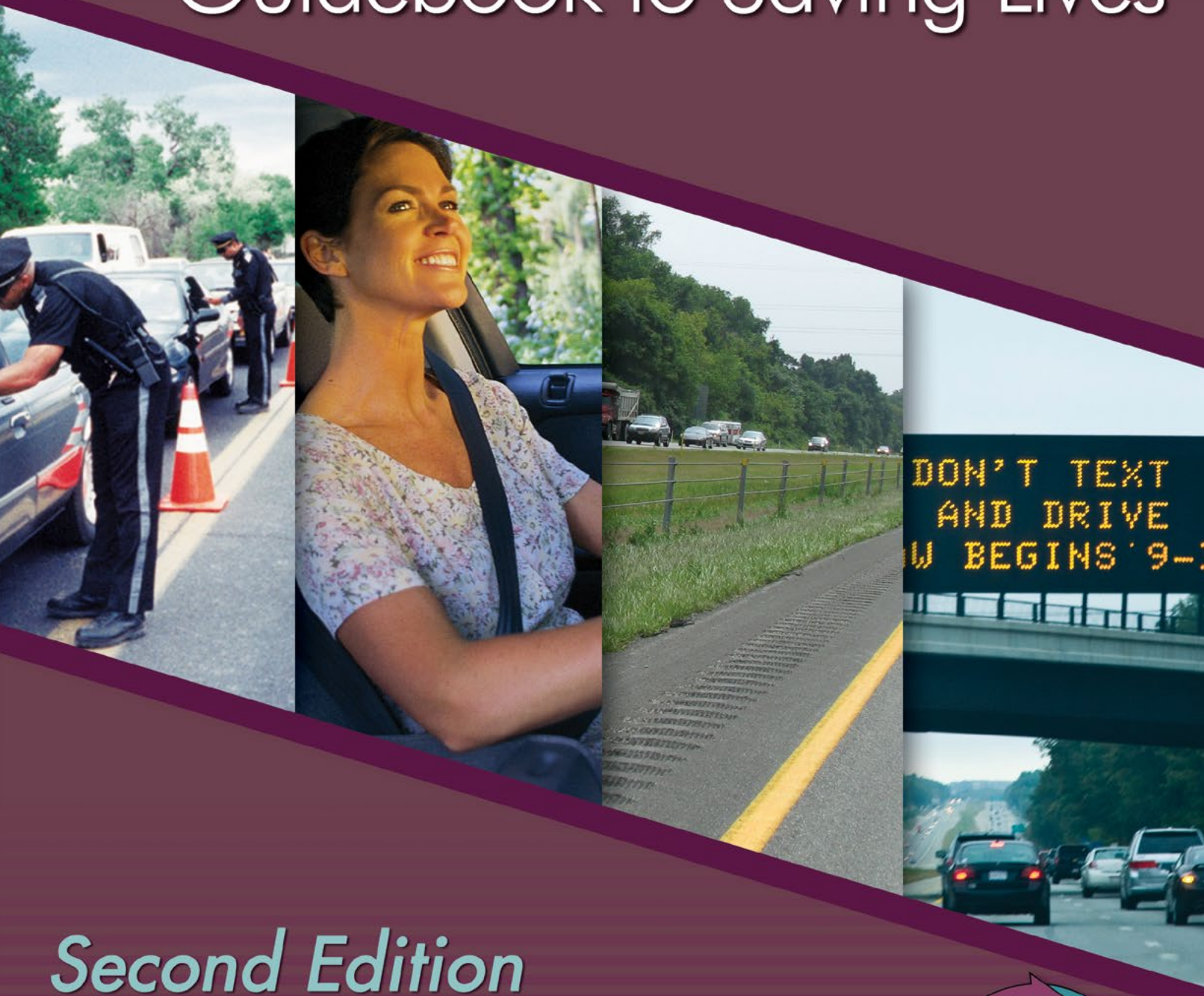
Strategic Highway Safety Plans

A Champion's Guidebook to Saving Lives



Second Edition

U.S.Department of Transportation
Federal Highway Administration

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16. Abstract This document reviews the basic principles and important considerations concerning the development, implementation, and evaluation of a Strategic Highway Safety Plan (SHSP). It is intended as a resource for States to consult during examination of their SHSP process, as well during SHSP updates. It is also a valuable reference for professionals new to safety and planning or newly involved in the SHSP process. This document addresses the SHSP fundamentals of champions, leadership, organizational structure, safety partners, and collaboration; data collection and analysis; content; preparation (of document); and implementation and evaluation. The original Champion's Guide published in April 2006, provided guidance to States as they developed their first SHSPs. This revised second edition, while not guidance, is consistent with current legislation and builds upon more than five years of States' experiences implementing SHSPs. It is designed to encourage practitioners to revisit their SHSP with effective practices and processes in mind, and includes a helpful checklist at the end of each chapter with recommended steps for achieving these standards. The document concludes with a list of additional tools and references.			
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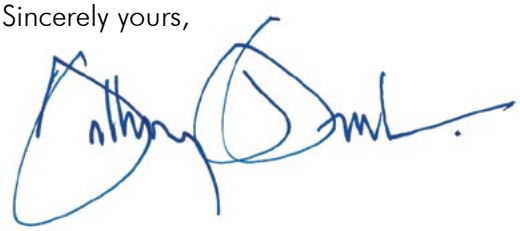
Foreword

The original *Champion's Guide to Saving Lives,* published in April 2006, provided guidance to States as they developed Strategic Highway Safety Plans (SHSP), required for the first time by SAFETEA-LU. Since then, all States have developed and implemented their SHSPs and many have updated them at least once. Through its data-driven and collaborative process, the SHSP is helping States identify and prioritize their most pressing road safety needs, and develop a program of strategies with the greatest potential to save lives and reduce injuries.

The SHSP process is ongoing and cyclical; therefore, it is helpful to periodically revisit its elements. *Strategic Highway Safety Plans: A Champion's Guidebook to Saving Lives, Second Edition* addresses the fundamental and effective steps for the SHSP development process. While this Second Edition is not legislative guidance, it is consistent with MAP-21 (Moving Ahead for Progress in the 21st Century) and is intended to be a resource for States that are updating their SHSPs or reviewing their SHSP process. It is intended as a reference for professionals new to safety and planning. It describes the fundamentals of SHSP safety champions, leadership, organizational structure, safety partners, and collaboration and communication and how to incorporate them into the SHSP process. It identifies helpful data collection and analysis techniques, describes typical content elements of SHSPs, provides a sample SHSP format, and describes helpful implementation and evaluation strategies. Included in the document are recommendation checklists and resources to assist practitioners through the SHSP process.

Every SHSP update is an opportunity to revisit and strengthen the State's safety priorities, performance measures, goals, objectives, and strategies. This Guidebook describes how a commitment to a data-driven, performance-based, collaborative, and multidisciplinary SHSP can dramatically improve SHSP efforts and transportation safety.

Sincerely yours,



Anthony Furst

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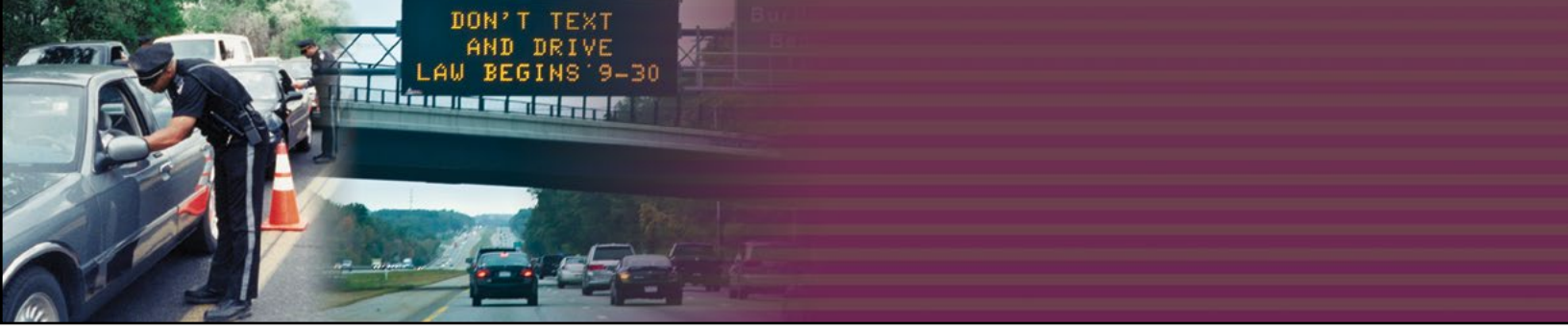

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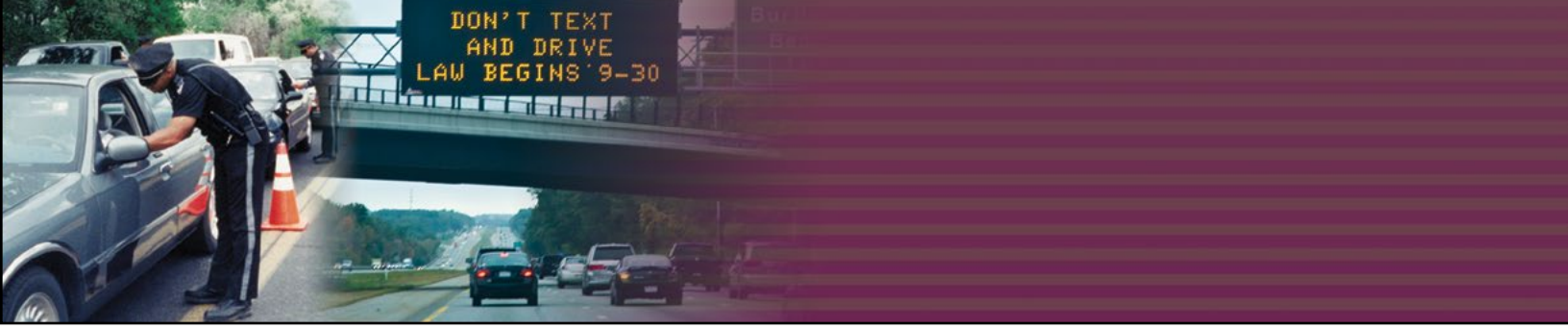
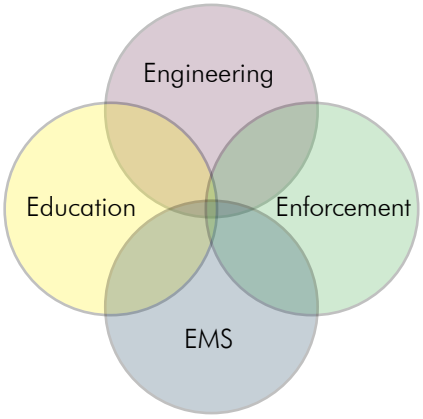


Overview

The *Strategic Highway Safety Plan Champion's Guidebook, Second Edition* is intended to provide an overview of the fundamental elements of the SHSP process. It will serve as a resource for States that are updating their Strategic Highway Safety Plans (SHSP) or assessing their SHSP development process, as well as provide a reference for professionals new to safety and planning.

An SHSP is a data-driven, comprehensive, multidisciplinary plan integrating the "4 E's" of safety – engineering, education, enforcement, and emergency medical services. It establishes statewide performance measures, goals, objectives, and emphasis areas and describes a program of strategies to reduce or eliminate safety hazards. It is developed by the State Department of Transportation (DOT) in consultation with Federal, State, local, and tribal safety stakeholders.



Source: Cambridge Systematics, Inc.

History and Background

To prevent the devastating human and economic consequences of traffic crashes, the American Association of State Highway and Transportation Officials (AASHTO) published an SHSP[1] in 1997 that identified 22 emphasis areas where progress could be made on reducing transportation-related fatalities and serious injuries. States were encouraged to develop SHSPs by addressing the emphasis areas in the AASHTO plan. At that time, some States already had produced SHSPs, and others began to work on them after the AASHTO plan was published.

In 2005, Congress passed legislation[2] requiring States to develop SHSPs. By October 1, 2007, all States and the District of Columbia had complied with the requirement, and many have since updated the original SHSP at least once. All States are implementing SHSPs, and many are experiencing remarkable results in roadway safety.

