mile terminology, or were unable to interpolate log miles accurately based on the maps provided.

2. The maps and physical mile markers were subject to change at all times. Updated maps were not always available to law enforcement agencies in a timely manner.

3. All crash reports required verification by AHTD crash locators to ensure each crash was accurately located on the State Highway System. This verification could take a significant amount of time, which contributed to major delays when finalizing the annual statewide traffic records database.

4. Inconsistencies existed among crash locators.

Although the Arkansas State Police and other State agencies experimented with the use of GPS equipment to solve this location issue, it was found to be difficult to implement widely due to cost, technique, and ease of use.

Not only did AHTD see a problem internally with this crash location process, the State's law enforcement agencies also indicated how difficult it was to identify a specific log mile location on the printed maps. AHTD decided to find a solution to help State's law enforcement agencies without the need for any special software packages or extensive training.

NOW (June 2011 to Present)

The Virtual Integrated Safety User Assisted Location Tool (VISUAL-T) was developed using AHTD's linear referencing system (LRS) to place a point every 100 feet along each route in the LRS. Each point contains county, route, section and exact log mile information. Subsequently each point was spatially intersected with AHTD's roadway inventory data so that all roadway characteristics are linked to each point. By exporting the point data into a .kml file, location and roadway information can be visually displayed in Google Earth for every 100 feet along a given route. In addition, AHTD is able to publish these data points on ArcGIS Online through Arkansas' Geographic Information Office (AGIO). This enables effective information transfer from AHTD to users through the Internet, smart phones or tablets.

The VISUAL-T is not only being used by the crash locators, but since the summer of 2011, approximately 35 law enforcement agencies around the State are also using this tool. That includes the largest agency, the Arkansas State Police, which reports for nearly 25 percent of all motor vehicle crashes in Arkansas. Many law enforcement agencies using the tool have commented on how easy it is to use the tool, and more have expressed interest in using it. VISUAL-T has significantly increas-

ed the crash location timeliness and accuracy. Major advantages of the VISUAL-T tool include:

1. Law enforcement can visually locate the crash site in Google Earth and then click on the point nearest to the crash site to obtain the most accurate route, section, and log mile information for the crash report. This eliminated both the possibility of an officer using a route name other than the officially signed highway route number and the need for officers to interpolate log miles.

2. In addition to the point data, city limits or jurisdiction boundaries can be provided to assist law enforcement and crash locators to identify crash locations accurately.

3. All the .kml files are updated every few months to account for route or roadway characteristic changes. They are downloadable from a secured AHTD FTP site. Notifications of updated files are emailed to all the law enforcement agencies that are using the tool. This process significantly reduces the time to get the updated roadway information to the officers.

   When the crash report is filled out with the accurate location information, it completely eliminates the need for AHTD crash locators to verify the crash locations.

4. When the crash report is not completed with the VISUAL-T, the crash locators can use the tool to verify locations. Since all the crash locators are using the same .kml files, the inconsistencies among crash locations are significantly reduced.

5. Since the VISUAL-T is displayed in Google Earth with a street view function, crash locators are able to identify the crash site easily based on the description provided in the crash report.

6. Because of the visual nature of the tool, minimal training is required.

7. The VISUAL-T can be easily integrated into the statewide eCrash system, which is currently being implemented in Arkansas. When fully implemented, each crash location as well as other important information for a crash record can be automatically completed with the click of a button.

For more information, contact Sharon Hawkins (sharon.hawkins@ahtd.ar.gov) or Jessie Jones (jessie.jones@ahtd.ar.gov) at 501-569-2201.

