

Safety and Planning Get a Spotlight in MAP-21

Moving Ahead for Progress in the 21st Century (MAP-21) continues the trend in Federal transportation legislation for increased transportation safety. Following is a summary of the safety provisions in the law:

Highway Safety Improvement Program (HSIP)

- Increases funding for HSIP by \$1 billion for a total of \$2.4 billion;
- Keeps the set aside (\$220M/year) for rail-highway grade crossings, but eliminates the high-risk rural roads set aside unless safety statistics worsen;
- Directs the U.S. Department of Transportation (U.S. DOT) to establish safety performance measures and states to set targets for serious injuries and fatalities by number and per vehicle miles traveled (VMT);
- Addresses state safety data improvements; and
- Strengthens the link between HSIP and National Highway Traffic Safety Administration (NHTSA) programs.

Strategic Highway Safety Plan (SHSP)

- Requires regular recurring updates;
- Directs the U.S. DOT to set schedule and content of updated SHSP by October 1, 2013;
- Expands list of participants; and
- Requires Highway Safety Plan (HSP) from the state highway safety office be coordinated with SHSP.

Other safety provisions in the law include emphasis on safety performance management (see companion article), changes in the Safe Routes to School program, and the establishment of a new tribal safety program.

MAP-21 is the new Federal transportation bill designed to move transportation forward.



Source: Cambridge Systematics, Inc.

The following is a summary of some of the planning provisions in the law:

- Requires the transportation planning process to be performance-driven and outcome-based, and address the national performance goals;
- Establishes a decision-making 3-C (continuing, cooperative, and comprehensive) planning process framework that is transparent and accountable for states, Metropolitan Planning Organizations (MPO), and providers of public transportation;
- No changes in planning factors, population thresholds for MPOs and Transportation Management Area (TMA), and update schedule for the Long-Range Statewide Transportation Plan, Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP), and Metropolitan Transportation Plan (MTP);
- Adds officials of public agencies that operate major modes of transportation and public transportation providers to MPO structure;

- Includes nonmotorized transportation facilities as part of the MTP; and
- Establishes the procedures to designate Regional Transportation Planning Organizations (RTPO), which will develop a planning process for nonmetropolitan multiregion areas.

For additional information, visit the FHWA MAP-21 web site at <http://www.fhwa.dot.gov/map21/>.

Safety Performance Measures and MAP-21

*By Tony Giancola, P.E.,
Transportation & Local Government Consultant*

MAP-21 establishes an outcome-driven approach that tracks performance and will hold states and MPOs accountable for improving the conditions and performance of their transportation assets, a situation helped by utilizing performance targets.

Performance measures include fatalities and serious injuries by number and VMT.



Source: iStockphoto®.

Within 18 months of the enactment of MAP-21, U.S. DOT will establish, through rulemaking, performance measures for seven national goals, one of which is safety. State DOTs will have 1 year to develop

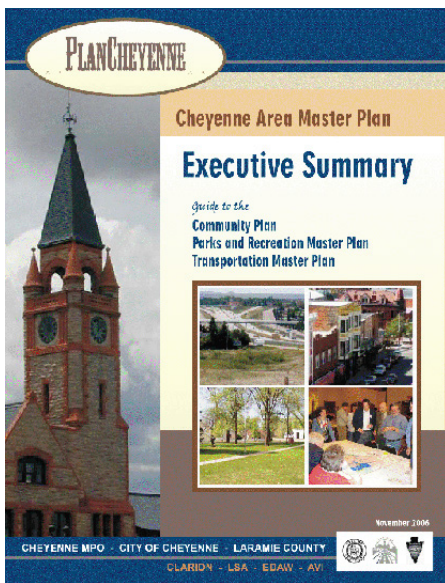
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Cheyenne Updates LRTP with Safety in the Forefront

The Cheyenne Metropolitan Planning Organization (MPO) is currently updating their award winning Long Range Transportation Plan (LRTP), *Plan Cheyenne*. For many MPOs, safety is a critical consideration during the transportation planning process. Planners identify crash locations or characteristics, and program safety countermeasures. The Cheyenne MPO is committed to this approach, but is also interested in integrating safety elements into all future highway, transit, bicycle, pedestrian, operations, and freight projects.