Legislative and Regulatory Requirements

The SHSP is a requirement of the Highway Safety Improvement Program (HSIP).[3] The goal of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The SHSP supports that goal because it is intended to drive State HSIP investment decisions by ensuring projects correspond to the emphasis areas and strategies identified in the SHSP.

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[1] AASHTO Strategic Highway Safety Plan.
[2] Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA LU).
[3] Moving Ahead for Progress in the 21st Century (MAP-21).

Other SHSP requirements[4] include:

- Based on crash and other safety data analyses to identify safety issues on all public roads;
- Developed after consultation with a broad range of stakeholders;
- Addresses the 4 E's of safety through a multidisciplinary approach;
- Describes a program of strategies to reduce or eliminate safety hazards;
- Considers other State highway safety plans and processes.

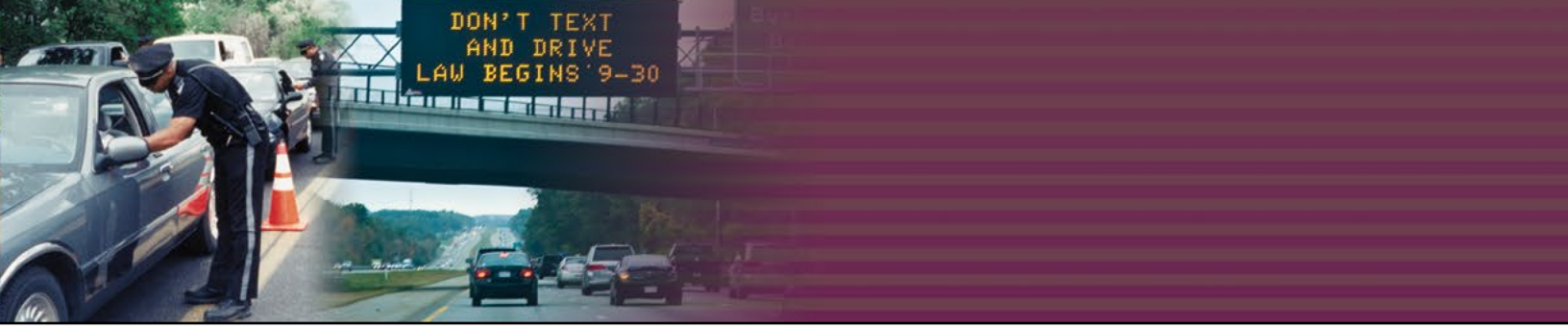
Benefits of SHSPs

The primary goal of an SHSP is to reduce fatalities and serious injuries on all public roads. The collaborative process of developing and implementing an SHSP brings together, and draws on, the strengths and resources of all safety partners. An SHSP should help safety partners better leverage limited resources and work together to achieve common safety goals. The SHSP offers the following benefits:

- Establishes common statewide goals and priorities;
- Strengthens existing partnerships;
- Builds new safety coalitions;
- Promotes data, knowledge, and resource sharing;
- Avoids redundant activities and leverages existing resources, such as funding, personnel, and leadership; and
- Incorporates both behavioral and infrastructure strategies and countermeasures to more effectively reduce highway fatalities and serious injuries on all public roads.

Source: Louisiana Department of Transportation and Development.

[4] 23 U.S.C. 148(a)(12).



SHSP Cycle

The SHSP process is continuous and cyclical. It begins with development and continues as States implement, evaluate, and update their plans on a regularly recurring basis. Regulation[5] establishes the requirements for the SHSP evaluation and update process. At any point in this cycle, it is helpful to revisit the fundamental elements of SHSP development.

The SHSP development process begins by "laying the groundwork" or having in place the fundamental elements needed to organize the effort and see it through to implementation and evaluation (a champion, leadership, organizational structure, safety partners, and collaboration and communication) (Chapter 1). The remaining elements of the SHSP development process include data collection and analysis (Chapter 2); performance management, establishing strategic goals, emphasis areas, objectives, strategies and countermeasures (Chapter 3); preparing the SHSP (Chapter 4); and consideration of next steps, including implementation and evaluation of the SHSP (Chapter 5). The chapters in this document provide an overall framework along with strategies States may use to support and enhance SHSP development efforts. A checklist is provided at the end of each chapter that recommends steps to improve a State's SHSP, both the plan itself and the processes by which a State manages their SHSP.

Source: Federal Highway Administration.

[5] 23 CFR 924; MAP-21 requires the Regulation to be updated by 2013.

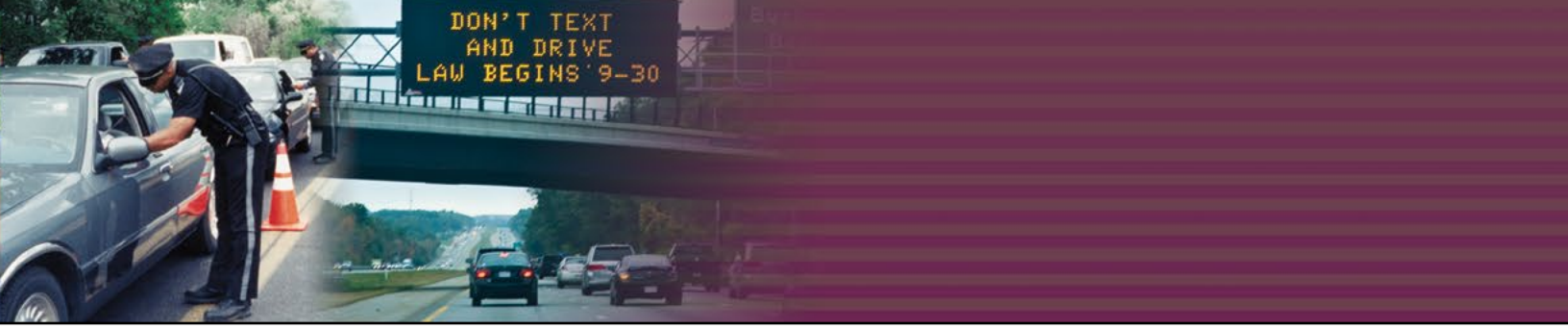
Chapter 1 – SHSP Fundamentals

Introduction

In the complex, multidisciplinary world of transportation safety, leaders bring together the diverse interests and concerns of engineers, planners, law enforcement officers, education officials, emergency response personnel, and others. Because people who work within this diverse set of disciplines have the potential to improve safety, it is important they work collaboratively. A partnership among these disciplines during every stage of the SHSP process is critical. At a minimum, the collaborative effort should result in the communication and adoption of the SHSP vision, mission, goals, and performance measures among the agencies. This chapter discusses the fundamental need for an SHSP Champion, leadership, safety partners, collaboration, and communication and suggests strategies to help integrate these elements into the SHSP process.

Champions

Successful SHSP efforts call for at least one "champion" to assist in gathering all critical safety partners into a collaborative group. Champions provide enthusiasm and support for the SHSP and must be credible and accountable, have excellent interpersonal and organizational skills, and be a skilled expediter. Safety champions help secure the necessary leadership, resources, visibility, support, and commitment of all partners. Sometimes the champion is appointed by the department of transportation (DOT) leadership or the leadership of the primary sponsoring agency. A safety champion can reside at any level within the organizational structure and perform various functions. For example, a safety champion may lead the working group that develops and implements the SHSP and is responsible for maintaining the group's cohesion, focus, and effectiveness. In this case, champions sustain the working group's interest and momentum and promote communication and collaboration among the partners. Where relationships are not fully developed, the champion may have to put in additional effort in keeping the full range of safety partners committed and actively participating.



Leadership

Leaders are an instrumental part of any planning process, and the SHSP process is no exception. They bring people together, provide essential direction, and motivate people to participate in and implement the SHSP. Leaders should be engaged and actively involved in the SHSP process. Leadership support should come from the State DOT, State Highway Safety Office or Governor's Highway Safety Office (SHSO/GHSO), State Commissioners (e.g., of Health, Education, Police), etc. Good leaders influence policy direction, set priorities, and define performance expectations. They energize the SHSP process and see to it that the plan, once developed, is implemented. They are risk takers, problems solvers, and creative thinkers committed to doing what is necessary to advance the cause, which sometimes means breaking traditional institutional barriers, such as working in "silos" and balancing competing agency priorities. Leaders are needed throughout all stages of SHSP development, implementation, and evaluation. They communicate the SHSP vision and goals and support a collaborative framework that enables safety stakeholders to actively participate in SHSP implementation.

To expand leadership support, begin with the safety partners already committed to the SHSP concept and process. Encourage the leadership of those partners to contact their peers, explain the significance of this effort, and marshal support. Their endorsement of the SHSP should include encouraging staff to stay engaged and build relationships across organizational boundaries and traditional areas of responsibility. Leadership support affects agencies or organizations internally by granting permission to dedicate time and resources to the effort, and holds those responsible for the SHSP accountable. Support must be sustained throughout the process for continuous implementation and evaluation. Leadership should recognize this is an ongoing process and institutionalize the change in the safety decision-making culture.

SHSP leadership also includes SHSP program managers who manage and attend to the day-to-day tasks of arranging, facilitating, and documenting meetings, tracking progress, and moving discrete activities through to completion. The SHSP program manager may perform either as a part- or full-time permanent role; experience demonstrates that a dedicated role is preferable.

In some cases, a single person may fulfill the Champion, Leadership, and Program Manager role, but it is more often the case that these responsibilities are assumed by multiple people.

Source: Louisiana Department of Transportation and Development.

Organizational Structure

The SHSP process depends upon collaboration among engineers, law enforcement personnel, emergency responders, outreach professionals, and other safety stakeholders. A formal organizational structure facilitates the SHSP management process. It helps the stakeholders understand their role and establishes a decision-making hierarchy.

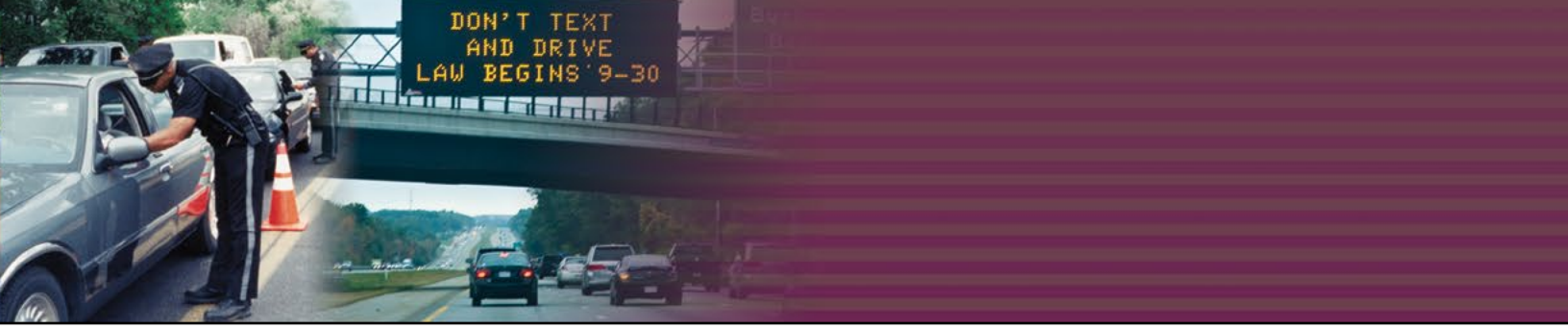
The organizational structure will vary from State to State. Regardless of the form it takes, it should function to oversee the SHSP process; from development and implementation to evaluation.

An example of an SHSP organizational structure could be:

Source: Cambridge Systematics, Inc.

Source: Nevada Department of Transportation.

An executive committee or leadership council is typically made up of members who are leaders of departments and agencies, such as transportation, State highway safety offices (SHSO), public safety, statewide law enforcement organizations, licensing agencies, departments of health and education, and others. States form executive committees to provide leadership for SHSP development, implementation, and evaluation. Executive committees are typically comprised of top management representatives from the stakeholder agencies, which helps gain consensus at a high level. The members of this committee have the authority to commit agency resources to the planning process and promote the SHSP within individual agency plans. Executive committees typically meet one or more times a year and are responsible for the overall direction and administration of SHSP activities. SHSP executive committees are generally responsible for defining priority issues and providing direction to steering committees or working groups.