ArcGIS Smartphone App
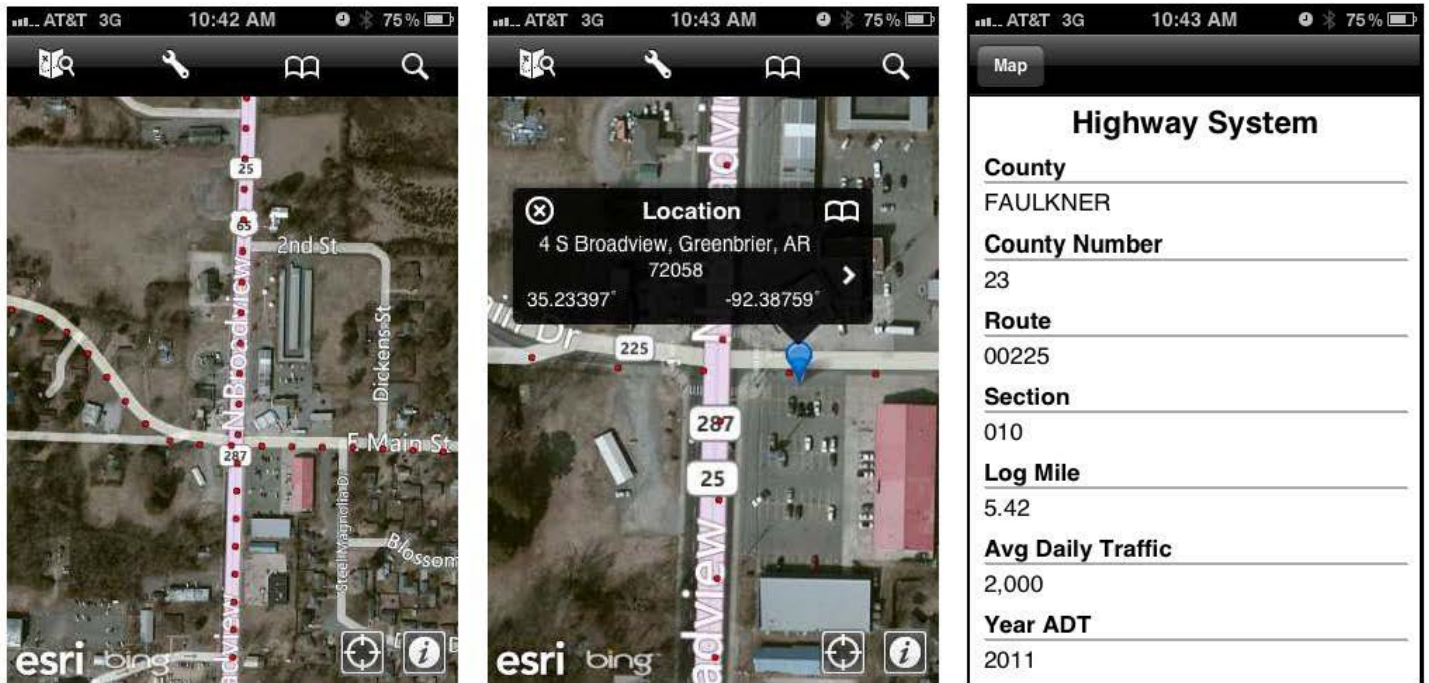
Accelerating Safety Activities Programs (ASAP) For 2012

Author: Mark Sandifer, FHWA Technology Partnership Program

With a goal of supporting training, outreach, and education to better improve the quality of road safety, Accelerating Safety Activities Programs (ASAP) is designed to provide funding to accelerate the advancement of safety efforts in States. This program, administered through the FHWA Office of Safety, provides State agencies the opportunity to raise the level of discussion, build on successful

efforts, and expand their ability to deliver positive results. ASAP can help States to keep the momentum going or to provide the impetus to start a larger initiative.

The 2012 program was implemented through a partnership between the Office of Safety and Technology Partnership Programs with a focus on providing support specifically to the 23 States that are eligible to participate in the Focused Approach to Safety (http://safety.fhwa.dot.gov/fas). The 2012 program was centered on promoting the Office of Safety's Proven Safety Countermeasures (see http://safety.fhwa.dot.gov/provencountermeasures/)

at the local level, emphasizing the importance of pedestrian safety, intersection safety, and roadway departure countermeasures.

