

# Highway Safety Performance Newsletter

Newsletter of the TRB Highway Safety Performance Committee

Winter 2010

Issue 1

## AASHTO Publishes the First Edition of the Highway Safety Manual

On June 30, 2010, AASHTO published the 1st Edition of the Highway Safety Manual (HSM) ([www.highwaysafetymanual.org](http://www.highwaysafetymanual.org)).

Since the 1950's transportation professionals have been able to quantitatively assess project alternatives based on mobility and more recently in terms of environmental impact. Unfortunately limited means existed to assess the safety performance of different design alternatives. The HSM offers quantitative methods and procedures to estimate highway safety in the project development and road safety management process through data-driven decision making.

The HSM presents an immeasurable effort by members and friends of the TRB Highway Safety Manual Task Force, the AASHTO Joint Task Force for a



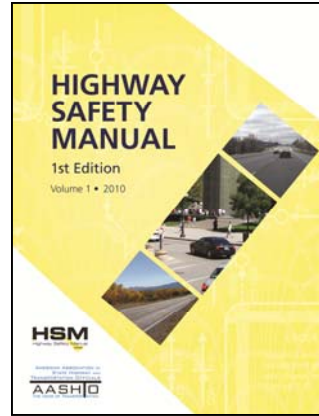
*The TRB HSM Task Force, the predecessor of TRB ANB25, meeting in D.C. at the 2008 TRB Annual Meeting*

researchers and staff of the NCHRP program to develop a scientifically based approach to safety estimation. This effort took over a decade to develop.

Rather than being prescriptive, the HSM presents tools that can be used in planning, programming, design, operations and maintenance activities. These tools are presented along with discussions of the strengths and limitations of each. The HSM is intended for use by state DOTs, counties, metropolitan and regional planning organizations and cities across the nation.

The HSM is presented in four parts:

- Part A serves as an introduction to the HSM, and gives the foundation of human factors and concepts underlying tools and approaches presented in the HSM.
- Part B contains the tools and methodologies that can be used to support the roadway safety management process, i.e. network screening, site investigation and diagnosis; identification and evaluation of countermeasures; economic analysis and prioritization.
- Part C presents the predictive methods along with national level safety performance functions (SPFs) and crash modification factors (CMFs).
- Part D contains all the crash modification factors (CMFs) that were available up to the end of 2007 and met scientific rigor required for reliable assessments.



Learn more about the HSM at the AASHTO HSM website: <http://www.highwaysafetymanual.org>.

**The HSM can be purchased from AASHTO through the AASHTO Bookstore:**  
<http://bookstore.transportation.org>.

## AASHTO, FHWA and TRB ANB25 agrees to work jointly to support advancing the science to quantify highway safety performance

At the midyear meeting of the TRB Highway Safety Manual Task Force (the TRB Highway Safety Performance Committee), AASHTO, FHWA and TRB agreed on specific roles and responsibilities to support the continued development of the HSM and advances in the quantification of safety performance. You can read more about the roles and responsibilities of each on the TRB ANB25 website ([www.safetyperformance.org](http://www.safetyperformance.org)).



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Visit the TRB ANB25 website at <http://www.safetyperformance.org>

### Special points of interest:

AASHTO Publishes the 1st Edition of the HSM

About the TRB Highway Safety Performance Committee

Ongoing and anticipated projects to support the quantification of safety performance.

Resources for the quantification of safety performance.

Activities of the committee during the 90th Annual Meeting of the Transportation Research Board

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[www.safetyperformance.org](http://www.safetyperformance.org)

### Contact Us

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WSDOT,  
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Secretary: Beth Wemple, Kittelson & Associates,  
[BWEMPLE@kittelson.com](mailto:BWEMPLE@kittelson.com)

Communications Coordinator: Ida van Schalkwyk, CH2M HILL,

## History of ANB25

In 1999, a workshop was held under the sponsorship of eight TRB committees to determine the need for, nature of, and feasibility of producing a document which contains the best currently available information on safety and the provision of quantitative measures of performance, prediction, and evaluation of highway safety. At this meeting the need for a Highway Safety Manual (HSM) was identified. With the support of the eight TRB committees, FHWA, and AASHTO, a Joint Subcommittee was established to prepare the first draft of the HSM. The first formal business meeting as a Joint Subcommittee was held at the January 2000 TRB Annual Meeting in Washington, DC. After operating as a subcommittee for three years, the subcommittee formally became a Task Force in 2003.