Source: Cheyenne Area Metropolitan Planning Organization.

To identify ideas and concrete actions for considering safety in the context of all transportation projects, planners at the Cheyenne MPO, Wyoming Department of Transportation (WYDOT), Federal Highway Administration (FHWA) Division Office, and local jurisdictions participated in an interactive workshop designed to provide participants with a seven-step framework for institutionalizing safety in the LRTP.

For each step, participants learned about the national state of the practice, discussed how each step is currently addressed in the Cheyenne region, reviewed how other MPOs or state agencies are implementing each step, and brainstormed ideas for how to consider the step during the Cheyenne LRTP process.

Based on discussion, the Cheyenne MPO decided upon a number of actions to move safety integration forward in the region, including:

- Educate elected officials on transportation safety issues, so they can be engaged, promote, and discuss transportation safety efforts;
- Identify an overarching transportation safety goal for the plan and subgoals;
- Review the policies, goals, and strategies in the Strategic Highway Safety Plan (SHSP) to identify which are relevant and could be customized and adopted in the LRTP;
- Decide what safety data is needed and work with WYDOT on collection and analysis; and
- Develop a transportation project prioritization process inclusive of safety.

For more information on the Cheyenne MPO, visit their web site at <http://www.plancheyenne.org>.

The Important Role of Transportation Planners in Safety

When people take to the road, whether by vehicle, public transit, walking, or biking, they expect to get where they are going safely. Transportation planners have the tools and knowledge to ensure people meet this safety goal as evidenced by the following:

- Connections to decision-makers, which allows planners to convey the importance of transportation safety;
- Technical tools and analysis capabilities to identify current and future safety needs;
- A commitment to inform and involve the public in transportation issues, including safety;
- A wider view of the transportation network to understand how safety can impact operations, congestion, livable communities, the economy, land use decisions, and other issues; and
- Program investments that ensure a safer transportation system.

Portland Metro

Transportation Safety in an Urbanized Region

by Anthony Butzek, P.E., PTOE, Metro, Portland, OR

The Portland, Oregon metropolitan region recently completed a detailed regional safety analysis called the *State of Safety* report, which will be used to develop a data-driven Regional Safety Plan. Metro led the analysis with support from regional government, technical experts, including staff from cities, counties, the State of Oregon, TriMet (the regional transit agency), Portland State University, and safety consultants.

The *State of Safety* report sheds light on the distinct crash patterns involving pedestrians, bicyclists, and motorists in an urban area of 1.5 million people, focusing on fatal and severe injury crashes. The analysis considered relationships between fatal and severe injury crashes and roadway characteristics such as functional classification, number of lanes, degree of roadway congestion, and lighting, as well as other influencing factors such as weather, month, day of the week, time of day, and user behavioral factors.

The results showed 59 percent of the fatal and severe injury crashes occur on arterial streets, with only 12 percent occurring on freeways and freeway ramps. Arterial streets comprise two-thirds of fatal and severe pedestrian crashes and more than half of fatal and severe injury bicyclist crashes. On these arterial streets, higher rates of fatal and severe injury crashes per traffic volume correlate with increasing number of traffic lanes and with decreasing congestion, likely due to the higher speeds. The report indicated street lighting was inadequate in a large number of the fatal and severe injury pedestrian crashes, which echoes previous research.

Behavioral issues are a major contributing factor to severe crashes in the region as well. Alcohol or drugs were a factor in 57 percent of the region's fatal crashes. Aggressive driving and excessive speed were also frequent factors. More information, including the *State of Safety* report, is available at <http://www.oregonmetro.gov/regionalmobility>.