To accomplish the program's goals, the Local Technical Assistance Programs (LTAP) and Tribal Technical Assistance Programs (TTAP) were enlisted as the primary conduit for outreach to the local agencies across the Nation. With their unique ability to reach out to the locals, the program was opened to the LTAP/TTAP Centers in the 23 Focus States.

The LTAP/TTAPs were required to complete a short project nomination form describing the project (how, what, when, where), current conditions, benefits expected, and funding amount requested. Nominations were submitted through the FHWA Division offices to ensure that each Division had the opportunity to work closely with its State, local and LTAP/TTAP partners.

An FHWA panel and a representative from the LTAP/TTAP Centers reviewed, ranked, and scored the projects. A list of recommended projects was provided to the Office of Safety Associate Administrator for final approval and distribution of funds. Decisions on awards were based on a project's applicability under the Focused Approach

to Safety and the extent to which it promoted proven safety countermeasures with foreseeable benefits to local agencies.

Twenty-one projects were submitted for consideration, with only 12 being selected for funding. The FY 12 program budget was $100,000, with the total cost of submitted projects close to a quarter of a million dollars.

Below is a list of the projects which were selected for funding for 2012:

California	Safe Journeys: Tribal Pedestrian Road Safety Audits
Ohio	Ohio Local Roadways Systemic Safety Improvements Implementation Plan Safety Peer Exchange
New Jersey	Pedestrian Safety for State and Local Stakeholders
North Carolina	Low-Cost Safety Improvements for Local Governments - Series of Four, One-Day training Sessions Across the State
Georgia	Accelerating Use of Pedestrian Safety Countermeasures
Ohio	Local Road Owners Safety Education
Texas	Traffic Signal Safety Training for Technicians
Florida	Creating Public Service Announcement (PSA) to Educate Florida's Drivers on Roundabout Navigation to Reduce Florida's Fatality and Injury Rates
Missouri	2012-2016 SHSP Deployment
Arizona	Arizona Tribal Safety Pilot Workshop
Arizona	Interactive Highway Safety Design Model (IHSDM Training)
Georgia	Automated Bicycle Traffic Counts to More Effectively Deploy Countermeasures

If you have any questions about the program please feel free to contact Esther Strawder, esther.strawder@dot.gov, (202) 366-6836, or Mark Sandifer, mark.sandifer@dot.gov, (708) 283-3528. If you have any questions about a specific project please feel free to contact your state LTAP/TTAP Center or your FHWA Division office.

IHSDM Training Uses Federal ASAP Funding in Arizona

Authors: Kohinoor Kar, Ph.D., P.E., PTOE, ADOT Traffic Safety Section; Rebecca Mayher, Arizona LTAP; and Kelly LaRosa, P.E., FHWA Arizona Division.

Arizona is one of the States supporting the national Highway Safety Manual (HSM) implementation initiative. As a part of Arizona's HSM implementation plan, the Arizona Department of Transportation (ADOT) has offered three two-day HSM Overview training classes (using NCHRP 17-38 materials) to ADOT staff and FHWA Arizona Division Office staff. ADOT has also started applying HSM predictive methods in safety evaluations for projects funded under the Federal Highway Safety Improvement Program (HSIP). The Interactive Highway Safety Design Model (IHSDM) is a companion software program, developed and promoted by FHWA, which assists in using the predictive methods to make design decisions.