To facilitate a consultative and comprehensive approach to safety, many States have found it beneficial to establish a steering committee (or sometimes called a working group) to guide the SHSP process. This committee will typically oversee the ongoing development and implementation of the plan. They usually meet quarterly or on an established schedule to review progress in each of the plan's emphasis areas, and to receive updates on SHSP-related strategies and programs. They also provide assistance when appropriate to overcome barriers or solve problems, and provide recommendations to the Executive Committee on SHSP initiatives or areas that require a higher-level solution.

The steering committee also should consist of representatives from the agencies across engineering, education, enforcement, emergency medical services (EMS), public health, and other disciplines. This is consistent with the Federal requirements for State DOTs to develop and implement a strategic highway safety plan (SHSP) in consultation with:

- The Governor's highway safety representative;
- Regional and metropolitan transportation planning organizations;
- Representatives from the major transportation modes;
- State and local traffic enforcement officials;
- The Governor's highway-rail grade crossing representative;
- Representatives conducting a motor carrier safety program;
- County transportation officials;
- State representatives of nonmotorized users;
- Motor vehicle administration agencies; and
- Other major Federal, State, tribal, and local safety stakeholders.[6]

In addition to Federally required safety partners, the working group also may include other safety advocates from government, academia, special interest groups, and the private sector. These members should be selected based on their level of expertise and commitment to highway safety. Participants can be appointed by leadership or invited to participate by the SHSP champion. DOT, Metropolitan Planning Organization (MPO), and regional transportation planners should be involved. Likewise, given the high number of highway fatalities and serious injuries that occur on non-State roads, local, regional, and tribal agencies should be invited and encouraged to participate. Local/Tribal Technical Assistance Programs (LTAP/TTAP) also can help represent local need and issues.

Source: Cambridge Systematics, Inc.

[6] 23 U.S.C. 148(a)(12)(A).

Source: PhotoDisc, Inc.

Some working groups develop a memorandum of understanding (MOU) to facilitate communication among transportation professionals within the participating organizations. The MOU briefly describes the common goal of improved highway safety and emphasizes the commitment to work as a team to achieve a shared vision. A MOU reminds members of their mission and goals, emphasizes the importance of each participant's contribution, helps the group remain focused, and can increase understanding and trust among the agencies and organizations.

States may form an emphasis area team for each emphasis area. Emphasis areas are based on analysis of the safety data and input from safety stakeholders. Emphasis area teams conduct further analyses of safety data and develop emphasis areas action plans (see Chapter 4). Reducing highway fatalities and serious injuries is contingent upon a multiagency collaborative effort. These emphasis area teams are usually comprised of representatives from agencies representing the 4 E's. The benefits of participation include the ability to influence strategic priorities and resource allocation. Team members include technical specialists knowledgeable in the emphasis area and safety professionals whose program plans are directly affected by the emphasis area strategies.

Most States also have an SHSP program coordinator who is responsible for overall management of the day-to-day SHSP activities.

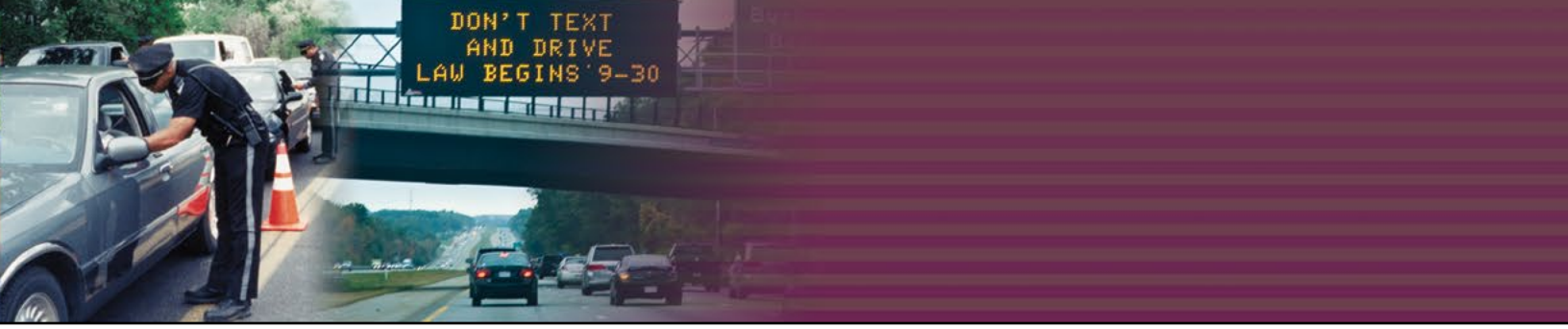
Many States use some version of the structure described above, but again this will vary among States. The goal is to create a structure that will help States effectively administer and manage the SHSP process and best meet their organizational needs.

Safety Partners

The organizational structure of State agencies and interagency working relationships are important factors to consider when bringing safety partners together. Rather than create entirely new committees, a State should build upon existing relationships, interagency working groups, and committees. Many States currently have functioning transportation safety committees such as Traffic Records Coordinating Committees (TRCC), and impaired driving or safety belt coalitions. Some States have revitalized past Safety Management Systems. Regardless of how safety partners are brought together and organized to contribute to the SHSP process, States should look for ways to expand membership to include a broad range of partners, such as insurance, trucking, and motor coach companies, fire and rescue, local businesses, and others. Each State and community has its own character, but with local input, the "movers and shakers" can be identified and recruited. SHSP partners typically include those that are Federally required (see previous section) as well as emergency medical services providers, health and education departments,

"Coming together is an accomplishment, staying together is progress, working together is success."

- Henry Ford



Motor Carrier Safety Assistance Program (MCSAP) managers, local agencies, tribal governments, special interest groups (i.e., MADD, AAA), and others.

With the emphasis on wide-ranging collaboration that includes many external partners, it can be easy to overlook the importance of broad DOT involvement as well. Early involvement of Design, Operations, Maintenance, etc. will enhance the implementation of SHSP strategies, especially if they are new or experimental.

Some States bring partners together by convening a safety summit or meeting. This could be a large initial meeting to kickoff an SHSP update or a meeting of the SHSP working group or steering committee. It provides an opportunity to learn about each of the safety partner priorities and understand what they contribute. States should give participants the opportunity to describe their safety concerns and current programs. This may advance the discussion of critical safety issues, identify opportunities, and forge an agreement on how to proceed.

zero Fatalities | NEVADA STRATEGIC HIGHWAY SAFETY PLAN

zero Fatalities Drive Safe Nevada

Safety Culture Connection

Zero Fatalities Billboard Campaign

Motorists across Nevada may have noticed new billboards that highlight ways to stay safe on the roadway. The educational effort is part of the state's Zero Fatalities campaign that reminds people to:

- Always buckle up;
- Don't drive impaired;
- Stop on red;
- Focus on the road; and
- Be pedestrian safe.

So far, the campaign, supported by more than 50 agencies and safety organizations across the state, has generated more than 63 million impressions among Nevada residents and has reached nearly 85 percent of urban Nevadans. Approximately that same amount of Nevadans report they now understand such driving behaviors as driving while distracted to be unsafe, thanks in part to the Zero Fatalities campaign. Nearly half of Nevadans age 45-54 also reported being aware of the campaign.

The billboard messages tell road users that "Today is not a good day to die," "Just Drive," "Drivers: Look for Walkers, Walkers: Look for Drivers," and "Don't Be Color Blind, Stop on Red." To learn more about the campaign, go to http://www.zerofatalitiesnv.com/.

Today's not a good day to die. zero Fatalities

Click it or Ticket Campaign

Nevada recently concluded the annual National Seat Belt Enforcement Mobilization *Click it or Ticket* campaign. This campaign, conducted May 21 through June 3, 2012, involves high visibility enforcement efforts conducted by law enforcement agencies across Nevada through the state's unique Joining Forces program.

The campaign also includes a safety belt daytime observational survey conducted by researchers at the UNLV in Washoe, Clark, Elko, Lyon, and Nye counties. A nighttime survey was also conducted in Washoe and Clark counties. Results from the survey will indicate Nevada's safety belt use rate and are used to target efforts in future *Click it or Ticket* campaigns and other safety belt programs. Those results will be out in late August. For more information, visit the NHTSA *Click It or Ticket* website at http://www.nhtsa.gov/nhtsa/2012ciot/index.html.

AUGUST 2012 ZEROFATALITIESNV.COM

Source: Nevada Department of Transportation.

Collaboration and Communication

Safety partners and organizations bring unique and valuable perspectives to bear on the transportation safety problem. However, differing philosophies, competing priorities, and varying business cultures may make collaboration a challenge. Creating a basic foundation for effective collaboration and establishing a process to support collaborative efforts overcomes these barriers. Techniques for establishing a foundation include:

- Establishing common mission statements, performance measures, goals, and safety objectives; and incorporating them into each agency's priorities;
- Implementing a data collection and analysis strategy to support collaborative safety planning and identifying mechanisms for sharing data and analysis results with local agencies and other safety partners; and
- Organizing and institutionalizing opportunities for interaction through workshops, forums, training courses, and conferences.

Once the foundation is established, States can support ongoing collaboration and communication by:

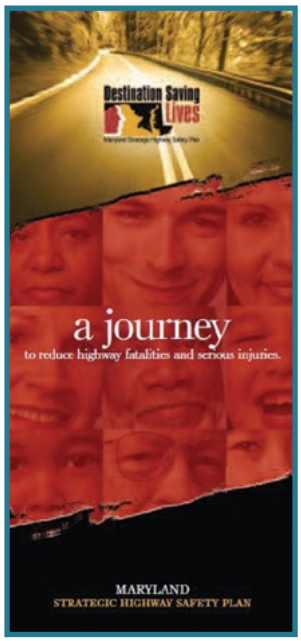
- Institutionalizing an analysis-driven process to focus all members and collaboration activities on the most pressing road safety problems;
- Adopting an implementation focus early in the process to define who will do what, by when, and identify the resources needed to accomplish the tasks;

- Adopting an evaluation focus from the beginning; collaboratively defining performance measures and data collection needs required to monitor and evaluate the effectiveness of the SHSP efforts;
- Periodically reviewing the current organizational relationships among the different safety partners and identifying opportunities to strengthen these relationships;
- Creating a memorandum of understanding or other type of agreement (if applicable) to institutionalize the collaborative process so it outlasts the current participants;
- Establishing regular communication with safety partners. Utilizing collaborative technology, such as listservs, chat rooms, web sites, and other electronic forms of communication to encourage greater interaction;
- Developing emphasis area action plans (see Chapter 4) for the specific emphasis areas in the SHSP to encourage partners to maintain their role in SHSP implementation;
- Providing regular status updates in the SHSP focus or emphasis areas so partners understand the impact of their role in implementing the SHSP;
- Examining the effectiveness of both formal and informal interagency communications; and
- Identifying resource and training needs to support the collaborative safety effort.

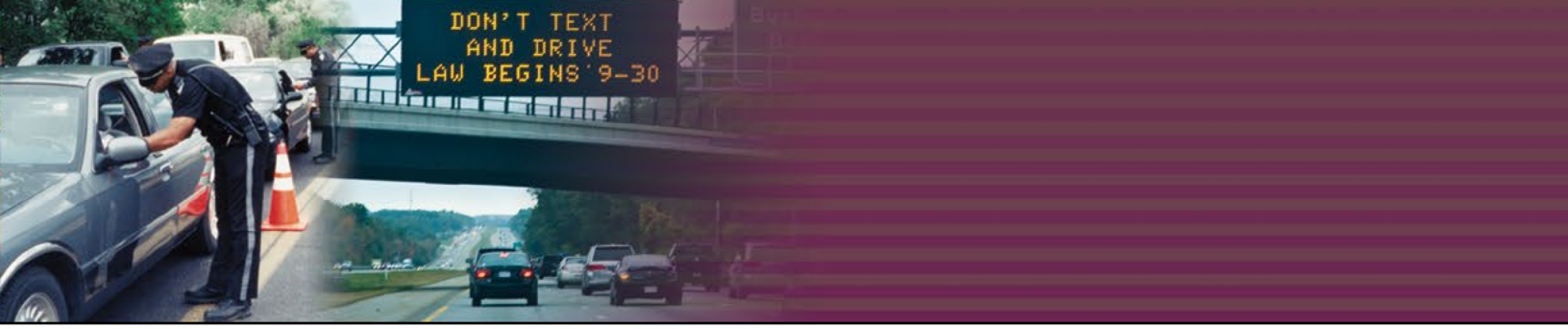
Checklist

Following the recommended steps in the checklist below will help build SHSP fundamentals into SHSP development and implementation.

