



STRATEGIC PLAN FOR FUTURE
EDITIONS OF THE
HIGHWAY SAFETY MANUAL

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PURPOSE

The Highway Safety Manual (HSM) provides practitioners with information and tools to consider safety when making decisions related to design and operation of roadways. The HSM assists practitioners in selecting countermeasures and prioritizing projects, comparing alternatives, and quantifying and predicting the safety performance of roadway elements considered in planning, design, construction, maintenance, and operation. Development and implementation of current and future editions of the HSM relies on involvement of researchers, practitioners, and policymakers, so the purpose of this strategic plan is to document the process to develop future editions of the HSM and to provide guidance for continuing to advance the science of safety.

BACKGROUND

The Transportation Research Board (TRB) created a Task Force to develop the HSM. The Highway Safety Manual Task Force (HSM TF) and its partners, the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), worked for 10 years to produce the HSM. The HSM was developed through a series of NCHRP projects, a program managed by TRB. During the latter stages of the development process, the HSM TF was elevated to the status of a TRB standing committee (Highway Safety Performance Committee, ANB25).

To assist with implementation and institutionalization of the HSM, TRB and AASHTO decided that the HSM would become an AASHTO publication. The draft of the first edition was completed in early 2009 and successfully balloted and published in 2010. AASHTO assigned oversight of the HSM to the Committee on Safety (formerly Standing Committee on Highway Traffic Safety), which assigned it to Task Group 2 (now subcommittee), Technical Publications.

The implementation of the HSM began while TRB ANB25 wanted to start work on the second edition of the HSM. There was no clear path for implementation of the Manual or for research to improve the Manual. To resolve these issues, National Highway Research Program (NCHRP) project 20-7(279) was conducted to prepare a work plan for the second edition of the HSM. NCHRP project 20-7(279) was conducted by gathering information from the partners (TRB, AASHTO, and FHWA) about additions and changes desired for the second edition. The Final Report identified research statements that would be integral to the second edition of the HSM. See Appendix C for additional discussion on the process for the 2nd edition of the HSM.

ROLES AND RESPONSIBILITIES

AASHTO, TRB, and FHWA collaborate on development and implementation of the HSM. This includes jointly identifying research needs, discussing research progress and results, and identifying methods for supporting HSM users. Each organization has individual responsibilities as well.

AASHTO is the owner of the HSM and provides oversight on any corrections and updates. Through AASHTO committees and subcommittees, practitioners provide feedback and

direction on lessons learned, best practices, and knowledge gaps to advance the science of safety and the HSM. AASHTO is responsible for creating awareness of the HSM, communicating with users and providing or raising awareness of tools to support implementation of the HSM. The Committee on Safety Strategic Plan defines the need for a HSM strategic plan, and for each edition AASHTO will form a steering group to oversee the development of the edition for AASHTO. The steering group is comprised of members from AASHTO committees focused on safety, design, and traffic engineering.

The TRB ANB25 committee provides the research-based perspective on quantitative analysis of highway safety performance. The committee will review research related to the HSM to endorse technically sound findings that are in the spirit of the guiding principles. In addition, NCHRP projects to enhance the HSM are researched and overseen by practitioners and researchers with technical expertise. The research teams frequently reach out, using presentations, webinars, or white papers, to the TRB committee, AASHTO, and FHWA for project updates and input on project directions.

FHWA will continue to provide outreach and training related to the HSM. They provide supporting implementation tools, guides and resources. They are the lead agency for the HSM Implementation Pooled Fund Study that is focused on the implementation efforts of state DOT's.

The exceptional collaboration and coordination between the HSM partners (TRB, AASHTO, and FHWA) is assumed to continue during implementation of this Strategic Plan, leading to successful future editions of the HSM.

