

# **Highway Safety Improvement Program**

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## **NEVADA PEER EXCHANGE**

Reno, NV  
September 23-25, 2009



Highway Safety Improvement Program  
*Data Driven Decisions*

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## **Introduction**

The Nevada Department of Transportation (NDOT) hosted a Peer Exchange of its Highway Safety Improvement Program (HSIP) on September 23-25, 2009. NDOT is updating their State HSIP Manual and initiated a peer exchange to share information and experiences related to State HSIPs. Specifically, NDOT identified three areas that were critical to the advancement of their state HSIP. These included aligning HSIP efforts with the SHSP, expanded implementation of systemic improvements, and enhancing the overall quality and documentation of the HSIP. The participating peer exchange states were selected based on the alignment of noteworthy practices to NDOT's areas of interest.

The core peer exchange team consisted of NDOT and four visiting states: Idaho, Missouri, Utah and Wisconsin. Other attendees and observers include representatives from the Regional Transportation Commissions of Southern Nevada and Washoe County, the City of Las Vegas, NDOT's SHSP consultant and the Federal Highway Administration. Attachment 1 includes a complete list of peer exchange participants.

## **Objectives**

The objectives of NDOT's HSIP peer exchange were to:

- Learn how NDOT and visiting states manage and implement their HSIP.
- Discuss the future vision of NDOT's HSIP.
- Identify potential HSIP enhancements through participation by NDOT District Engineers and Local Agencies.
- Address the following goals identified by NDOT:
  - Workforce Development/Resource allocation
  - Better Data for better Decisions
  - Align the HSIP to the SHSP
  - More efficient/effective project selection and construction
  - 100% obligation of Federal Safety Funds!
- Identify useful ideas members of the peer exchange team can apply in their agencies.

## **Scope**

To prepare for the peer exchange, the team reviewed documentation describing NDOT's HSIP procedures, as well as relevant information from the visiting states. Each participating state was asked to develop a one-page document that provides an overview of their HSIP. During the exchange, the peer exchange team discussed NDOT's procedures and those used in other team members' respective agencies.

Members of the peer exchange team also answered questions posed to them by representatives from the Department of Transportation, FHWA, and others. The peer exchange team members volunteered information pertinent to the discussions on administration, HSIP development, project management, and technical accomplishments.

The peer exchange team facilitated a discussion with District Engineers and Local Agency participants regarding their involvement in the HSIP process and how that might be enhanced in the future. Several common themes emerged from these brainstorming sessions:

- Establish NDOT Safety's participation on District betterment reviews to identify and incorporate safety improvements as appropriate,.
- Formulate a process where NDOT can use Federal account provisions (23 CFR 635 Subpart B) to implement local safety improvements.
- Develop and deploy an education and outreach program targeting District Engineers and Local Agencies on what's eligible and desirable for HSIP as well as guidance/process on how to apply for funding.

## **Strengths and Key Takeaways**

Throughout the peer exchange, participating states shared best practices and innovative HSIP management approaches. The visiting states identified several aspects of NDOT's program that could be used to enhance their programs, while NDOT identified multiple aspects of the visiting states programs that could be adapted to meet their needs and enhance NDOT's HSIP. In addition, the visiting states identified key takeaways that would benefit their state HSIP's.

### ***Strengths***

The peer exchange team noted several significant strengths of NDOT's safety program. These noteworthy practices include the use of electronic crash reporting, availability of GIS data for all public roads in NV, and NDOT's road safety audit program.

Ninety percent of reportable crashes that occur on Nevada's roadways are submitted electronically. This accomplishment highlighted to the peer exchange participants that near complete electronic crash reporting is possible.

GIS data is available for all public roads in Nevada. This is accomplished via an interagency agreement to share data between NDOT and the rural counties.

NDOT has a well established Road Safety Audit Program. NDOT Safety Engineering established a dedicated RSA Coordinator to implement the RSA program statewide. To supplement these efforts, NDOT developed RSA guidelines that contain the procedures for RSA Pre-Construction Audits on new transportation project plans such as capacity projects on various design stages, as well as procedures for RSA Post Construction Audits on existing roads such as safety and 3-R preservation projects.