- ☐ Identify one or more SHSP Champions.
- ☐ Keep SHSP leaders engaged and actively involved.
- ☐ Establish an organizational structure to oversee the SHSP process.
- ☐ Involve organizations representing engineering, education, enforcement, and EMS in developing the SHSP.
- ☐ Identify both traditional and nontraditional safety partners and enlist their support in the SHSP effort.
- ☐ Establish strategies to support ongoing collaborative efforts.
- ☐ Establish regular communication with safety partners.



Source: Maryland Highway Safety Office.



Chapter 2 – Data Collection and Analysis

Introduction

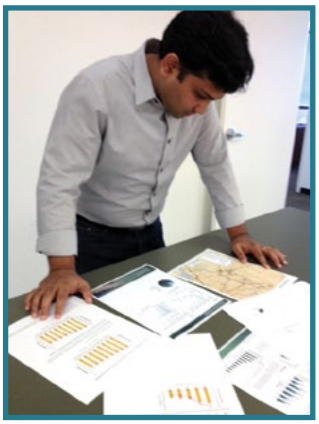
The SHSP is a data-driven process. All elements of the SHSP process, from development to evaluation, require States to analyze and make effective use of State, regional, local and tribal safety data.

Data enable managers to identify safety problems, select proper strategies and countermeasures, monitor progress toward achieving SHSP goals and objectives, measure the effectiveness of SHSP strategies, identify needed improvements, and direct limited resources to the highest potential for reducing fatalities and serious injuries. A variety of strategies can be employed to improve and collect data, perform analysis, and allow SHSP stakeholders access to the data and analysis. For example, States may qualify for a State Traffic Safety Information System Grant (NHTSA Section 405) for data improvement activities, such as improving the timeliness, accuracy, completeness, uniformity, integration, and accessibility of data that is needed to identify priorities for Federal, State, and local highway and traffic safety programs. In some States, multiple agencies provide funding for data collection and management through interagency agreements.

States should strive to improve the safety data needed to identify priorities for Federal, State, regional, tribal and local highway and traffic safety programs. When developing their SHSP, they should use the best available data to identify SHSP initiatives and plan data improvements, if needed.

To advance data gathering capabilities, States should develop an active partnership with the TRCC. TRCCs are responsible for identifying data system enhancement strategies that can affect access to data, as well as its accuracy and timeliness. FHWA and NHTSA data improvement programs, such as the Crash and Roadway Data Improvement Program (CDIP), the Roadway Data Improvement Program (RDIP), and NHTSA's Traffic Records Assessments, also provide opportunities to improve data systems. They are designed to assess the strengths and weaknesses of State safety data systems and offer expert consultation and recommendations for corrections and other improvements.

Availability of complete and accurate crash data for all public roads is a critical highway safety issue. Some States identify the need to upgrade, improve, and standardize the traffic records information system as an



Source: Cambridge Systematics, Inc.

Source: Comstock Images.

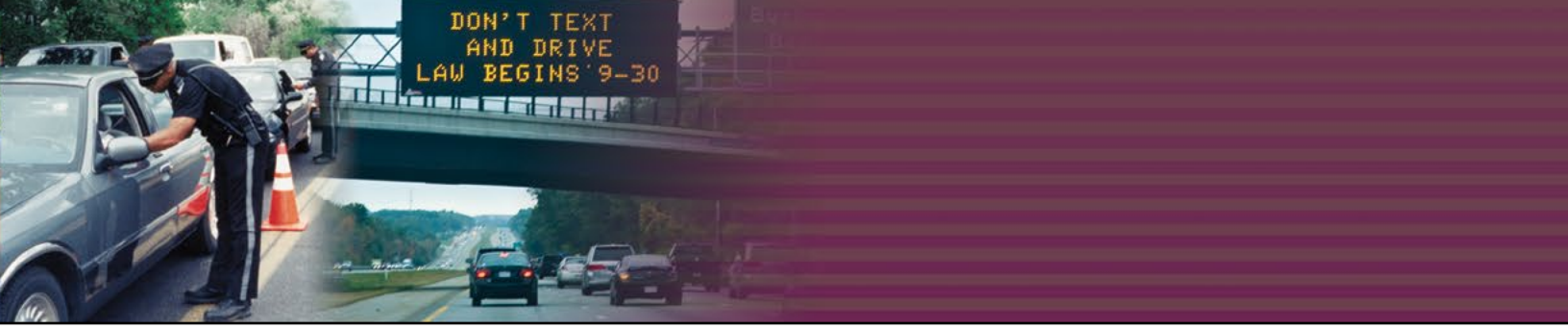
emphasis area in the SHSP to improve the completeness and accuracy of the safety data. This makes safety data improvements a priority, which will lead to a better SHSP in the future.

Types of Data

A variety of data are available to support the development of SHSPs. These include the following:

- **Crash Data –** Type of crash (lane-departure, intersection, rear-end, etc.), weather conditions, time of day, day of week, vehicle type, person type (driver, occupant, bicyclist, pedestrian, etc.), number and severity of injuries, traffic law violations, crash location, manner of collision, number of vehicles involved, alcohol or drug impairment, direction of travel, crash diagram, narrative description of the crash;
- **Injury Surveillance –** EMS response time, hospital injury severity assessment, hospital length of stay and cost, rehabilitation time and cost;
- **Roadway and Traffic –** Functional classification and ownership, roadway inventory data (i.e., roadway segment, intersection, ramp/interchange data), traffic control devices, location referencing system, rail grade crossings, structures (bridges, tunnels), traffic volume, locations that do not have an empirical history of fatalities and serious injuries, but possess risk factors for potential crashes, vehicle types on the roadway, road safety audit findings;
- **Vehicle –** Vehicle Identification Number (VIN), registration information and plate, age/model/year, weight, owner information, Commercial Motor Vehicle (CMV) data (e.g., U.S. DOT number, carrier information, inspection/out-of-service records;
- **Driver –** Age and date of birth, driver history (previous convictions and crashes), license status, gender, ethnicity, education, training;
- **Law Enforcement –** Citations, prosecutions, convictions, sentencing, case tracking, adjudication; and
- **Other –** Statewide occupant protection use survey, insurance data (carrier, policy number, claims cost), demographic data, etc.

The data may be collected from various sources, including State and local crash data systems and roadway inventory files, the National Fatality Analysis Reporting System (FARS), the General Estimates System (GES), the Motor Carrier Management Information System (MCMIS), the National Emergency Medical Services Information System (NEMSIS), the Crash Outcome Data



Evaluation System (CODES), Federal Railroad Administration Highway-Rail Crossing Inventory Data, and others.

Data Integration

Data integration refers to connecting to, combining, and/or linking data residing in various systems to provide a unified view of the data. With respect to highway safety, data integration can help SHSP leaders better understand highway safety needs and develop effective strategies for addressing them. Currently, each State maintains a crash database to which local agencies are required to submit crash reports. However, crash data alone do not typically provide sufficient information on the characteristics of the roadway, vehicle, driver experience, or medical consequences. When crash data are linked to (or integrated with) roadway inventory, driver licensing, vehicle registration, citation, conviction, EMS, death certificate, census, and other data, it is possible to evaluate the relationship among the roadway, vehicle, and human factors at the time of the crash. Linkage to medical information clarifies level of injury and other crash outcomes. For example, plotting lane departure crashes by location can provide valuable information about where these crashes have occurred in the past. Combining lane departure crash location data with roadway inventory data (shoulder widths, rumble strips/stripes, cable median barriers, curve configurations, hills, etc.) provides greater understanding of the relationship between roadway configuration and lane departure crashes and enables SHSP leaders to develop effective strategies to reduce them. The integration of these two datasets (crash data and roadway inventory) provides more and better information than either of them provide individually. In addition, integrating databases promotes collaboration among the agencies, which can lead to data collection improvements.

Data Collection and Management

Safety data are fundamental to SHSP development. Data enable managers to identify safety problems, select proper strategies and countermeasures, monitor progress toward achievement of SHSP goals and objectives, measure the effectiveness of SHSP strategies, identify needed improvements, and direct limited resources to where they have the highest potential for reducing fatalities and serious injuries. Of all the data types needed to develop and evaluate an SHSP, perhaps the most frequently used are crash data. But other safety data (e.g., vehicle, roadway, behavioral) also can and should be used to effectively inform SHSP decisions.

Safety data collection is a complex process that requires collaboration among agencies, organizations, modes of transportation, and disciplines. One method for establishing collaboration is accomplished through the State

Source: Cambridge Systematics, Inc.

TRCC, which facilitates project planning, coordination, and implementation designed to improve a State's traffic records system and oversees the State Traffic Records Strategic Plan, which details the critical traffic records data issues. Typically, all levels of law enforcement are represented on the TRCC. Some States develop a data emphasis area team to work in collaboration with the TRCC to improve crash data collection, distribution, and management processes and to determine what data to analyze as well as appropriate analysis methods. This may help all involved organizations to not only understand the need for data improvements, but also to agree on the priority areas identified through data analysis.

Data Analysis

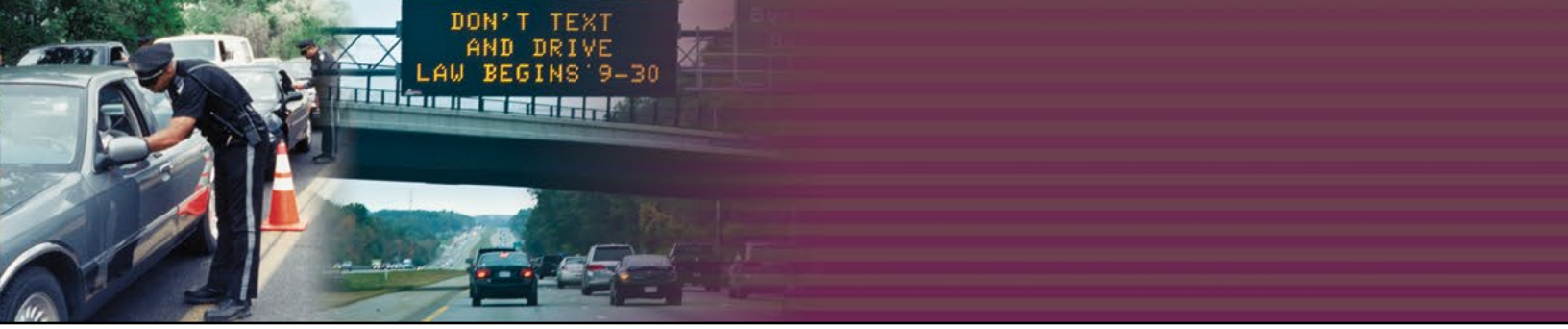
States must analyze the available safety data to identify the critical highway safety issues and safety improvement opportunities.[7] The analysis is used to develop emphasis area goals, objectives, and strategies and action plans; monitor and evaluate results; and provide feedback for future updates to the SHSP.

Source: Louisiana Department of Transportation and Development.

Analysis can involve simple statistical investigations of crash trends, types, and contributing factors, or use advanced methods such as those presented in the Highway Safety Manual (HSM). The basic data analysis required to support the SHSP process is usually performed in-house. If States feel like they need additional data analysis assistance, this can often be provided by university research centers, other State agencies that work with similar data, etc. Data are used as a foundation for identifying SHSP priorities for the SHSP process and serve as the basis for the following:

- **Identification of emphasis areas –** By identifying and describing safety problems quantitatively, an agency knows the magnitude of the problem and can focus its efforts on areas with the greatest potential to improve safety.
- **Identification of crash type –** Data analysis is used to discern trends in the frequency of certain types of crashes (e.g., rear-end collisions, lane departures, impaired driving, etc.). Crash type data are used to identify SHSP emphasis areas and develop action plans.
- **Strategy and countermeasure selection and prioritization –** Analysis of safety data helps managers to select and prioritize strategies and countermeasures. High priority should be given to those strategies and countermeasures that could significantly reduce highway fatalities and serious injuries in the key emphasis areas. Consideration also should be given to systemic safety improvements, which address high-risk roadway features that are correlated with specific severe crash types, rather than crash frequency. Low-cost countermeasures (e.g., rumble strips) are ideal to apply on a systemic basis.