VISION AND MISSION

Overview

The production of new editions of the HSM should be based on significant additions and/or modifications to the knowledge base. Each edition should maintain a commitment to both high quality research and practical application, as well as a consistent approach for presenting information (including terminology). To ensure the new information to be incorporated into new editions meets the same high standards as in earlier editions and continues to meet the needs of users, a comprehensive process for considering new research is followed (see Appendix A). This process adheres to guiding principles that have been developed and updated to ensure that HSM content meets a high standard of quality and is a practical tool for transportation professionals (see Appendix B).

This Strategic Plan outlines concepts, research, implementation efforts, and activities leading to future editions of the HSM. The Plan is anticipated to help the HSM partners (AASHTO, TRB, and FHWA) in selecting topics and activities in developing future editions of the HSM and to ensure the development of new editions follows the same approach even when new researchers, practitioners, and other stakeholders are involved in the process. As the HSM is further developed, other highway safety related publications, such as the Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, the Human Factors Guide, and the Manual of Uniform Traffic Control Devices should be aligned with the HSM.

If there is research completed on a topic that may need to be released prior to the next edition of the HSM, then AASHTO will determine if an addendum to the current edition is necessary. In addition, future editions should consider user feedback on the current edition.

Vision

To ensure that the HSM remains the authoritative document for highway safety performance and analysis through a coordinated approach to expand the knowledge and tools available based on the latest research.

Mission

To provide future editions of the HSM, that enhances the knowledge base of highway safety fundamentals and performance including engineering and human factors.

GOALS AND STRATEGIES

Goal 1 – Future editions of the HSM are at the forefront of highway safety.

Strategy 1 - Identify and prioritize research needs that broaden the coverage of the HSM to include all motorized and non-motorized users.

Strategy 2 – Identify and prioritize research statements that advance the science of safety, including updating and improving existing methods.

Strategy 3 – Identify and advocate for resources available for funding HSM related research.

Strategy 4 – Ensure modeling techniques align with data available while also advancing development of robust data inventories to be used for quantitative safety analysis.

Strategy 5 – Coordinate with other transportation-related publications/tools to ensure the latest relevant research is considered during updates to both the HSM and other related documents to provide the best information to the transportation community.

Strategy 6 – Promote awareness of the HSM, including educating users on new aspects of future editions.

Goal 2 – Supporting documents, training and software are aligned with the knowledge contained in the future editions of the HSM.

Strategy 1 – Identify needs and prioritize the development, maintenance, and enhancement of AASHTO, NCHRP, and FHWA software that supports the future editions of the HSM.

Strategy 2 – Identify and promote the need to update existing or create new supporting documents to educate users on the future edition of the HSM in coordination with safety and agency partners.

Strategy 3 – Identify and promote training needs and advocate for funding to support research and development of the necessary training and implementation materials in coordination with safety and agency partners.

Goal 3- Future editions of the HSM reflect the lessons learned and best practices in implementing and using the HSM.

Strategy 1 – Facilitate discussion and sharing of experiences using and implementing the HSM from practitioner, academic, and policy perspectives, through formats such as peer exchanges, workshops, conferences, case studies, publications.

Strategy 2 – Promote the institutionalization of the HSM at the federal, state, regional and local levels with the support of the (FHWA) HSM Implementation Pooled Fund.

Strategy 3 - Coordinate academic and practitioner needs related to the HSM.

Strategy 4 – Examine the effectiveness of the HSM in transportation decision-making to identify opportunities for enhancing future editions.

Goal 4 –Future editions of the HSM and supporting documents are easily accessible.