While the IHSDM software itself is available at no cost, users need to have a good understanding of various modules, data requirements, data importing, running the software, and interpreting the output. In an effort to obtain available training on IHSDM, the Arizona Local Technical Assistance Program (LTAP) Center, in cooperation with the ADOT Traffic Safety Section, submitted a proposal to request federal Accelerating Safety Activities Program (ASAP) funding in FY 2012. The Arizona LTAP Center received the grant in the amount of $10,000 ($8,000 from FHWA and $2,000 from ADOT for a 20% match), and organized a two-day IHSDM training offered by the National Highway Institute (NHI) at the Arizona LTAP's training facility in Phoenix, Arizona. The training class was full with 26 participants from ADOT, FHWA and ADOT on-call consultants currently working on federally funded safety projects.

ADOT has ongoing safety demonstration projects with the applications of HSM predictive methods by using IHSDM and NCHRP 17-38 Excel spreadsheets. The IHSDM training has provided valuable insight into the software and allowed the attendees to solve simple hands-on example problems, including an Arizona case study. ADOT plans to continue with more safety demonstration projects, including applying HSM predictive methods in evaluating design exceptions and

conducting alternatives analysis. ADOT anticipates that more projects will use IHSDM as a part of its safety evaluation toolkit in the future. The FHWA Arizona Division continues to partner with ADOT to support the implementation of HSIP-funded HSM initiatives in Arizona.

For more information, please contact Kohinoor Kar, Ph.D., P.E., PTOE, ADOT Traffic Safety Section at kkar@azdot.gov or 602-712-6857; Rebecca Mayher, Arizona LTAP at rmayher@azdot.gov or 602-712-4252; or Kelly LaRosa, P.E., FHWA Arizona Division at kelly.larosa@dot.gov or 602-382-8991.

Missouri Rolls Out New SHSP at Statewide Conference

Submitted by the Missouri Department of Transportation in conjunction with the FHWA Missouri Division Office

Missouri has been working collaboratively with its safety partners over the past year on a new Strategic Highway Safety Plan. A multidisciplinary working group developed the draft plan, which was distributed to safety partners across the State for their review and comments. A major benefit of this collaborative strategic planning effort was maximizing the combined knowledge of all of Missouri's safety partners to develop a comprehensive approach to improving roadway safety.

The new SHSP, *Missouri's Blueprint to SAVE MORE LIVES,* along with its new fatality reduction goal, was rolled out at a statewide safety conference in Branson, Missouri, October 24-26, 2012. The conference received important funding support from the FHWA Office of Safety's Accelerating Safety Activities Program (ASAP) through a competitive process undertaken in cooperation with Missouri's Local Technical Assistance Program (LTAP). Utilizing a statewide meeting to unveil this important document and goal offered several benefits for our safety partners and the public-at-large. Key benefits included:

- Focusing on a common vision and goal
- Reviewing crash data and roadway safety progress
- Discussing safety countermeasures having the greatest opportunity to *save more lives*
- Reinforcing the value of the state and regional safety coalitions

- Expanding roadway safety knowledge
- Sharing crash data and performance measurement
- Strengthening existing partnerships

The statewide conference attracted over 230 safety partners representing a variety of agencies that included:

- City, County, and State Law Enforcement Agencies
- Advocacy Groups (AAA, AARP, MADD, ThinkFirst, Missouri Trucking Association, PedNet, Trailnet, Safe and Sober)
- Health Agencies (hospitals and health departments)
- EMS/Ambulance Districts
- MPOs and Regional Planning Commissions
- Federal Agencies (FHWA, NHTSA, FMCSA)
- Prosecutor and Traffic Safety Resource Prosecutor (TSRP)
- City, County, and State Highway Departments
- Universities
- High Schools
- State Agencies (Missouri Department of Revenue, Division of Alcohol and Tobacco Control, Office of Prosecution Services, Department of Health and Senior Services, Department of Transportation)
- Safety Councils
- Consultants

Federal safety partners reviewed elements of MAP-21 and reconfirmed their support and willingness to assist Missouri in making additional strides in saving lives. State safety leadership thanked attendees for all their efforts over the past 6 years, which has resulted in 2,009 lives being saved. They also challenged attendees to continue to work together to make even more progress.