[7] 23 U.S.C. 148(a)(12)(B).



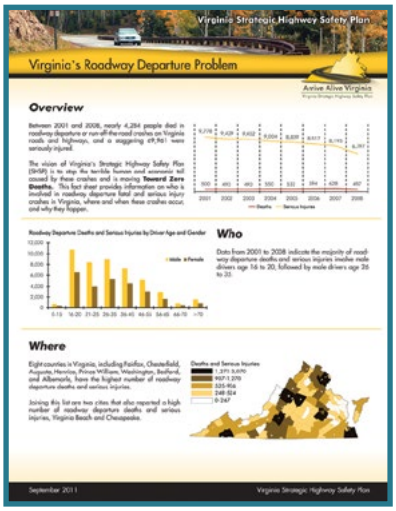
- **Performance-based program management –** Analysis of safety data allows managers to determine the extent to which the SHSP is achieving its goals and objectives.
- **Monitoring and evaluation –** Data monitoring and evaluation helps managers make course corrections as the SHSP is implemented; develop new programs using more effective countermeasures and strategies; improve existing programs; and direct resources toward implementation of the most effective programs, policies, and projects.
- **Resource justification –** Data-driven prioritized road safety projects provide transportation planners, engineers, law enforcement officers, and others with justification for additional resources.

Data Sharing

Local governments, MPOs, advocacy groups, and others require safety data for conducting safety planning and project-related activities. Some State agencies provide raw data, as well as filtered datasets that can be readily used by local agencies. Collaboration is fostered by providing stakeholders with access to safety data and training on analysis techniques. Data sharing also promotes local efforts to improve data accuracy.

Stakeholder access to reliable data helps provide consistency between the SHSP and other transportation and safety plans. Some effective and efficient data sharing practices include:

- Provide a mechanism for State and local agency partners to access data (such as a data fact book or a web-based centralized data site) to promote the consistent use of data and information among partners;
- Provide safety data and analysis to both internal and external partners;
- Develop policies to establish data dissemination schedules;
- Develop a standard procedure for handling data requests that clearly identifies who will manage requests and how they will be processed;
- Host forums to discuss data issues and enhancement strategies (for MPOs, local agencies, etc.);
- Encourage MPOs to conduct safety analysis for their member jurisdictions, including crash location mapping;
- Work with the Local Technical Assistance Program (LTAP) personnel and others to support safety planning efforts at the local level by providing data for non-State highways;



Source: Virginia Department of Transportation.

- Develop a highway basemap, which is a representation of all public roads that can be used to geolocate attribute data on roadways; and
- Provide training to State and local agency partners on the collection and analysis of safety data to enhance their ability to generate and share reliable data.

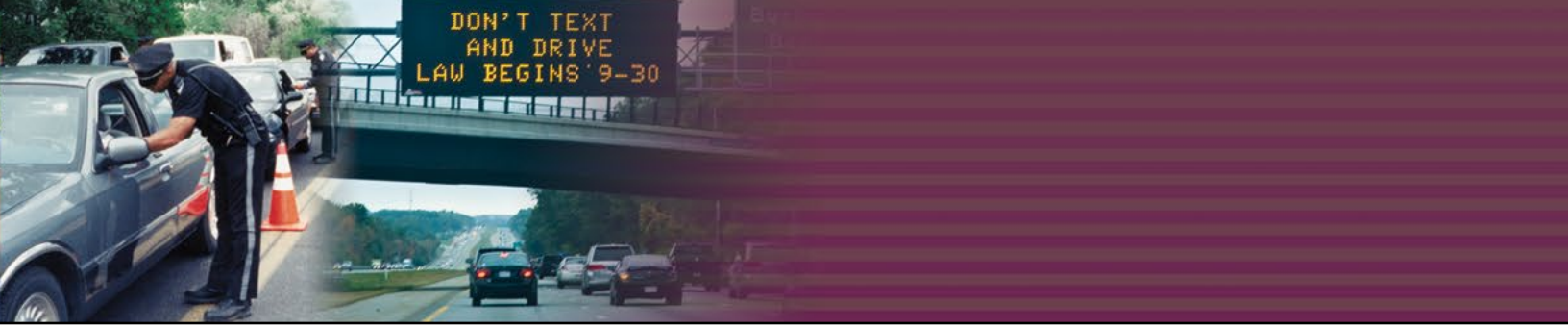
Source: Cheyenne Metropolitan Planning Organization.

Checklist

Following the recommended steps in the checklist below will help support the data collection, management, analysis, and sharing procedures necessary for developing an SHSP.

- ☐ Develop a data emphasis area team to collaborate with the State TRCC to improve crash data collection, distribution, and management processes and to determine what data to analyze as well as appropriate analysis methods.
- ☐ Analyze the available data to identify critical highway safety issues, safety improvement opportunities, and emphasis areas.
- ☐ Provide a mechanism for State and local agency partners to access consistent data (such as a data fact book or a web-based centralized data site).
- ☐ Conduct forums to discuss safety data issues and enhancement strategies.
- ☐ Provide safety data and analysis to internal and/or external partners to support safety efforts.
- ☐ Encourage MPOs to conduct safety analysis for their member jurisdictions.

Source: Cambridge Systematics, Inc.



Chapter 3 – SHSP Content

Introduction

The SHSP is the State's guiding highway safety plan. Its success is dependent upon the State's ability to effectively implement and evaluate the plan. To accomplish this, the SHSP should include the following critical content: performance measures; strategic goals and objectives; emphasis areas; and emphasis areas goals, objectives, strategies, and countermeasures.

States should use safety data to identify emphasis areas and establish strategic goals and objectives. This helps direct limited resources to the most critical safety needs. Performance measures are essential to monitor progress of statewide and emphasis area safety goal(s) and objectives.

Performance Management

Performance management is critical for any strategic planning process. Through performance management a State can monitor the status of SHSP implementation efforts and measure progress toward SHSP goals. This is accomplished by establishing performance measures.

Safety issues vary across the country; therefore, no single set of performance measures is applicable to all States. However, it is important that what is measured is directly tied to the goals and objectives that the State establishes in the SHSP. In addition, legislation requires the U.S. Department of Transportation to establish performance measures for the Federal-aid program.[8] In the area of safety these measures are the number and rate of serious injuries and fatalities. States will be required to set targets for and report on these performance measures, so they should be considered when developing SHSP performance measures as well.

Performance measures are used to streamline the tracking and evaluation process by establishing consistent data and reporting methods from one period to the next. Performance measures provide quantifiable evidence of progress and helps managers determine whether the SHSP is meeting its stated goals and objectives. Ideally, performance measures should be developed prior to implementation to track progress by emphasis area and identify the data that must be collected.

Performance measures can be classified as "output" or "outcome" measures.

- **Output measures** are quantitative and indicate the level of activity or effort. For example, an output measure for rumble strips would be the

[8] MAP-21 requires these performance measures to be established and defined in Regulation by 2014.

Performance Measures

NHTSA and the Governor's Highway Safety Association (GHSA) developed a set of core performance measures. Some of them are:

- Number of traffic fatalities (three- or five-year moving averages);
- Number of serious injuries in traffic crashes;
- Number of speeding-related fatalities;
- Number of pedestrian fatalities; and
- Observed seat belt use for passenger vehicles.

For a list of all NHTSA/GHSA performance measures, please see this jointly developed report: Traffic Safety Performance Measures for States and Federal Agencies.

States can also review *A Primer on Safety Performance Measures for the Transportation Planning Process,* developed by FHWA, for help in creating safety performance measures.

Source: Cambridge Systematics, Inc.

CREATING
S.M.A.R.T.
OBJECTIVES

Specific
Measurable
Action-oriented
Reasonable
Time bound

number of center line miles along which rumble strips are installed. Output measures also can be used to track cost and productivity.

- **Outcome measures** provide an indication of the effectiveness of the SHSP strategies or actions in meeting the fundamental objectives of the SHSP. An example of an outcome measure would be the number of run-off-the-road fatalities.

Strategic Goals and Objectives

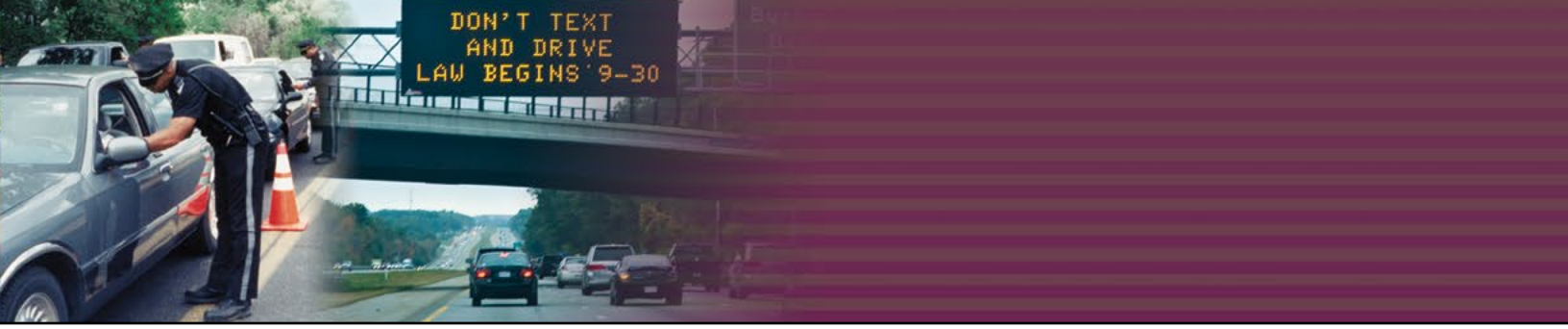
Every State should establish SHSP goals and measurable objectives that address traffic safety. These goals and objectives should include behavioral as well as infrastructure issues and opportunities on all public roads (which include non-State-owned roads, rural roads, and roads on tribal land). Strategic goals are high-level, longer-term goals that usually span an extended time period. For example: Move toward zero deaths and reduce traffic-related fatalities and serious injuries.

The SHSP strategic goals should be consistent with the State highway safety program and commercial vehicle safety plan (CVSP). In turn, the strategic safety goals in the State's other transportation plans should align with those in the SHSP. States should review the safety goals and plans of participating agencies (Highway Safety Plan (HSP), CVSP, etc.), and agree on mutually acceptable goals or collaboratively review safety trends and forecast performance.

The SHSP also defines the measurable, time bound objectives – what the plan will accomplish by when. Some States may prefer to adopt an objective expressed in the total number or percentage reduction in highway fatalities and serious injuries in combination with a timeframe or express the objectives as a fatality rate per vehicle-miles traveled. Example objectives are "reduce statewide roadway fatalities 10 percent by 2015," "lower highway fatalities to no more than 400 fatalities per year by 2020," and "reduce the fatality rate to 1.0 by 2015."

It is important to set criteria when developing objectives so it can be determined if the State is accomplishing what it set out to do. One set of objective setting rules commonly used is known as S.M.A.R.T. This criterion establishes objectives that are: Specific, Measurable, Action-Oriented, Reasonable, and Time Bound. These are briefly described below.

- An objective is not general; it identifies exactly what the State wants to happen.
- A measurable objective is quantifiable and can detect changes over time.
- An action-oriented objective can be counted or observed.
- A reasonable objective is realistic and reachable, versus what is simply desired.
- A time-bound objective establishes a deadline.



Emphasis Areas

Each State should identify emphasis areas based on analysis of the available safety data and input from safety stakeholders representing the 4 E's of safety. Emphasis areas may change during SHSP updates based on the results of ongoing safety data analysis.

Many States have found a fewer number of emphasis areas (usually between four and eight) helps direct efforts and makes the SHSP a more "strategic" and effective plan. For example, a State may review annual fatality and serious injury data for the preceding five years. The top five areas representing the most fatalities and serious injuries are then selected for the SHSP.