### ***Nevada's Key Takeaways***

NDOT identified several key takeaways to assist in achieving their previously established goals for the HSIP. The noteworthy practices NDOT would like to consider as they update their HSIP processes include:

- Establishing a multi-year program that increases the use of the systemic approach and enhances local safety project development and administration;
- Expand safety-related training and outreach initiatives; and
- Develop administrative performance measures that directly relate to the goals and objectives of the Strategic Highway Safety Plan.

Additional detail on each of these practices and NDOT's potential approach to implementation is summarized below.

#### Establish a Multi-year Program

NDOT would like to establish a 3-5 year program that will continuously feed the HSIP project development process. A multi-year program would support obligation of HSIP funds to the fullest extent possible each year. For example, if one project cannot be implemented in a given year as planned, it may be possible to move another project up into an earlier funding cycle. This can be accomplished by implementing projects on a systemic basis rather than solely at spot locations, expanding the local safety project application process and streamlining the administration of local safety projects, as described below.

#### *Systemic Approach*

The key to a successful safety program is an appropriate balance between implementing safety improvements at spot locations as well as on a systemic basis. Implementation of a systemic approach in Nevada could begin on the state system using an evidence-based approach (i.e. crash data, AADT, median width) that aligns with the SHSP emphasis areas and strategies (i.e. intersections, slope flattening, shoulder widening, FHWA's "9 Proven Countermeasures"). The systemic approach can be more easily implemented, particularly on rural roadways, and support the multi-year program NDOT desires.

#### *Local Safety Project Application Process*

Currently, NDOT identifies its HSIP "flex" funding projects through the SHSP emphasis area groups. NDOT would like to expand this process to include the broader range of local safety projects. To accomplish this, NDOT would have to establish an application review and project selection process. Also, to ensure the integrity of the HSIP, NDOT will have to determine the maximum amount of HSIP funding that will be allocated to local projects. This could be determined based on SHSP emphasis area, by project and/or district. NDOT could also explore set-aside programs targeting specific SHSP strategies (i.e. pedestrian countdown signals). To ensure successful implementation of the local safety program, NDOT would seek to establish an HSIP representative in each district to assist with local project development and coordination.

#### *Local Safety Project Administration*

Local agencies face many challenges in implementing federal-aid projects. To offset some of these challenges and streamline the federal-aid process, NDOT might explore streamlining local agency agreements. For example, multiple projects might be covered by one agreement or NDOT might develop a boilerplate agreement for local force account construction. NDOT might also consider strategies to address current project delivery impediments. These strategies might include setting time limits to achieve various stages of project development (i.e. design, right-of-way acquisition, construction) from time of award. Another approach might include NDOT assisting with the construction of larger projects or locals using force account to construct smaller projects. All of these approaches should consider and adopt some level of accountability to ensure appropriate use of limited resources.

### Expand Training & Outreach Initiatives

One common theme revealed during the peer exchange was the need to expand safety-related training and outreach at all levels of government and to all stakeholders. The first step in this process is for NDOT Safety Engineering to continue communication with District Engineers and their staff. This could be accomplished by hosting regular training initiatives at each district. Potential training topics include how to conduct crash analysis, identify projects, etc. It would also be beneficial to have an HSIP Coordinator in each district. This position could not only serve as the HSIP “expert” for each district, but also conduct outreach and training initiatives with local agencies in their district.

NDOT should explore providing data analysis tools (i.e. Critical Analysis Reporting Environment - C.A.R.E.) for planning organizations and local agencies. The Local Technical Assistance Program (LTAP) could provide safety data and HSIP related training to planners, engineers and legislators. NDOT might also explore the use of a Safety Circuit Rider to assist local and rural agencies with project development. Success stories realized as part of these training and outreach initiatives can be shared with all safety stakeholders at the Statewide Safety Summit.