Missouri's Blueprint to SAVE MORE LIVES is dedicated to preventing and minimizing the consequences of the "Moment of Impact." Victims spoke about the effect of the "Moment of Impact" - lives lost, lives changed, and lives saved to close the opening session.

Missouri uses a state and regional coalition model as the foundation to implement the strategies in its strategic highway safety plan. Currently, there is a Missouri Coalition for Roadway Safety Executive

Committee, 10 State-level subcommittees and 7 regional coalitions working simultaneously to improve roadway safety. During the General Session selected State-level subcommittees and the regional coalitions gave reports highlighting their safety activities over the last 2 years. The Session culminated in rolling out Missouri's third strategic highway safety plan: *Missouri's Blueprint to SAVE MORE LIVES.* This vital safety plan guides the way for Missouri to reach its fatality reduction goal of *700 or fewer fatalities by 2016.*

While Missouri is one of a very few States that has experienced 6 consecutive years of fatality and serious injury reductions (2006-2011), the safety partners recognize that there is much more work to do to meet both the new goal and Missouri's vision toward zero traffic fatalities. One of the general session speakers provided a statistical overview of Missouri's journey to decrease roadway fatalities and serious injuries and also discussed the strategies that had been implemented and led directly to the reduction in specific crash types.

Highway Safety Heroes were recognized at an awards luncheon which honored both efforts at the state and regional levels. There were four statewide award recipients and 13 regional winners. The statewide awards were *Lay Down the Law Award, Show-Me Safety Award, Tempe Humphrey Award,* and *Arrive Alive Award. Arrive Alive* and *Show-Me Safety Awards* were also given at the regional level.

The remainder of the day was dedicated to providing the attendees with a variety of workshops to help build their safety skill sets. Most of these sessions addressed several elements including Education, Enforcement, Engineering, EMS, Technology and Public Policy. Workshops included:

- Distracted Driving
- Impaired Driving
- Occupant Protection
- Older Drivers
- Motorcycle Safety
- Pedestrians
- Young Drivers
- Commercial Motor Vehicles

Closing the conference was a presentation forcing attendees to take an introspective look at their personal safety behaviors. What behaviors are we modeling to our family, friends and community? The presentation stressed that safety is personal and it begins with each individual.

Missouri's first statewide SHSP conference received Excellent or Good ratings from the attendees for both the General Sessions as well as the Workshops. When asked if they would attend another conference of this type in the future, 100 percent of those who turn in an evaluation responded "yes," which further supports the use of ASAP funding for this important statewide safety event.

To view the new Blueprint go to www.saveMOlives.com. For more information, contact Leanna Depue, Ph.D., MoDOT Highway Safety Director at (leanna.depue@modot.mo.gov, 573-751-7643) or Marc J. Thornsberry, P.E., Safety & Mobility Engineer (marc.thornsberry@dot.gov 573-636-7104).

Kentucky LTAP's Safety Circuit Rider Program Improves the Safety of Rural, Low-Volume Roads

Authors: Martha Horseman, Kentucky LTAP Director; Todd Morrison, Safety Circuit Rider; and Amy Terry, Marketing and Publications Manager

Local agencies own and operate more than 75 percent of all public roadways in the United States and nearly 80 percent of rural roads. Of the 42,000-plus annual fatalities on the Nations roadways each year, more than 60 percent occur on our rural roads. These routes carry less than 40 percent of the total vehicle-miles traveled.

Kentucky has 120 counties and 426 cities. Collectively, they maintain 63 percent of all public roadways in Kentucky and 60 percent of the rural roads. Of the fatalities that occur in Kentucky 60 percent are on rural roads. In 2005, the Federal Highway Administration introduced the Safety Circuit Rider Program as a means of improving safety on local roads and reducing crashes and fatalities. Kentucky was selected as a pilot State for this program.