From these efforts, it has been recognized that while the first edition of the HSM is a significant step in the goal to consider and quantify highway safety throughout the project development and roadway operations processes, there is much more that needs to be accomplished. For example, there are many areas of highway safety that have no quantitative methods of estimating safety performance for use by decision makers. In addition, there will be a continued need to advance the knowledge, science, and research methods related to highway safety performance now and into the future. These needs were the fundamental basis and rationale for the creation of the subcommittee, the subsequent task force and the development of the HSM. The rationale for continuing and building upon this effort remains and is the primary reason for a standing committee on Highway Safety Performance.

In January, 2010, the Chair of the HSM Task Force met with the founding committees to gain support for the formulation of the Highway Safety Performance Committee. With this support, the HSM Task Force submitted a proposal in the Spring of 2010 and the proposal was adopted by the TRB Executive Committee in June 2010. The first official meeting of the TRB ANB25 Highway Safety Performance Committee will be held at the 2011 Annual meeting.

## Current Members of TRB ANB25

Beth Wemple (Kittelson & Ass.)	Jose M. Pardillo-Mayora (Universidad Politecnica de Madrid)
Craig Copeland (Caltrans)	Larry Sutherland (PB)
Dan Turner (U of Alabama)	Leanna DePue (MoDOT)
Dominique Lord (Texas A&M Univ)	Mike Dimaiuta (GENEX Systems)
Doug Harwood (MRI)	Mike Griffith (FHWA)
Francesca La Torre, Univ of Florence	Priscilla Tobias (IDOT)
Geni Bahar (Navigats)	Robert Hull (UDOT)
Ida van Schalkwyk (CH2M HILL)	Scott Windley (US Access Board)
Jake Kononov (CDOT)	Simon Washington, Queensland Univ of Technology
Jim Bonneson (TTI)	Stan Polanis (City of Winston-Salem)
John Ivan (UConn)	Stephen Read (VDOT)
John Mason (Auburn Univ.)	Venky Shankar (PennState Univ)
John Milton (WSDOT)	Xiaoduan Sun (UL Lafayette)
John Nitzel (CH2M HILL)	
Karen Dixon (OSU)	

## A letter from our Chair

I would like to thank the members and friends of the TRB Highway Safety Performance Committee (previously TRB Task Force for a Highway Safety Manual) for your commitment to reducing fatal and serious injuries on our nation's highways. This goal cannot be achieved without your dedication and efforts towards improved safety performance. Since the mid-year meeting we have been coordinating efforts with AASHTO and FHWA to support the implementation of the first edition of the HSM. Once again our committee assisted in producing outstanding research proposals for consideration by AASHTO in 2011. We were fortunate this year as a number of our proposals are working their way through the process. We will keep our fingers crossed for great success. Take time to visit our website and sign up for our blog, twitter and Facebook feeds. If you have any questions, comments or suggestions please contact our communications coordinator, Ida van Schalkwyk at [ida.vanschalkwyk@ch2m.com](mailto:ida.vanschalkwyk@ch2m.com).

I look forward to seeing you January 10<sup>th</sup>-14<sup>th</sup> in Washington D.C. for the 90<sup>th</sup> Annual TRB meeting. Be safe in your travels.

*John Milton*

Chair,  
TRB Highway Safety Performance Committee (ANB25)

## Transportation Research Board 90th Annual Meeting

January 23–27, 2011 • Washington, D.C.