### Goals, Performance Measures & Accountability

A common message throughout the peer exchange was to have consistent safety goals across all agencies and top level support to accomplish those goals. NDOT should consider developing one goal for all agencies under the SHSP umbrella. This might include re-evaluating “Drive Safe Nevada” and establishing a unified brand with all safety partners. To ensure safety goals are met, it is essential to have safety champions at the director level for all agencies. One way to accomplish this may be to promote NDOT’s performance measure of “zero fatalities”. In addition, NDOT might consider tracking performance measures (i.e. fatalities, median guard cable installed, rumble strips installed) on a regular basis. In addition, to ensure accountability for safety, top level leaders should include safety in their performance plans.

### *Visiting State Key Takeaways*

The peer exchange was beneficial not only to Nevada, but to the visiting states as well. A bulleted summary of Idaho, Missouri, Utah and Wisconsin’s key takeaways are provided below.

#### Idaho

Idaho identified several areas to consider as they move forward with HSIP planning and implementation. These include:

- Adopting a systemic approach based on fatalities and roadway miles
- Implementing a low cost safety initiative program (i.e. Chevrons)
- Engaging districts in the Road Safety Audit process
- Improving implementation of the High Risk Rural Roads Program
- Marketing Safety with Upper Management
- Using a multi-disciplinary approach to address Safe Corridors
- Establishing “Toward Zero Deaths” as Umbrella Program

### Missouri

Missouri acknowledged several noteworthy practices that might enhance their HSIP. These practices include:

- Targeting safety funds towards local projects [This would include developing targeted amounts of funding for local safety projects and establishing a process to compete with district projects.]
- Developing Road Safety Audits guidelines and principles
- Improve central office oversight of HSIP by requiring better descriptions of HSIP projects
- Expand communication to District Engineers regarding HSIP eligible and desirable projects

### Utah

Utah identified several items that would add value to their HSIP program, including:

- Reporting crashes electronically is possible and enables real time data analysis
- Use of CADD, sight distance & photos to enhance Railway-Highway Crossing Program Inventory
- Documenting HSIP Process and Program

### Wisconsin

Wisconsin identified several noteworthy practices that would benefit their HSIP.

- Combine the use of systemic and spot improvements for both HSIP and HRRRP
- Safety performance measures can be used to ensure timely project delivery and promote a shift in safety culture
- Use of digital imagery to enhance HSIP application packages

**Attachment 1  
PEER EXCHANGE PARTICIPANTS**

**Visiting States**

**Idaho Transportation Department:**

Brent Jennings, Highway Operations and Safety Engineer  
Mary Hunter, Highway Safety Coordinator

**Missouri Department of Transportation**

Jon Nelson, Senior Traffic Studies Specialist

**Utah Department of Transportation**

Robert Hull, Engineer for Traffic and Safety

**Wisconsin Department of Transportation**

Chuck Thiede, HES Coordinator

**Host State**

**Nevada Department of Transportation**

Fred Drees, Chief, Safety/Traffic Engineer  
Chuck Reider, Principal Safety Engineer  
James Ceragioli, Sr. Safety Coordinator  
Lori Campbell, Safety Coordinator  
Kim Stalling, Transportation Planner/Analyst  
Peter Aiyuk, Safety Coordinator  
Jaime Tuddao, RSA Coordinator

Grahame Ross, Safety Analyst, GIS  
Lawrie Black, Sr. Safety Analyst, GIS  
Tom Moore, Chief Traffic Engineer  
Mary Martini, District I Engineer  
Thor Dyson, District II Engineer  
Kevin Lee, District III Engineer

**Other Participants/Observers**

**Local Agencies**

Paul Judd, RTC of Southern Nevada  
Chris Louis, Washoe County RTC  
Mike Janssen, City of Las Vegas Traffic Engineering

**Consultant**

Kathleen Taylor, PBS&J, SHSP Coordinator

**Federal Highway Administration**

Stephen Ratke, NV Division  
Keith Sinclair, Resource Center  
Karen Yunk, Office of Safety