Kentucky saw a need to continue this program and funding has been provided by the Kentucky Transportation Cabinet with support from the Kentucky Division of the FHWA. The Safety Circuit Rider Program is part of Kentucky's Local Technical Assistance Program (LTAP) at the Kentucky Transportation Center, University of Kentucky. The program is designed to provide technical

assistance to local agencies for the implementation of low-cost safety improvements.

Local governments are selected through a data-driven, systematic approach using crash data analysis conducted by the Kentucky Transportation Center in the report Analysis of Traffic Crash Data in Kentucky. Twelve local roadways with the highest crash rates on State, local and locally maintained roadways will be targeted to receive technical assistance, training and guidance in implementing low-cost safety improvements. Examples of these improvements are removal of fixed objects such as trees, brush, stumps, etc. and installation of signage per the MUTCD guidelines. This technical advice is offered free of charge and is helping communities across the state of Kentucky save lives every day.

The Safety Circuit Rider Program also offers a free course on low-cost safety improvements to local agencies. This course is intended for individuals who are responsible for managing rural roads including: county judges, mayors, road supervisors,

public works directors, county and city engineers and state officials. Training includes identifying high crash locations; learning how to maintain signs, markings, and the Clear Zone; setting advisory speeds; and conducting roadway safety audits.

Selected counties have received assistance in areas such as:

- Setting curve advisory speeds;
- Placing guardrails with crashworthy end treatments;
- Correcting and updating signs to meet current MUTCD standards;
- Clearing and correcting water runoff and drainage;
- Repairing shoulder drop off and width;
- Removing fixed objects such as trees and stumps; and
- Clearing vegetation around signs and inter-sections.

Before and After Photos of the Rock Wall on Clear Creek Rd.

Before and After Curve Warning Countermeasure Installation on Vince Rd.

Jessamine County Judge/Executive Neal Cassity fully embraced the opportunity to partner with KTC in reducing crashes.

"Jessamine County is excited to participate in the Safety Circuit Rider Program which will make safety recommendations to the roadways in Jessamine County. We feel our involvement in this program will ensure that drivers in our county have a safe driving experience," Cassity said.

Todd Morrison, PE, is Kentucky's Safety Circuit Rider. Todd, who has retired from the Kentucky Transportation Cabinet, has worked with environmental, work zone, construction, traffic and maintenance concerns as an Environmental Coordinator, Maintenance Engineer, Resident Engineer, Engineering Supervisor, and as a Branch Manager for Operations.

For more information, contact Martha Horseman (martha.horseman@uky.edu) or Amy Terry (amy.terry@uky.edu) at , 859-257-4531.

FHWA Releases 2012 Version of Interactive Highway Safety Design Model

Submitted by the FHWA Office of Safety Design

On September 28, 2012, the Federal Highway Administration (FHWA) released version 8.0.0 of the Interactive Highway Safety Design Model (IHSDM), a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions. This 2012 IHSDM release includes a Crash Prediction Module (CPM) that provides a faithful implementation of AASHTO's Highway Safety Manual (HSM), Part C: Predictive Method. New for 2012 is a Beta version of crash prediction capabilities for mainline freeway segments based on draft HSM materials developed under National Cooperative Highway Research Project 17-45. The CPM also covers two-lane rural highways, multi-lane rural highways, and urban and suburban arterials. Another major enhancement to the CPM in the 2012 Release is a new site-based data input and analysis capability that provides users with more flexibility in how data are entered. IHSDM includes five other evaluation modules applicable to rural two-lane highways: policyreview, design consistency, intersection review, traffic analysis, and driver/vehicle. The software is available for free download at www.ihsdm.org. For

more information, please contact Clayton Chen, 202-493-3054, clayton.chen@dot.gov.