Data is Essential to the Planner's Role

Collecting and analyzing data is a key part of any transportation planner's job. The difficulty is making sure sufficient data is available. Two reports will help make the planner's job easier by providing additional information on data. The Model Minimum Uniform Crash Criteria (MMUCC) is a voluntary guideline of data elements and their attributes that states are encouraged to collect at the scene of a crash. All states collect a large percentage of the data recommended in the Guideline, and most states continue to revise their Police Accident Report forms so they are consistent with the MMUCC recommendations. A 4th Edition of the Guideline, first developed in 1998, includes some important changes such as a more comprehensive definition of distracted driving. It also includes a better definition of serious injuries by breaking injuries into five categories and providing definitions for each category. There are also new data elements describing speed-related crashes, crashes on private property, and secondary crashes. The Governors Highway Safety Association (GHSA) and the National Highway Traffic Safety Administration (NHTSA) managed the update process, which was underwritten with funding from NHTSA. It is available online at <http://www.mmucc.us>.

This map appears on the NCSA State Traffic Safety Info webpage and allows users to get specific information on their state.



Source: Cambridge Systematics, Inc.

The National Center for Statistics and Analysis (NCSA), an office of NHTSA, is responsible for providing data in a variety of topics and formats. On the NCSA web site, users can find traffic safety fact sheets on specific topics, state specific traffic safety information, and links to the Fatality Analysis Reporting System (FARS). Recently NCSA released their Traffic Safety Facts Overview, which reported in 2010, 32,885 people were killed, and 2,239,000 people were injured. Compared to 2009, this is a three percent decrease

in the number of fatalities, and a one percent increase in the number of people injured. To visit the NCSA web site, go to <http://www-nrd.nhtsa.dot.gov/cats/>.

The Framework for Institutionalizing Safety Continues

A Framework for Institutionalizing Safety in the Transportation Planning Process, the National Cooperative Highway Research Program (NCHRP) 08-76 will continue research by implementing and evaluating the framework through a lead state initiative, and develop a guidebook based on the experience with input from practitioners. The framework, which is available at <http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2502>, provides transportation planners at the state and regional level with an "ideal" seven-step framework for integrating and institutionalizing safety in the transportation planning process. The framework has been tested by Department of Transportation (DOT) and metropolitan planning organization (MPO) planners in Nevada, during a four-hour Boot Camp workshop at the 2012 TRB Planning to Programming conference, and by the Cheyenne MPO (see Cheyenne MPO – *Integrating Transportation Safety into Plan Cheyenne* article). The research team will utilize the results from the research to revise the framework and implementation approach.

Report on Policies and Practices for Pedestrian Safety

Transportation planners working on pedestrian safety issues will be interested in a new report from NCHRP. NCHRP Synthesis 436, *Local Policies and Practices That Support Safe Pedestrian Environments*, documents the regulatory, administrative, and financial tools used by communities to provide safe pedestrian environments. The report identifies



Source: Cambridge Systematics, Inc.

the effective tools and strategies in a range of contexts (e.g., geography, community size, weather, demographics, and regulatory requirements) as well as the development conditions such as new and infill development, street reconstruction, and retrofitting. The report notes the most successful initiatives recognize high-quality pedestrian environments are places where pedestrians are anticipated and encouraged. To view a copy, go to http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_436.pdf.

SHSP Champion's Guidebook to Saving Lives: Second Edition-Available Soon

The FHWA Office of Safety will release the *Strategic Highway Safety Plan Champion's Guidebook to Saving Lives: Second Edition* in the fall of 2012. The Guide will be a resource for safety stakeholders, including planners, who are involved in the update of their state's SHSP. It will also serve as a reference for professionals who are new to the state's safety and planning efforts, particularly the SHSP process. The first Champion's Guide was a valuable document to states during the initial development of SHSPs providing guidance on legislative requirements, the steps to undertake, and who to involve. While the Second Edition is not a guidance document, it does provide helpful information on SHSP fundamentals such as data collection and analysis; organization and structure; emphasis area action plans; and SHSP preparation, implementation, and evaluation. Visit the Office of Safety web site for more information at <http://safety.fhwa.dot.gov/hsip/shsp/>.

