NCHRP 17 - 50
Lead State Initiative for Implementing the Highway Safety Manual

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HSM Implementation

- AASHTO
- FHWA
- NCHRP
Alabama

- Implementation Study Ongoing (due Nov. 2011)
  - Study to determine optimal method to implement HSM at state and local gov’t agency levels
  - Focuses on users & user needs, data needs, inventory, & gaps, software evaluation & deployment, and preliminary SPF analysis

- HSM Training Provided to over 120 Individuals (State and County) with another round planned for July 2011

- Incorporating HSM into SHSP Program Elements

- Utilizing HSM in Statewide, Systematic Safety Investigations
• Secretary named 3 central office management level champions to support and promote the HSM (Safety, Transportation, Engineering)
• 5 member Core Implementation Team representing:
  • Each district secretary identified 1 or 2 district champions to work with the Core Implementation Team
• Purchased many manuals
• Held FHWA lead training for all districts
• Calibrated the SPFs for statewide use
• Pilot study to encourage the use of the HSM
• Interested in regional partnerships
Michigan HSM Implementation Highlights

- Copies of HSM distributed to key DOT personnel
- HSM alternative analysis being incorporated into select Road Safety Audits
- SafetyAnalyst being utilized to identify high crash locations
- Training for local agency elected-appointed officials ready to be deployed
Missouri HSM Implementation Highlights

- Developed Implementation Plan/Team.
- Written Policy Requiring HSM Analysis for Design Exceptions, if Applicable
  - In review/comment period
  - Adoption anticipated soon (summer 2011)
- Identified a “Pilot” District for Full Implementation
  - Beyond design exception policy
  - Design exceptions, design alternatives, safety project identification, etc.
- Developing Internal Training Material Specifically for MoDOT’s Use of the HSM
  - First training in “pilot” district – July 13, 2011
HSM Implementation Highlights

Maine, New Hampshire, Vermont

• Training:
  – 1 day planning course, 2 day practitioners course
  – Attendees included states, municipalities, MPO, RPC, consultants
  – Safety Analyst training this fall

• Data: NH is a MIRE Lead State

• Tools:
  – Safety Analyst is being used in NH for network screening, corridor studies: results to the MPO and municipalities
  – Evaluating use of IHSDM
Training: ODOT will develop a training plan for the Department as well as our local partners. The initial internal training will focus on enhancing the knowledge and proficiency of key personnel who can then pass along this information.

Tools: ODOT will develop or modify existing tools to assist in the implementation of HSM practices and procedures. With the development of these tools, HSM users will be able to input basic existing condition data and return an expected crash value.

Safety Study Guidelines: Standard procedures have been developed to provide an understanding of what a safety study is and when and why a safety study needs to be completed. These guidelines are presented to external as well as internal safety practitioners in the form of a Traffic Academy course. To reflect the new procedures and available tools of the Highway Safety Manual, these guidelines will be changed.

Safety Policy: Minor changes to the ODOT Highway Safety Program Policy will be necessary to move forward in HSM implementation. The study of locations based on SafetyAnalyst network screening calculations will replace the previously used HSP and Hot Spot locations in the Safety Annual Work Plan. Also, project scoring will be modified to incorporate HSM principles.

Resurfacing Project Accident Analysis: Resurfacing projects require a review of all crashes over the past three years. Where the crash rate or frequency is greater than a predetermined threshold, the District must investigate to determine if design deficiencies are the probable cause of the crashes. With the implementation of the Highway Safety Manual, these thresholds will be replaced by thresholds based on the expected versus the actual number of crashes.

Project Development Process (PDP): ODOT is in the process of an overhaul to the PDP process. The new PDP will incorporate aspects of the HSM, particularly in the areas of alternative selection and economic appraisal.
Louisiana

- Implementation Team:
  - Key HQ Dept Heads, Districts & FHWA to Understand and Identify:
    - Opportunities and barriers associated with applying HSM methods;
    - How to integrate HSM into planning and engineering activities;
    - How to apply the methods within the HSM and
    - Data needs and data development programs for applying HSM procedures
- Training – 100 employees trained as well as locals and consultants, req consultants to be trained in HSM for particular projects
- SHSP – HSM added as a priority
- Using the HSM for Stage 0 Process, Design Exceptions, TMPs, Environmental Documents
- Data Needs Assessment
• Developed Implementation Plan to Incorporate Safety into the Planning Process
• Developed Safety in Phase I Policy
• Developed Prediction Analytical Tool
• Provided 5 two-day HSM training classes
• Project to Improve Roadway Safety Data Elements
Utah

- Conducting training specific to practitioners (late July)
  - Focusing on design exceptions and incorporating the HSM into the existing UDOT design process
  - Focusing on design engineers, project managers, and traffic safety engineers
  - Including limited number of consultant engineering firms
- Working with the university to calibrate the models
- Marketing to agency leadership
- Exploring combination of HSM principles and practical design concept being implemented in UDOT
• Working to translate data into Safety Analyst
• Developed SPFs for 2-lane roads and intersections
• Working on SPFs for multi-lane arterials and freeways
• Pilot work for tables of proportions and calibration process
• Training:
  – 140 VDOT planners, designers, and traffic engineers trained
  – Planning training needs for advanced users, local agencies, consultants
Conducted training

Added roadside data elements

Developed safety implementation plan with matrix of what staff is doing and how they would use the manual

Planning to develop SPFs
Overall Experience

- States continue to make progress with implementation of the HSM
- Most of the lead states have some type of implementation plan, outline or checklist
- All states have started training staff, some have trained DOT, locals and consultants
- Most states are working on incorporating the HSM into policy and procedures
- Most states have calibrated the models or are working on developing SPFs
- Most states are working on assessing data and filling data gaps
Next Steps

• Planning for the peer exchange
  – August 8-11, 2011 in Irvine, CA
  – In conjunction with the TRB Safety Performance Committee
  – Focus on tools, data, examples of using the HSM

• Working on the development of an HSM User Guide, technical briefings, webinars, tool summary table
Questions?