Register now to attend the 90th Annual Meeting of the Transportation Research Board in January 2011. Besides our committee and subcommittee meetings (listed on p.4) we are also sponsoring and co-sponsoring a number of sessions:

- International Workshop on Transferability of Crash Modification Factors
- Cost-Benefit Analysis in Road Safety: Selected Issues
- Advancements in Quantification of Highway Safety Performance
- Implementation and Development of Highway Safety Manual

## The Committee launches a brand new website at [www.safetyperformance.org](http://www.safetyperformance.org)



Stay up to date with the latest information by signing up for our blog via email or RSS Feed. We're also tweeting all that is happening in the area of quantifying safety performance. Join our group on Facebook.

[Committee Meetings](#) [FHWA HSM Training](#) [General](#) [HSM](#) [Resources](#) [Training](#)

# TRB Highway Safety Performance Committee

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## NCHRP 17-38 Spreadsheet Tools

September 27, 2010 [Ida van Schalkwyk](#)

No comments

As part of the NCHRP 17-38 project, spreadsheets were developed for each of the Part C chapters to support the training process. These spreadsheets are still under development but with the permission of Chuck Niessner from NCHRP, we are making the spreadsheets (and subsequent updates to the spreadsheets) available on the TRB ANB25 website: select Resources and NCHRP 17-38 - <http://safetyperformance.org/resources/nchrp-17-38/>

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## AASHTO and the HSM

The Highway Safety Manual was assigned to SCOHTS, Subcommittee on Safety

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Management Task Group on Technical Safety Publication Oversight and Coordination. The following is a list of the membership of this Task Group:

- Priscilla Tobias, Chair, AASHTO Region 3, Safety Management
- Anne Holder, Vice Chair, AASHTO Region 4, Safety Management
- Bruce Ibarguen, AASHTO Region 1, Traffic Engineering
- Mark Bott, AASHTO Region 3, Traffic Engineering
- Mike Manthey, AASHTO Region 4, Traffic Engineering
- Bart Thrasher, AASHTO Region 2, Design
- Jim Mills, AASHTO Region 2, Design
- To Be Determined, AASHTO Region 1, Design
- Robert Hull, AASHTO Region 4, Safety Management
- Mike Curtit, AASHTO Region 3, Safety Management
- Dan Magri, AASHTO Region 2, Safety Management
- John Milton, TRB Representative
- Tim Neuman, TRB Representative
- Breland Gowan, TRB Representative
- Tim Colling, LTAP Representative

## NCHRP 20-7(279) - A Draft Work Plan for the 2nd Edition of the HSM

—The draft Work Plan for the Second Edition of the HSM is nearing completion. Dan Turner (dturner@eng.ua.edu) is still accepting input and suggestions.

On the Saturday before the TRB Annual Meeting, the AASHTO Safety Management Task Group on Technical Documents will meet to develop a list of HSM future research topics. These will be folded into the list of projects selected by the Task Group/HSM Task Force at the 2010 summer meeting. This will allow completion of the draft Work Plan, which will be available for discussion and approval at the Safety Performance Committee meeting at TRB. *Anticipated Completion Date: January 2011.*

## NCHRP 17-38: Development of Overview Training for the Highway Safety Manual

—Overview training for the HSM is under development through NCHRP 17-38. The project team delivered three pilot workshops (D.C., WA and IL) and will deliver two more training sessions: LA, FL, and AZ. As part of the contract the project team developed a set of spreadsheet tools to support training sessions with Part C. Draft copies of these spreadsheets are available from the TRB ANB25 website—<http://safetyperformance.org/resources/nchrp-17-38/>. Any updates to these spreadsheets will be posted on this same page. Products of the project include the training material, an instructors' guide and a participants' guide. *Anticipated completion date: March 2011.*

## NCHRP 17-45: Enhanced Safety Prediction Methodology and Analysis Tool for Freeways and Interchanges

—The NCHRP 17-45 project team is currently developing a safety prediction methodology for freeways and interchanges. As part of the project a software tool is also being developed to implement the methodologies: "Enhanced Interchange Safety Analysis Tool". The project will develop a draft chapter for the second edition of the HSM and also algorithm (s) for IHSDM.