The Systemic Approach to Safety: Using Risk to Drive Action

Author: Karen Scurry, FHWA Office of Safety

The Office of Safety is pleased to launch a website dedicated to the systemic approach to safety. The systemic approach to safety uses risk to drive action by first identifying high-risk roadway characteristics based on their correlation with particular severe crash types. Agencies then widely implement countermeasures to reduce the potential for fatalities and serious injuries associated with these high-risk roadway features.

The website, http://safety.fhwa.dot.gov/systemic/, contains valuable information to advance implementation of the systemic approach to safety in your jurisdiction. If you are exploring the idea of incorporating a systemic approach to safety into your existing safety management practices, you might start with the "Why Systemic" page. There you will find a discussion on the need and rationale for a systemic approach as well as information on the benefits and challenges you might face when implementing a systemic approach to safety. Continue on to the "About Systemic" page, where you will find a description of the systemic planning process as well as examples of each step in the process. The "Resources" page contains link to resources that are currently available as well as an outline of those that are currently und development. Return "Home" to learn more about risk factors, systemic approaches in practice, and upcoming events or noteworthy news. If you are currently using a systemic approach to safety in your jurisdiction, we also invite you to share your practices with your peers by submitting a noteworthy practice. Additional information on how to submit a noteworthy practice is available on "Home" page under Systemic in Practice. The systemic approach to safety website is a precursor to the Systemic Safety Project Selection Tool, which will be available in the spring of 2013. For questions or additional information on the systemic approach to safety, contact Karen Scurry in the Office of Safety at karen.scurry@dot.gov or 609-637-4207.

Announcements and Events

Awards

2013 National Roadway Safety Awards Call for Nominations *DEADLINE FOR NOMINATIONS: March 31, 2013*

The National Roadway Safety Awards highlight exemplary roadway safety efforts and publicizes best practices. Awards are given for infrastructure, operational, and program related improvements and programs that address safety needs.

The FHWA and the RSF stress the importance of strategic, data-driven approaches to improving safety on our Nation's roadways. Applicants are encouraged to nominate projects or programs that exemplify innovative and effective safety activities and maximize the cost effectiveness of Federal, State, local, and/or private sector funds. For more

information or to access a nomination packet, go to: http://safety.fhwa.dot.gov/roadwaysafetyawards/

Conferences

ATSSA's 43rd Annual Convention & Traffic Expo, San Diego, CA, February 22-26, 2013. The ATSSA Annual Convention and Traffic Expo brings together Roadway Safety Professionals and vendors in fields such as pavement marking, computer software, protective clothing and ITS. A few of the topics that will be addressed in workshops and in presentations include:

- Pavement Markings
- Field Traffic Signs
- Roadway System Analysis Warning Lights
- Loss Prevention Programs
- Pedestrian Safety
- Infrastructure Technology
- Vehicle Safety Equipment

For more information, visit:

http://www.atssa.com/2013Convention.aspx

Institute of Transportation Engineers (ITE) Technical Conference, San Diego, CA, March 3-6, 2013. The ITE 2013 Technical Conference and Exhibit provides attendees with the opportunity to contribute to crucial conversations on today's most pressing transportation issues. Topics to be explored include, but are not limited to intersection planning, design, and operations; MAP-21; the growing relationship between the health community and the transportation profession, Toward Zero Deaths initiative; new tools for traffic impact assessments; and the prognosis on federal funding. Register by February 8, 2013 for Early Bird rates. For more information, visit: http://www.ite.org/meetings/index.asp

2013 Northeast Transportation Safety Conference, Concord, NH, April 3-4, 2013. Hosted by the New Hampshire Driving Toward Zero Deaths Coalition, sessions will include topics related to creating a traffic safety culture, managing safety data, and how to optimize public relations, marketing, and social media through emerging channels. If you would like additional information about this event, or sponsorship and display opportunities please contact: Emily Dewey: emily@wedu.com 603.647.9338, Ext 242 or Nick Williams: nick@wedu.com 603.647.9338, Ext 246.