The Legislative View of Transportation Solutions

A new report from the National Conference of State Legislatures, *On the Move: State Strategies for 21st Century Transportation Solutions*, reviews a number of surface transportation laws, policies, and programs that policy-makers are considering as ways to take the nation's transportation system into the 21st Century. Since transportation planners are often called upon to give their views on transportation needs to elected officials at the state and local level, it may be helpful to see what legislators view as important considerations. To view the report, go to <http://www.ncsl.org/documents/transportation/On-THE-MOVE.pdf>.

performance targets in consultation with MPOs and other stakeholders. States and MPOs must incorporate the measures and targets into their transportation planning processes. The safety performance measures identified in MAP-21 are the number of serious injuries and fatalities and serious injuries and fatalities per VMT.

MAP-21 imposes penalties on states that fail to meet their performance targets under the National Highway Performance Program and the HSIP. States that fail to meet their safety performance targets are required to devote an amount of their obligation equal to the prior year's HSIP apportionment to safety projects.

The availability and appropriateness of safety data, which is critical to developing realistic performance measures, will continue to be a challenge as state and local government agencies compete for available safety dollars. A current National Cooperative Highway Research Program (NCHRP) Synthesis Report 20-05/Topic 44-05: *Safety and Crash Data Management among State and Local Agencies* will be surveying the state and local governments to determine current practices.

Tony Giancola is a long-time member of the TSPWG, an APWA Life Member, Secretary of the Roadway Safety Foundation, and Retired Executive Director, National Association of County Engineers.

Members Corner

Safety on Local and Rural Roadways

By Tony Giancola, P.E.,
Transportation & Local Government Consultant

Several TRB committees focus on rural and local roadway safety. Following are the activities, initiatives, and publications of these committees that are of interest to planners and other local road practitioners.

Rural Road Safety, Policy, Programming & Implementation Joint Subcommittee (ANB10 & AFB30) – This joint subcommittee focuses on research-based activities that improve rural roadway safety through policies, programming, and countermeasure implementation. Recently the subcommittee proposed funding for a National Cooperative Highway Research Program (NCHRP) synthesis on *Best Practices for Safety and Crash Data Management among State and Local Agencies Exploring Safety Investments With and Without Crash Data*. This synthesis will examine the availability and accessibility of reliable and current data, and explore the activities of state and local agencies that are using the systemic risk-based approach to making safety improvements.

Low Volume Roads Committee (ABF30) – This is another important committee which is concerned with all aspects of low-volume roads, including planning, design, construction, safety, maintenance, operations, environmental, and social issues. For instance, one topic discussed by the committee was safety on gravel (unpaved roads). To learn more, visit the committee web site at <http://sites.google.com/site/trbcommitteeafb30/>.

Roadway Safety Cultures Subcommittee (AN000(1)) – The first meeting of this subcommittee was held at the 2012 Transportation Research Board (TRB) Annual Meeting. The vision states the Subcommittee is committed to eliminating roadway fatalities, reducing injury crashes, and increasing safe driving experiences through peer-reviewed, science-based research; a connection to safety performance variables that define roadway safety cultures; an integration of research into professional tools, practices, and policies; and advancement for the state of practice. To learn more, visit the subcommittee web site at <https://sites.google.com/site/trbsafetyculture/>.

In addition to the work of these TRB committees/subcommittees, several other publications provide useful information for local government public works and transportation agencies, including the following:

- The American Traffic Safety Services Association (ATSSA) and National Association of County Engineers (NACE) joint February 2012 publication *Cost Effective Local Road Safety Planning and Implementation* provides a general guide that local officials can utilize to identify and quantify existing safety issues, potential solutions to those issues, and possible state and local partnerships to fund them. To view a copy of the report, go to <http://www.countyengineers.org/ResourcesEdu/PublishingImages/Local%20%20Roads%20NACE%20ATSSA.pdf>.
- Roadway Safety Foundation's publication *Roadway Safety Guide* is a resource for elected officials, community leaders, civic groups, and all stakeholders interested in improving safety on their highways and roads. The guide is available at <http://www.roadwaysafety.org/wp-content/uploads/guide3.pdf>.

Research Needs Statement

The Transportation Research Board Transportation Safety Planning (TSP) subcommittee (ANB10(3)) is interested in your transportation safety planning (TSP) research ideas!

Contact Ed Stollof, TSP Subcommittee Chair at estollof@ite.org, with your ideas.