*Anticipated Completion Date: November 2011.*



Photo Credit: WSDOT

## NCHRP 20-7(290): Highway Safety Training Synthesis

—NCHRP 20-7(290) is currently identifying available training courses in highway safety. A roadmap and central database of information for training of professionals in highway safety are under development. *Anticipated completion date: December 2010.*

## NCHRP 17-50: Lead States Initiative for Implementing the Highway Safety Manual

—The Lead States Initiative will support ongoing implementation efforts. The initiative will monitor state progress, provide technical assistance and conduct two peer exchange workshops to exchange ideas, best practices, and case studies. A HSM User Guide will be developed as part of the project.

### Online resources

**AASHTO's Highway Safety Manual Website:**

[www.highwaysafetymanual.org](http://www.highwaysafetymanual.org)

**SafetyAnalyst:** [www.safetyanalyst.org](http://www.safetyanalyst.org)

**ISHDM:** [www.ihsdm.org](http://www.ihsdm.org)

**FHWA Crash Modification Factor Clearinghouse:** [www.cmfclearinghouse.org](http://www.cmfclearinghouse.org)

**FHWA HSM Page** (access brochure, fact sheet and introduction PDFs):

<http://safety.fhwa.dot.gov/hsm/>

**TRB ANB25:**

[www.safetyperformance.org](http://www.safetyperformance.org)

(our site provides access to resources such as spreadsheets developed in NCHRP 17-38 for training activities and a Part C Quick Reference Guide.)



## FHWA is supporting implementation of the HSM and quantitative methods in highway safety

FHWA is supporting implementation of the HSM and quantitative methods in the project development and safety management process in a number of different ways. The list below are just some of the new and ongoing activities and projects to support the needs of states.



### The HSM Implementation Plan Project

(Contact: Esther Strawder) — Development of a National Roadmap for the Implementation of the HSM; implementation strategies for state DOTs; training needs assessment for the HSM; development of an electronic suite in support of implementation of the the HSM.

### Development of web-based training for:

- The HSM (converting training material from NCHRP 17-38 into web-based training) (Contact: Esther Strawder, FHWA)
- HSIP: Overview, Project Identification, and Project Evaluation (Contact: Karen Yunk, FHWA)
- SHSP 101 and 102 (Contact: Karen Yunk, FHWA)

**Establishment of a HSM User Discussion Group through AASHTO's Highway Safety Manual website ([www.highwaysafetymanual.org](http://www.highwaysafetymanual.org))** (Contact: Esther Strawder, FHWA)

**Updating NHI courses to reflect current content of the HSM** (Contact: Tom Elliot, NHI)

**Co-sponsoring the Illinois Peer-to-Peer Exchange for Implementation of the HSM (November 16-17, 2010)** (Contact: Esther Strawder, FHWA and Priscilla Tobias, IDOT)

**Maintenance and update of the FHWA Crash Modification Factor Clearinghouse ([www.cmfclearinghouse.org](http://www.cmfclearinghouse.org))** (Contact: Karen Yunk, FHWA)

**Maintenance and update of the Interactive Highway Design Model ([www.cmfclearinghouse.org](http://www.cmfclearinghouse.org))** (Contact: Ray Krammes, FHWA)

**HSM**  
Highway Safety Manual

Errata for the HSM is now available at the

AASHTO HSM website: <http://www.highwaysafetymanual.org/Documents/HSM-1-E1.pdf>

# About the TRB Highway Safety Performance Committee

## Scope

The Highway Safety Performance Committee is committed to the advancement, integration and institutionalization of quantitative highway safety information to support transportation decision-making at all levels. The function of this committee is to foster the continual development, validation and increased knowledge of science-based methods, procedures and measures that will increase the safety performance on the nation's highways and roadways.

## Mission of Committee

The committee will identify, encourage, and refine the development of scientifically sound highway safety research directed toward the application of quantitative analysis of the safety impacts of transportation planning, design, operations, construction, and maintenance activities.

The committee will support the development of core safety competencies and principles, the requisite quantitative knowledge to advance the state of the art, and dissemination of this information to the user community. The focus of this committee will be on applications pertaining to streets and highways and their connecting systems with the ultimate mission to quantify multi-modal performance of highway safety.