States also may weigh other factors when considering emphasis areas, such as injury severity, high-risk roadway features that are correlated with particular crash types, risks associated with certain vehicle types, etc. For example, if a State has experienced a catastrophic bus crash, they may include in their data analysis a review of the number and severity of the injuries, the characteristics of the road where the crash occurred, the safety performance of the motor carrier operating the bus, and the volume of bus traffic on the road. After weighing these factors, they may determine that bus safety is a priority because, while bus crashes may be relatively infrequent, when they do occur they can cause a significant number of fatalities or serious injuries in a single event.

Recommendations on emphasis areas should be reviewed by the Steering Committee or Working Group, and then by the Executive Committee, which will typically make the final decision. A review by the SHSP committees will help ensure that emphasis areas represent a balance of resources and priorities.

Goals and Objectives

States should develop goals and measurable objectives for each SHSP emphasis area. Measurable objectives enable States to gauge progress. For example:

- **Emphasis Area:** Roadway Departure.
- **Goal:** Reduce the occurrence and consequence of leaving the roadway.
- **Objective:** By 2017, reduce the number of fatalities attributed to vehicles leaving the roadway by 15 percent from their 2012 level.

Strategies and Countermeasures

Once goals and objectives have been established, strategies and countermeasures for achieving each of them should be established.

The difference between strategies and countermeasures is subtle, and often the terms are used interchangeably. In this Guidebook, a strategy is defined as a plan or method to help achieve a goal, while a countermeasure is a specific action designed to support and implement the strategy.

Potential Emphasis Areas

- Graduated drivers licensing
- Licensed, competent drivers
- Older drivers
- Impaired drivers
- Keeping drivers alert
- Seatbelts and air bags
- Bicyclists
- Motorcyclists
- Heavy trucks
- In-vehicle enhancements
- Vehicle-train crashes
- Keeping vehicles on the road
- Minimizing consequences of leaving road
- Intersections
- Aggressive driving
- Driver safety awareness
- Pedestrians
- Head-on and cross median crashes
- Work zones
- Increasing EMS capabilities
- Improving decision support systems
- Processes and safety management systems

Source: AASHTO.

Evidence-Based Countermeasures

It is best to use countermeasures based on evidence from the research. These can be found in a variety of sources, including:

- NCHRP 500 Series;
- FHWA Crash Modification Factors Clearinghouse;
- Highway Safety Manual, Countermeasures that Work; and
- NCHRP 622: Effectiveness of Behavioral Highway Safety Countermeasures.

If the effectiveness of countermeasures or programs are not known, strategies should be accompanied by an evaluation plan to demonstrate effectiveness.

For example, if the Emphasis Areas is Speed/Aggressive Driving, the strategies might be:

- Deter aggressive driving in specific populations, including those with a history of the behavior, and in specific locations; and
- Implement traffic calming measures.

The countermeasures may then include:

- Tailored high-visibility enforcement;
- Sanctions against repeat offenders;
- Public awareness and education campaigns;
- Installation of speed bumps; and
- Installation of roundabouts.

As countermeasures are considered to address key emphasis areas, the following questions should be addressed:

- What evidence-based and effective countermeasures are available for a particular emphasis area?
- Are the countermeasures cost-effective?
- What countermeasures lend themselves to cooperative efforts and how can partner resources be leveraged?

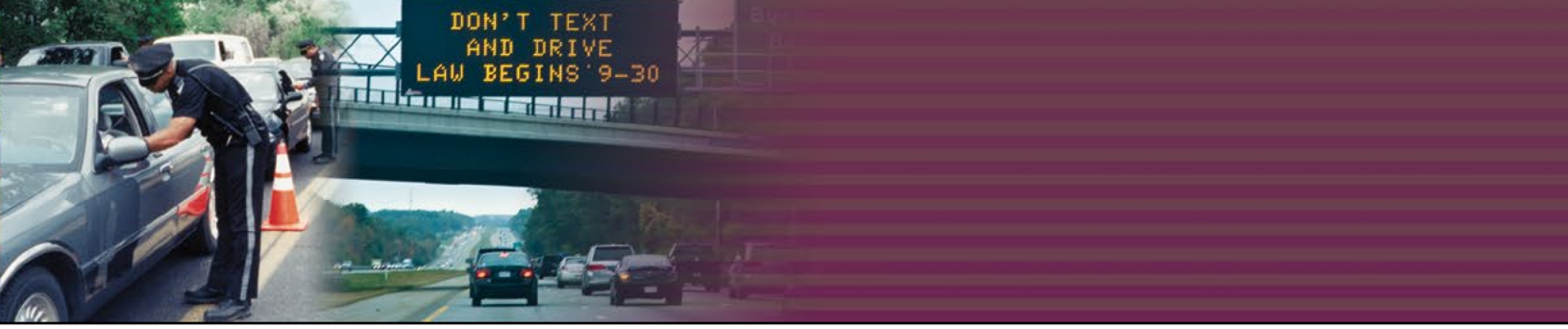
The SHSP is required to address engineering, management, operation, education, enforcement, and emergency services elements of highway safety[9] as key factors in determining strategies. High priority should be given to those strategies that could significantly reduce highway fatalities and serious injuries in the key emphasis areas. Systemic improvements and low-cost and achievable countermeasures also should be given consideration.

Checklist

Following the recommended steps in the checklist below will help ensure that the critical content is included in the SHSP.

- ☐ Use safety data to develop comprehensive statewide safety goals and objectives.
- ☐ Develop goals and S.M.A.R.T. objectives for each emphasis area.
- ☐ Analyze the data and solicit safety stakeholder input to select emphasis areas.
- ☐ Define performance measures for each emphasis area that correspond to the goals.
- ☐ Establish strategies and countermeasures to achieve the goals and objectives.

[9] 23 U.S.C. 148(a)(12)(C).



Chapter 4 – SHSP Preparation

Introduction

The SHSP should clearly and concisely describe the State's safety problem and describe a program of priorities and strategies to reduce fatalities and serious injuries on all roadways in the State. While the State DOT is ultimately responsible for the development, implementation, and evaluation of the SHSP, the safety partners should agree with the plan and its components. In addition, as part of FHWA's oversight and stewardship responsibilities, FHWA Division Administrators will verify that the State has followed a process that is consistent with SHSP requirements. The Governor or a responsible State agency must provide approval and sign the final SHSP.[10]

SHSP Format

The format of the SHSP should be discussed among the safety partners and the final format should be broadly supported among them. Some States have found it beneficial to structure the SHSP so that frequently updated sections, such as Emphasis Area Action Plans, are kept separate from the main document. During development, a review process should be established so appropriate parties have the opportunity to review and edit the SHSP and approve the final version. To monitor progress, a person (or persons) should be assigned the responsibility to prepare the SHSP or SHSP sections.

A recommended SHSP format is outlined below:

- **Table of Contents.**
- **Executive Summary:** This section summarizes or provides a snapshot of the contents of the SHSP. It may highlight significant achievements, the mission, vision, and goal of the SHSP, the emphasis areas, etc.
- **Mission, Vision, and Goal Statements:** This section highlights the mission, vision, and goal of the SHSP. These are usually high-level statements that capture the safety values and aspirations of the State.
- **Safety Partners:** This section lists and thanks all of the safety partners involved in the SHSP effort. It is an opportunity to highlight the collaborative nature of the SHSP and acknowledge the work of all involved.
- **Introduction and Background:** This section summarizes past accomplishments, challenges, and ongoing SHSP efforts as well as highlights directions for the future.
- **Development Methods or Approach:** Legislation requires a detailed description of the SHSP update process. States can include a section in

[10] 23 U.S.C. 148(a)(12)(G).

Source: Cambridge Systematics, Inc.

their SHSP that provides this description, such as the data analysis and problem identification methods used, as well as other considerations incorporated into the update.

- **Emphasis Areas:** This section describes the States priority safety problems that will be addressed. Each emphasis area should contain:
  - Goals;
  - Performance Measures;
  - Measurable Objectives; and
  - Strategies and Countermeasures.
- **SHSP Implementation:** This section describes and documents the State's implementation approach (strategies and processes).
- **SHSP Evaluation:** This section describes and documents the State's monitoring and evaluation methods.
- **Emphasis Area Action Plans:** These action plans identify specific action steps for each countermeasure, responsible agency or agencies, timelines, etc. They may be included as appendices, a separate chapter, or prepared separately from the SHSP document. Some States have separated the emphasis area action plans from the master SHSP document to facilitate modifications. See Chapter 5 for more details on developing emphasis area action plans.

SHSPs are dynamic plans and the emphasis areas goals, strategies, and countermeasures are adjusted based on monitoring, course corrections, and the achievement of performance goals. Because of its dynamic nature, the SHSP should be written in a format that facilitates updating. A process must be established to develop, implement, and update the SHSP regularly and according to regulatory requirements.[11]

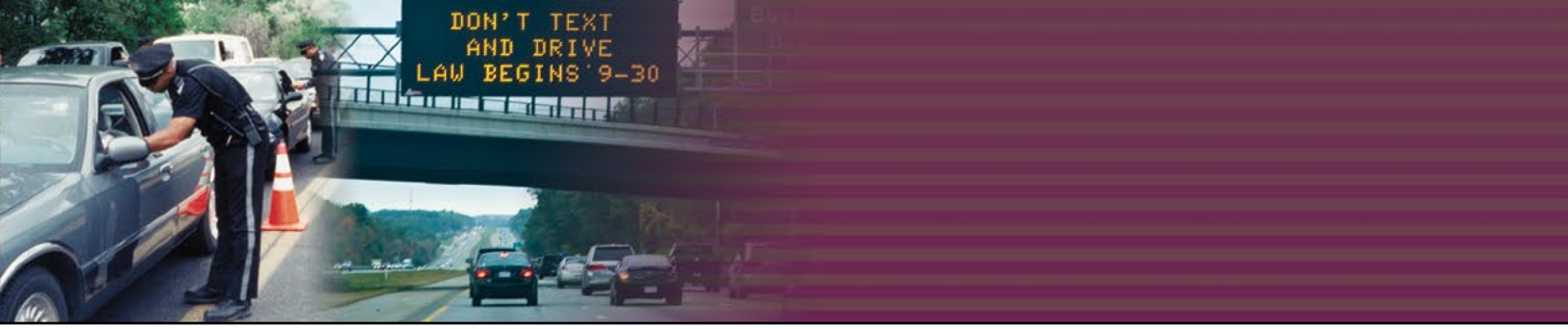
Checklist

Following the recommended steps in the checklist below will help with the preparation of the SHSP document.

- ☐ Designate a person (or persons) to prepare the SHSP or SHSP sections.
- ☐ Gain consensus on the SHSP format (such as the contents, chapters, etc.).
- ☐ Develop an SHSP format that is conducive to updates. Establish a process for review and approval of the draft SHSP and SHSP process by the appropriate parties (e.g., FHWA) and to incorporate feedback into the final version.
- ☐ Obtain approval and signature by the Governor or designee.
- ☐ Establish a process and schedule to facilitate future updates.

Source: iStock Photo.

[11] 23 CFR 924; MAP-21 requires the Regulation to be updated by 2013.



Chapter 5 – SHSP Implementation and Evaluation

Introduction

The development of the SHSP is the first stage of the SHSP cycle and creates the foundation for the SHSP process. However, the SHSP can only become a dynamic process if steps are taken to implement and evaluate the plan on an ongoing basis. SHSP leadership and key staff are encouraged to review not only this Champion's Guidebook, but also the SHSP Implementation Process Model (IPM) and Evaluation Process Model (EPM) before and during all stages of the SHSP effort. Knowing what needs to be accomplished to successfully implement the SHSP and to evaluate its effectiveness can pay substantial dividends.

Source: Comstock Images.

SHSP Implementation

There are several key steps to successful SHSP implementation. These include creating emphasis area teams and action plans, integrating the SHSP with existing transportation safety plans, and marketing the plan. These are covered in detail in the SHSP IPM, but a brief description is provided below.

Emphasis Area Action Plans

SHSP emphasis area action plans provide a road map to give stakeholders and partners direction. While emphasis areas may be defined differently, they should be supported by action plans that provide specifics such as measurable objectives, performance measures, strategies, action steps, tracking measures for action steps, and funding sources. Action plans turn SHSP concepts and ideas into reality.