2013 Annual Liversavers Conference, Denver, CO, April 14 – 16, 2013. Lifesavers is the premier national highway safety meeting in the United States dedicated to reducing the toll of deaths and injuries on our Nation's roadways. Drawing nearly 1,700 participants in 2012, the Lifesavers Conference provides a forum that delivers relevant and timely common-sense solutions to today's critical highway safety problems. Attendees can network with a unique combination of public safety, public health, research, volunteers and practitioners who address pressing highway safety challenges and discuss what has been proven to work. For more information or to register, please go to: http://www.lifesaversconference.org/

National Association of County Engineers 2013 Conference, DesMoines, IA, April 21-25, 2013. Each spring over road and bridge officials, county engineers, highway superintendents, public works directors and other state and county transportation professionals gather for the NACE annual conference. During the first two days of the conference, the exhibit show, which will feature over 100 exhibits, offers a friendly environment for delegates to learn about the latest products and services. Attendees will have many opportunities to meet road and bridge professionals as well as counterparts from other counties around the country, to exchange ideas and have some fun. The NACE 2013 Annual Meeting and Management & Technical Conference, "A Century of Service" will be hosted by the Iowa County Engineers Association in Des Moines, IA. For more information or to register, please go to: http://www.countyengineers.org/events/annualconf/Pages/NACE2013.aspx

23rd Annual ITS America Annual Meeting, Nashville, TN, April 22-24, 2013. This year's theme "Real Progress — Great Future" will touch on how far we've come as a nation in the deployment of ITS technologies and will also illustrate just how much further we can go to create a connected, efficient, sustainable and safe transportation system. The goal for the 2013 program is to weave this theme throughout each session as it relates to each of five main topical areas: traffic management, safety, commercial vehicle and freight mobility, sustainable transportation, and cross cutting issues. For more information or to register, please go to: http://www.itsa.org/annualmeeting.

Just Released

Illinois DOT Launches New Safety Website. The Illinois Department of Transportation launched a new website this week to provide a "one-stop shop" for safety information about various transportation modes and issues across the State. Users have quick access to relevant current information (e.g., New Year's Eve drunk driving, winter weather) IDOT news; a Frequently Asked Questions page that addresses questions about State work zone laws, cell phone laws, and tickets; IDOT's Strategic Highway Safety Improvement Program, which provides a plan to strive toward zero fatalities across the State's highways; and much more. Visit Illinois DOT's new safety page at: http://www.dot.il.gov/slp/index.html.

PIARC Releases "Best Practices for Road Safety Campaigns"

A new report from the World Road Association – PIARC presents key findings of a literature review of best practices for road safety campaigns by road administrations and authorities of fourteen countries who responded to a survey questionnaire. The report addresses:

- Road user behavior (including reference to theories of behavior change);
- Types of road safety campaigns;
- Target audiences;
- Campaign media; and
- Campaign evaluation.

The report shows how and why these issues should be sufficiently researched and understood before implemented by road authorities and administrations. This report is free to the public and may be downoaded at:

http://www.piarc.org/en/order-library/18037-en-Best%20practices%20for%20road%20safety%20campaigns.htm

PIARC Issues Report on "Comparison of National Road Safety Policies and Plans." This Report examines the road safety performance of several nations, reviews reported policies and strategies in jurisdictions and attempts to establish linkages between adopted and implemented road safety policies, overarching multi-year strategies and performance outcomes. The findings are built upon policy survey returns from 15 countries and 5 states/provinces and strategy survey returns from 11 countries and 4 states/provinces. The surveys requested information on a variety of issues, including: road safety vision, ambition and approach, road safety management arrangements, population and driver data, policies adopted to address drink driving, drug driving, speeding, and improve seat belt and helmet use (motorcyclists and cyclists), and several other items. To download the report free of charge, visit: http://www.piarc.org/en/order-library/18728-en-Comparison%20of%20national%20road%20safety%20policies%20and%20plans.htm