## Key Functions

Acting as a forum for sharing information and research related to the quantitative estimation and modeling of safety information and effectiveness of strategies and programs.

Plan workshops, conferences, create research problem statements, identify appropriate calls for papers, conduct paper reviews as part of the day-to-day committee responsibilities.

Identifying emerging safety issues, technologies, data needs, performance improvement tools and measures relevant to state DOTs, local and federal agencies.

Serving as a scientific expert resource to AASHTO and to the transportation community involved in highway safety and supporting efforts towards institutionalization of quantitative safety practices.

Developing areas of future research and methods, and disseminating research needs statements for consideration by the highway safety and the general transportation community.

Providing a forum to identify knowledge gaps, and expand the knowledge of safety performance and the measurement thereof, for potential use by AASHTO in updating the HSM and commensurate documents.

Ensuring that potential HSM and commensurate document content is continually reviewed, validated, presents the best available science, and reflects the evolving nature of highway safety estimation methods and procedures.

Identify training needs and priorities; conducting and facilitating workshops and providing expertise to foster increased knowledge and understanding in road and highway safety.

Establish liaison with other TRB Committees and stakeholder groups.

Incorporate TRB Executive Committee priorities and cross-cutting issues into committee activities and priorities.

Encouraging cooperative research efforts with other human safety organizations (e.g., NIH) to assess need to incorporate other content into the HSM.

## Committee Structure

- Chair (John Milton, WSDOT)
- Secretary (Beth Wemple, Kittelson & Associates)
- Communications Coordinator (Ida van Schalkwyk, CH2M HILL)
- Research needs Coordinator (Doug Harwood, MRI)
- Paper Review Coordinator (John Ivan, UConn)
- Conference and Workshops Coordinator (John Nitzel, CH2M HILL)
- Administrative Subcommittees
  - ◊ Policy and Legal (Chair: Bre Gowan)
  - ◊ User Liaison and Technical Facilitation (Chair: Geni Bahar, Navigats)
- Technical Subcommittees
  - ◊ Highway Safety Management (Chair: Doug Harwood, MRI)
  - ◊ Predictive Methods (Chair: John Ivan, UConn)
  - ◊ CMFs (Chair: Karen Dixon, OSU)
  - ◊ Future Directions (Chair: Jim Bonneson, TTI)

Join our TRB ANB25 Committee and Subcommittee Meetings at the 90th Annual Meeting of the Transportation Research Board. All the meetings listed are taking place at the Marriott Wardman Hotel in Washington, D.C.

TRB ANB25 is also sponsoring and co-sponsoring a number of sessions at the meeting.

Visit the TRB Annual Meeting website at: <http://www.trb.org/AnnualMeeting2011/Public/AnnualMeeting2011.aspx> to register for the meeting and access an interactive program for the Annual Meeting.



### TRB ANB25 Committee and Subcommittee Meetings

Highway Safety Performance Committee	Jan 26 2011   2:30PM- 6:00PM
Policy and Legal Aspects Subcommittee	Jan 26 2011   6:00PM- 8:00PM
Predictive Methods Subcommittee	Jan 26 2011   7:30PM- 9:30PM
User Liaison and Technology Facilitation Subcommittee	Jan 26 2011   7:30PM- 9:30PM
Conferences and Meetings Subcommittee	Jan 26 2011   7:30PM- 9:30PM
Future Directions in Research Subcommittee	Jan 26 2011   7:30PM- 9:30PM
Crash Modification Factors Subcommittee	Jan 26 2011   7:30PM- 9:30PM
Highway Safety Management Subcommittee	Jan 26 2011   7:30PM- 9:30PM
Highway Safety Performance Committee	Jan 27 2011   8:00AM- 12:00PM

## Would you like to get involved?

Our committee always has room for volunteers to assist with our activities. Please contact our chair at [miltonj@wsdot.wa.gov](mailto:miltonj@wsdot.wa.gov) or any of the officers listed above if you would like to support the activities of TRB ANB25.

Any opinions, findings, or conclusions expressed on this website are those of the authors and do not necessarily reflect the views of the Transportation Research Board or the National Academies.