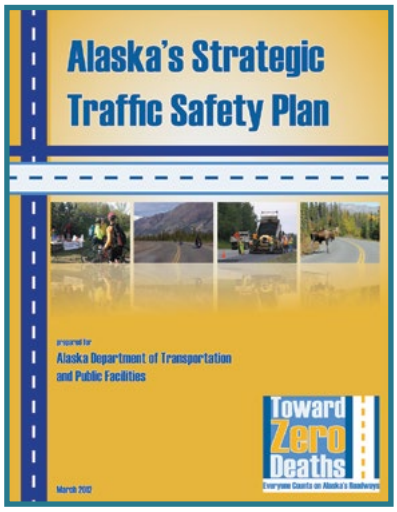
Action plans eliminate guesswork, prevent shot gun approaches, and focus resources where most needed. They create a link between the goals and objectives of the SHSP and the prioritization and selection of projects within existing transportation planning and programming activities (e.g., HSPs, HSIPs, CVSPs, S/TIPs, etc.). SHSP action plans can be posted on the Internet to promote transparency and offer opportunities for additional stakeholders to participate in or support SHSP implementation.

The first step in developing an emphasis area action plan is to establish an action planning framework. To develop the framework:

- Review the goals for the SHSP and for the emphasis areas;
- Document the measurable objectives and performance measures for each emphasis area;
- Determine the data requirements for each performance measure;
- Identify the required resources and action steps for implementing each countermeasure;
- Identify a process to track countermeasure and action step implementation; and
- Regularly monitor the extent to which emphasis area goals and objectives are being met.

The SHSP does not provide funding for specific programs and activities, but identifying potential resources as part of the action plan helps managers allocate resources more effectively when project selection occurs. Types of resources typically required include: partners whose cooperation and coordination is required; funding source(s); personnel; data and information; equipment and materials, and; training.

Action plans are living documents and should be revisited and amended as necessary. Teams can add, remove, or revise strategies and countermeasures over time so the action plan remains relevant. For instance, dramatic changes in data may warrant a fresh look at all SHSP elements, including action plans. States may consider developing a process or format for adding, deleting, or amending emphasis areas, strategies, or countermeasures to ensure the partners are in agreement with how the plan is modified in the future. This avoids loss of momentum while waiting for the next SHSP update cycle. Figure 1 provides an example template for developing an emphasis area action plan.

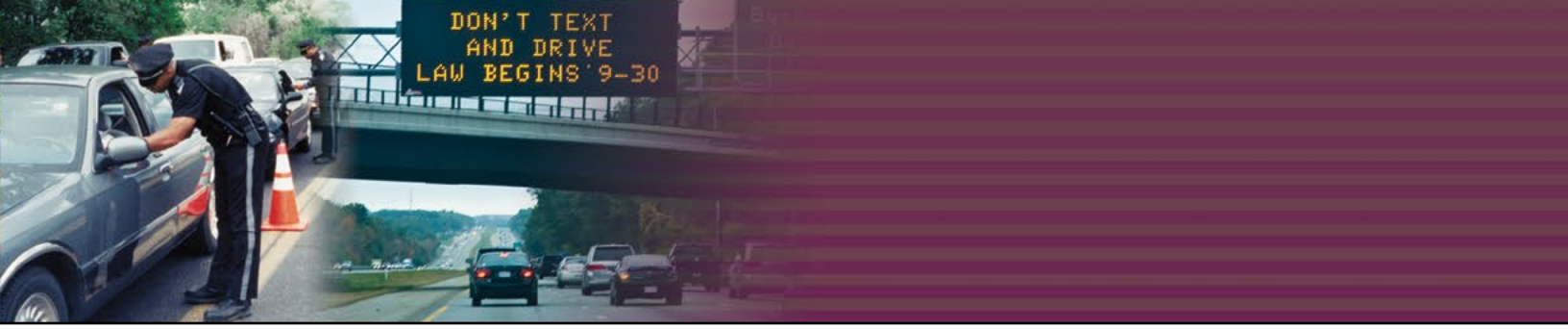


Source: Alaska Department of Transportation and Public Facilities.

Figure 1. Emphasis Area Action Plan Template

Emphasis Area:			**Updated:**		**Reporting Period:**	
Lead Agency:						
Performance Measures:						
Goal(s):						
Objective #1 **Objective #2**						
Strategy #1: **Strategy Agency:** ***(Repeat for each strategy)***						
Countermeasures/Actions	Action Step Measure	Action Step Agency	Resources	Partners	Funding Source(s)	Timeline

Source: Cambridge Systematics, Inc.



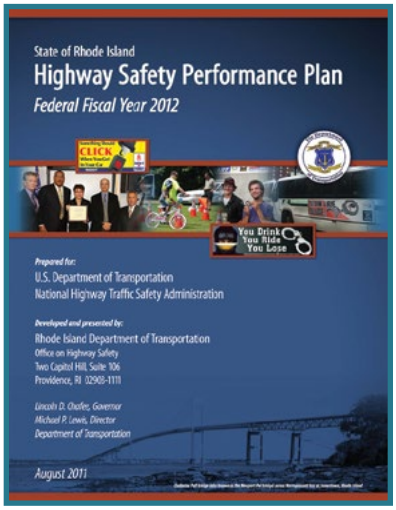
Integrating the SHSP with Other Programs and Plans

Effective SHSPs leverage the resources of existing transportation planning and programming activities to reduce fatalities and serious injuries. Integrating the State's SHSP safety goals and efforts into statewide and metropolitan plans and programs advances the safety agenda because these plans and programs reflect statewide priorities, provide a blueprint for action for key agencies, and influence resource distribution. Safety professionals should participate in planning activities such as working groups, task forces, and advisory committees that are convened for the various State and local plans. Active involvement in this area can strengthen the partnership between planners and safety professionals and provide access to decision-makers and resources beyond the traditional limited safety funding sources.

One of the programs where integration of the SHSP is most evident is the Highway Safety Improvement Program (HSIP). The purpose of the HSIP is to achieve a significant reduction in the occurrence of and the potential for fatalities and serious injuries on all public roads. This is accomplished through a data-driven program consisting of planning, implementation, and evaluation components. The strong tie between HSIP and SHSP is the HSIP requirement that States develop, implement, evaluate, and update an SHSP. HSIP projects (defined as strategies, activities, or projects on a public road) also are required to be consistent with the SHSP.

Brief descriptions of SHSP integration into other transportation plans and programs are provided below.

- Long-Range Transportation Plan (LRTP) – LRTPs identify transportation goals, objectives, needs, and performance measures over a 20-year horizon and provide policy and strategy recommendations for accommodating those needs. SHSP goals and priorities should be adopted into the LRTP and MPO long-range plan, or at a minimum reflected in the transportation planning process based on safety data and analysis. Incorporating the SHSP into the LRTP impacts the degree to which the SHSP is implemented because projects that are later prioritized and programmed in the Statewide and Metropolitan Transportation Improvement Program are connected to the LRTP goals, objectives, and strategies. Project prioritization weighting or ranking schemes also should address safety considerations.
- Statewide and Metropolitan Transportation Improvement Program (S/TIP) – S/TIPs, developed at the State and MPO levels, are resource-constrained capital programming documents. They identify projects and funding reflecting the State's prioritized mobility, operational, and safety needs. Therefore, they should reflect the emphasis areas and strategies in the SHSP.



Source: Rhode Island Department of Transportation.

- Highway Safety Plan (HSP) – HSPs address behavioral safety areas, such as occupant protection (safety belts, child safety seats, motorcycle and bicycle helmets), impaired driving, police traffic services, emergency medical services, motorcycle safety, and other program areas. The HSP is an annual plan identifying program activities supported by Federal funds targeting identified behavioral safety problems. These activities typically support traffic safety law enforcement, media and public education, prosecution and adjudication, training, and other actions designed to reduce crash-related injuries and fatalities. States are required to coordinate their highway safety plan, data collection, and information systems with the SHSP. While the emphasis areas, goals, and objectives of the SHSP and HSP may not be identical, they are based on consistent data and should jointly support and help achieve progress in the State's safety priority areas and performance measures. When emphasis areas do align, strategies selected in the HSP should be consistent with those in the SHSP, which are identified through analysis of the same data and a review of evidence-based strategies and countermeasures.
- Commercial Vehicle Safety Plan (CVSP) – The CVSP is a performance-based annual plan that outlines a State's commercial motor vehicle (CMV) safety objectives, strategies, activities, and performance measures. The CVSP aims to improve motor carrier, CMV, and driver safety and to reduce the number and severity of crashes and fatalities resulting from such crashes involving a CMV (e.g., motor coach/bus, semi truck, trailer, etc.) through consistent, uniform, and effective CMV safety programs. For example, performance objectives and related strategies in a CVSP may be to decrease the number of bus crashes to less than the five-year average by increasing the number of passenger-carrying vehicle inspections during that fiscal year. States must coordinate the CVSP, data collection, and information systems with State highway safety programs.[12] The SHSP should influence the development of the CVSP mission and goal statements, the identification of CMV safety problems, and the development of State-specific objectives, strategies, and activities. Likewise, the SHSP should complement the CVSP.
- Other Plans within the State – Other plans within a State, such as Pedestrian Safety Action Plans, Bicycle Safety Action Plans, Freight Plans, etc., also support the statewide safety effort. In some States, local agencies and organizations are also developing Local Road Safety Plans (LRSP). These plans represent a variety of agencies, organizations, both public and private that have an interest in safety. The SHSP should provide input into these plans. Similarly, these plans can inform the SHSP process and help identify specific safety issues.

Source: Digital Stock.

[12] 49 U.S.C. 350.201.

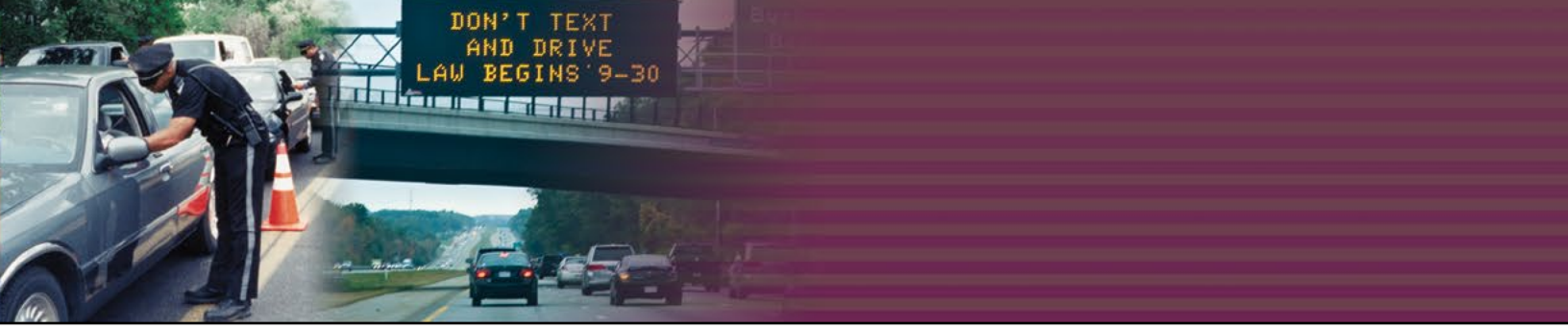
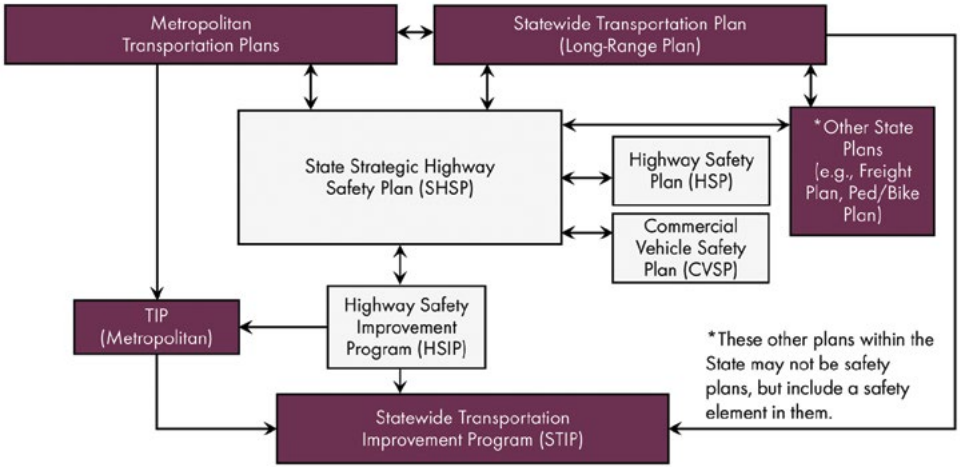


Figure 2 illustrates the relationships among these transportation planning and programming processes and how the various safety planning processes interact with them.