GHSA Annual Meeting Highlights Highway Safety and Public Health

The Governors Highway Safety Association's annual meeting, Public Health + Highway Safety: Saving Lives Together, was held August 27-29 in Baltimore, Maryland. General sessions and breakout workshops explored highway safety from the public health perspective, focusing on how to apply public health successes to the field of highway safety. As planners become more involved in multidisciplinary projects like Strategic Highway Safety Plans (SHSP), they will benefit from an understanding of the role of state highway safety offices. For more information on the meeting, go to <http://www.ghsa.org/html/meetings/annual/2012/index.html>.

NHI Offers Courses on HSIP and SHSP

The National Highway Institute now has a suite of training courses that focus on the Highway Safety Improvement Program (HSIP) and Strategic Highway Safety Plans (SHSP). Following is a brief description of each course. To find out dates and times, visit the NHI web site at <http://www.nhi.fhwa.dot.gov/default.aspx>.

The **HSIP Overview** course provides a basic understanding of the purpose of the HSIP and the processes for planning, implementation, and evaluation. The course provides an overview of safety data, including data collection and management methods, sources, quality measures, and overcoming data challenges.

The **HSIP Project Identification** course provides the background and information to identify HSIP projects. Background information includes data analysis concepts such as regression-to-the mean, safety performance functions, and the Empirical Bayes method.

The **HSIP Project Evaluation** course provides a description of safety effectiveness evaluation, an overview of fundamentals needed to perform safety effectiveness evaluation, and information about why safety effectiveness evaluation is important to the HSIP.

The **SHSP Development** course provides a basic understanding of SHSP development processes, which are consistent throughout the life cycle of the plan. The course will benefit States presently in the implementation stage or those in the process of updating their SHSP.

The **SHSP Implementation** course provides strategies and examples of the processes that will help safety partners implement their state's SHSP. The intended audience for SHSP Implementation encompasses a wide range of safety stakeholders involved in SHSP implementation efforts at all levels (e.g., local, regional, state, and Federal).

Meetings

October 28-31, 2012
Traffic Records Forum
Biloxi, MS
<http://www.trafficrecordsforum.org>.

November 15-19, 2012
AASHTO Annual Meeting
Pittsburgh, PA
<http://www.cvent.com/events/2012-aashto-annual-meeting/event-summary-13e860b8efa84f0796a3ce3c28105114.aspx>.

January 13-17, 2013
TRB Annual Meeting
Washington, DC
<http://www.trb.org/AnnualMeeting2013/AnnualMeeting2013.aspx>.

TSPWG Members

The TSPWG includes representatives from agencies and organizations dedicated to advancing the integration of safety in the transportation planning process. If your organization is interested in participating, contact Rick Pain, TSPWG Moderator, at rpain@nas.edu. The TSPWG members are:

AARP

American Association of
Motor Vehicle Administrators (AAMVA)

American Association of State Highway and
Transportation Officials (AASHTO)

American Planning Association (APA)

American Public Transportation
Association (APTA)

Association of Metropolitan Planning
Organizations (AMPO)

Community Transportation Association
of America (CTAA)

Federal Highway Administration (FHWA)

Federal Motor Carrier

Safety Administration (FMCSA)

Federal Transit Administration (FTA)

Governors Highway
Safety Association (GHSA)

Institute of Transportation Engineers, Inc. (ITE)

International Association
of Chiefs of Police (IACP)

National Association
of County Engineers (NACE)

National Association
of Development Organizations (NADO)

National Association
of Regional Councils (NARC)

National Conference
of State Legislatures (NCSL)

National Highway Traffic
Safety Administration (NHTSA)

Rails-to-Trails Conservancy (RTC)

Transportation Research Board (TRB)

The mission of the TSPWG is to fully implement the SAFETEA-LU and MAP-21 safety planning factor and coordinate activities with the implementation and evaluation of Strategic Highway Safety Plans from a multimodal perspective on transportation safety planning.

Planning It Safe

Editorial Oversight

FHWA Office of Planning

http://www.fhwa.dot.gov/planning/transportation_safety_planning/index.cfm

FHWA Office of Safety

<http://safety.fhwa.dot.gov/hsip/tsp/>

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