Source: Federal Highway Administration.

Figure 2. Coordinated Transportation Safety Planning

Marketing

A well-designed marketing strategy performs several functions, including informing the general public on transportation safety issues, educating key political leaders on their role in saving lives, and encouraging active participation in SHSP implementation activities among safety partners. Marketing to individuals both inside and outside of the transportation community and to nonparticipating partners helps build and maintain support for SHSP implementation. It also broadens the reach of the SHSP to those who may not participate in implementation activities on a regular basis.

Effective SHSP marketing strategies include, among other things, news events, web sites, newsletters, and a branding theme that stakeholders and the public can identify with.

Source: Nevada Department of Transportation.

SHSP Evaluation

States are required to evaluate their SHSP on a regular basis[13] to ensure the accuracy of the data and priority of proposed strategies. In addition to this requirement, evaluation is essential to any strategic planning process. Evaluation enables States to maintain an SHSP process that is open to continuous examination, change, and improvement. It includes establishing continual monitoring and feedback to track progress and communicate results.

[13] 23 U.S.C. 148(c)(1)(C).

Tracking and Monitoring

An evaluation process or framework should be developed early so that appropriate data are collected for tracking and monitoring SHSP implementation and progress in meeting goals and objectives. States should incorporate a feedback loop into the process to ensure: 1) leadership and stakeholders are informed; and 2) information is regularly used to make course corrections as implementation takes place.

Program Evaluation and the SHSP Evaluation Process Model

In addition to the continual monitoring that occurs during SHSP implementation, a structured SHSP program evaluation provides SHSP managers and practitioners with important information about their SHSP at a specific point in time. Program evaluation is a high-level examination of a State's SHSP. It helps States examine how they develop, manage, and implement their SHSP and identifies if the goals and objectives are being met.

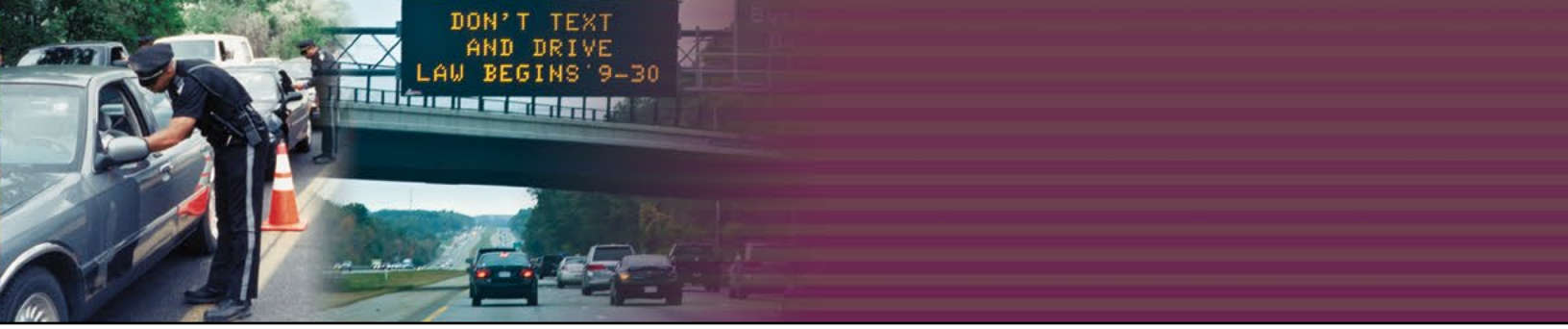
Source: Federal Highway Administration.

The SHSP Evaluation Process Model (EPM) was developed to assist States with conducting a program evaluation of their SHSP. SHSP program evaluation is composed of two equally important components – process evaluation and performance evaluation. Process evaluation assesses the procedural, administrative, and managerial aspects of the SHSP (such as leadership, SHSP structure, partners, collaboration, and communication, etc.). Performance evaluation examines the outputs and outcomes resulting from SHSP implementation.

The specific timing of SHSP evaluation is determined by the State, but must take into consideration Federal requirements as well as the needs and circumstances of the State. Some likely times are:

- Before or as part of an SHSP revision or update, to base update on solid evaluation results;
- After several years of implementation to gauge progress; or
- In response to a leadership request on the status and impact of SHSP.

Please refer to the EPM for more information about SHSP program evaluation.



Checklist

Following the recommended steps in the checklist below will help with SHSP implementation and evaluation efforts.

- ☐ Develop emphasis area actions plans that:
  - Document the measurable objectives and performance measures for each emphasis area;
  - Determine the data requirements for each performance measure;
  - Identify the required resources and action steps for implementing each countermeasure;
  - Identify a process to track countermeasure and action step implementation; and
  - Regularly monitor the extent to which emphasis area goals and objectives are being met.
- ☐ Integrate the SHSP with other transportation safety plans.
- ☐ Market the SHSP through branding, news events, web sites, newsletters, etc.
- ☐ Monitor and track regularly the extent to which emphasis area strategies are being implemented.
- ☐ Monitor and track regularly the extent to which emphasis area goals and objectives are being met.
- ☐ Plan a comprehensive SHSP program evaluation to examine the SHSP's process and performance.

Leads Toward Zero Deaths

Source: Rhode Island Department of Transportation.

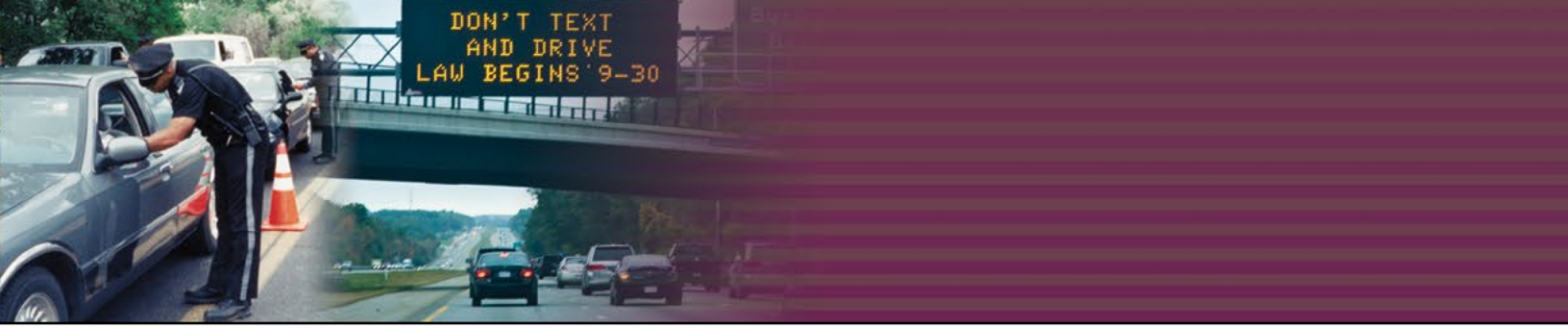
"Never doubt that a small group of thoughtful committed citizens can change the world: indeed it is the only thing that ever has."

- Margaret Meade

Conclusion

The task of saving lives on the nation's roadways is monumental. Success is only possible when organizations and agencies combine their skills and work together toward a common mission. The SHSP is making a difference! Through its data-driven and collaborative process, the SHSP is helping States identify and prioritize their most significant road safety needs, and develop a program of strategies with the greatest potential to save lives and reduce injuries.

The SHSP is a dynamic and "living" document. While specific legislative requirements may evolve or change over time, following the recommended strategies in the Champion's Guidebook to Saving Lives sets the foundation for State, regional, and local agencies and coalitions to have a well-defined SHSP process, from development and implementation to evaluation.



Resources

The hyperlinked resources below provide additional tools and references for the information in the Champion's Guidebook to Saving Lives.

SHSP Fundamentals

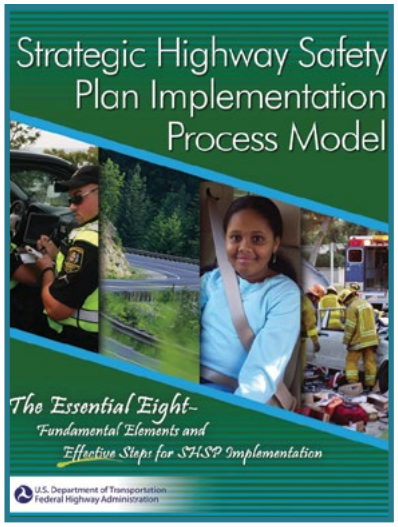
- *Strategic Highway Safety Plan (SHSP) Development Course*.
- *Transportation Safety Planning (TSP) Course*.
- *Highway Safety Improvement Program (HSIP) Overview Course*.
- *Champion's Guide to Saving Lives* (Original version).
- *SHSP Implementation Process Model*.
- SHSP Technical Assistance:
  - » *FHWA Roadway Safety Peer-to-Peer Program*.
  - » *FHWA Office of Safety*.
  - » *FHWA Division Offices and Resource Center*.

Data Collection and Analysis

- *FHWA Data Analysis and Tools*.
- *Traffic Records Coordinating Committee*.
- Data Technical Assistance:
  - » *Crash Data Improvement Program (CDIP)*.
  - » *Roadway Data Improvement Program (RDIP)*.
  - » *NHTSA Traffic Records Assessment*.
- *FMCSA Analysis and Information Online*.
  - » *FMCSA State Safety Data Quality*.
- *National EMS Information System (NEMSIS) Website*.

Emphasis Area Action Plans/Strategy Selection

- *FHWA Office of Safety Proven Safety Countermeasures*.
- *NHTSA Countermeasures That Work*.
- *FHWA Crash Modification Factors Clearinghouse*.



Source: Federal Highway Administration.

- *NCHRP 500 Series: Guidance for Implementation of the AASHTO Strategic Highway Safety Plan Transportation Research*.
- *NCHRP 622: Effectiveness of Behavioral Highway Safety Countermeasures*.
- *The Highway Safety Improvement Program (HSIP) Manual*.
- *The Highway Safety Improvement Program (HSIP) Overview Course*.
- *The Highway Safety Manual*.

SHSP Implementation and Evaluation

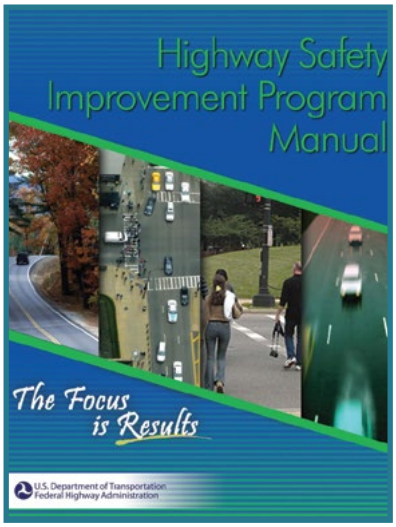
- *SHSP Implementation Process Model*.
- *SHSP Evaluation Process Model*.
- *Strategic Highway Safety Plan Implementation Course*.
- *A Primer on Safety Performance Measures for the Transportation Planning Process*.
- *Traffic Safety Performance Measures for States and Federal Agencies*.
- *The Art of Appropriate Evaluation*.

Federal Web Sites

- *The U.S. Department of Transportation*.
- *Federal Highway Administration (FHWA)*.
- *FHWA Office of Safety*.
- *FHWA Office of Planning, Environment and Realty*.
- *FHWA Division Offices and Resource Center*.
- *National Highway Traffic Safety Administration (NHTSA)*.
- *Federal Motor Carrier Safety Administration (FMCSA)*.

Local Road Safety Plans

- *Developing Safety Plans: A Manual for Local Rural Road Owners*.



Source: Federal Highway Administration.

U.S.Department of Transportation
Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration
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1200 New Jersey Avenue, SE
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