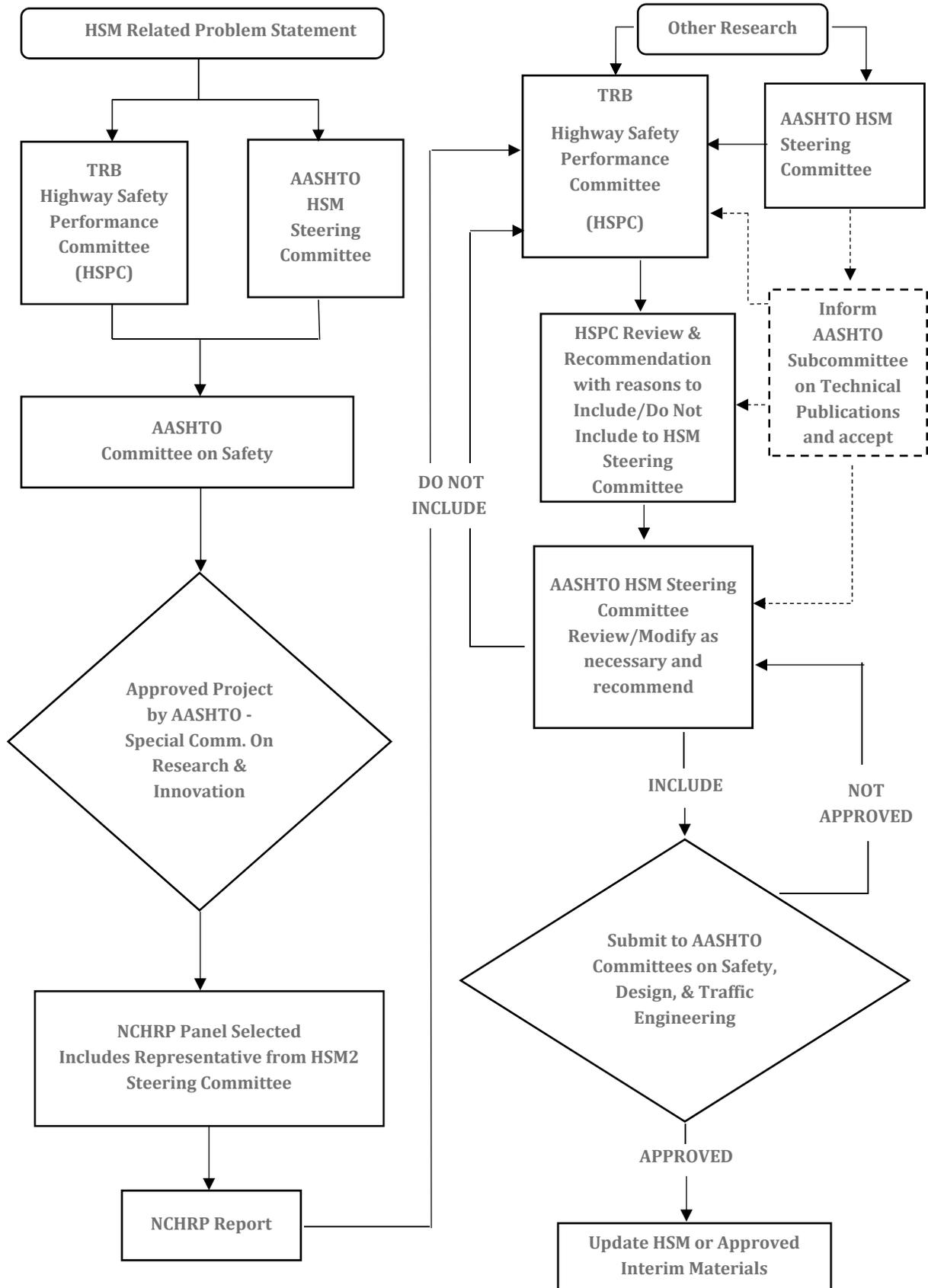
Strategy 1 – Promote the development of an electronic version of the HSM that is fully searchable and accessible to users with disabilities.

Strategy 2 – Promote a robust website (compatible with all devices) for users and researchers that is linked to supporting and related partners’ information and resource materials.

SUMMARY

This Strategic Plan provides a roadmap for research and other supporting activities that will create future editions of the HSM. It assumes that the HSM partners (AASHTO, TRB, and FHWA) will continue to work independently of each other in a collaborative manner to advance the science of highway safety and to keep the HSM as the preeminent document on highway safety. The adoption and implementation of this plan will ensure the successful development of future editions of the HSM.

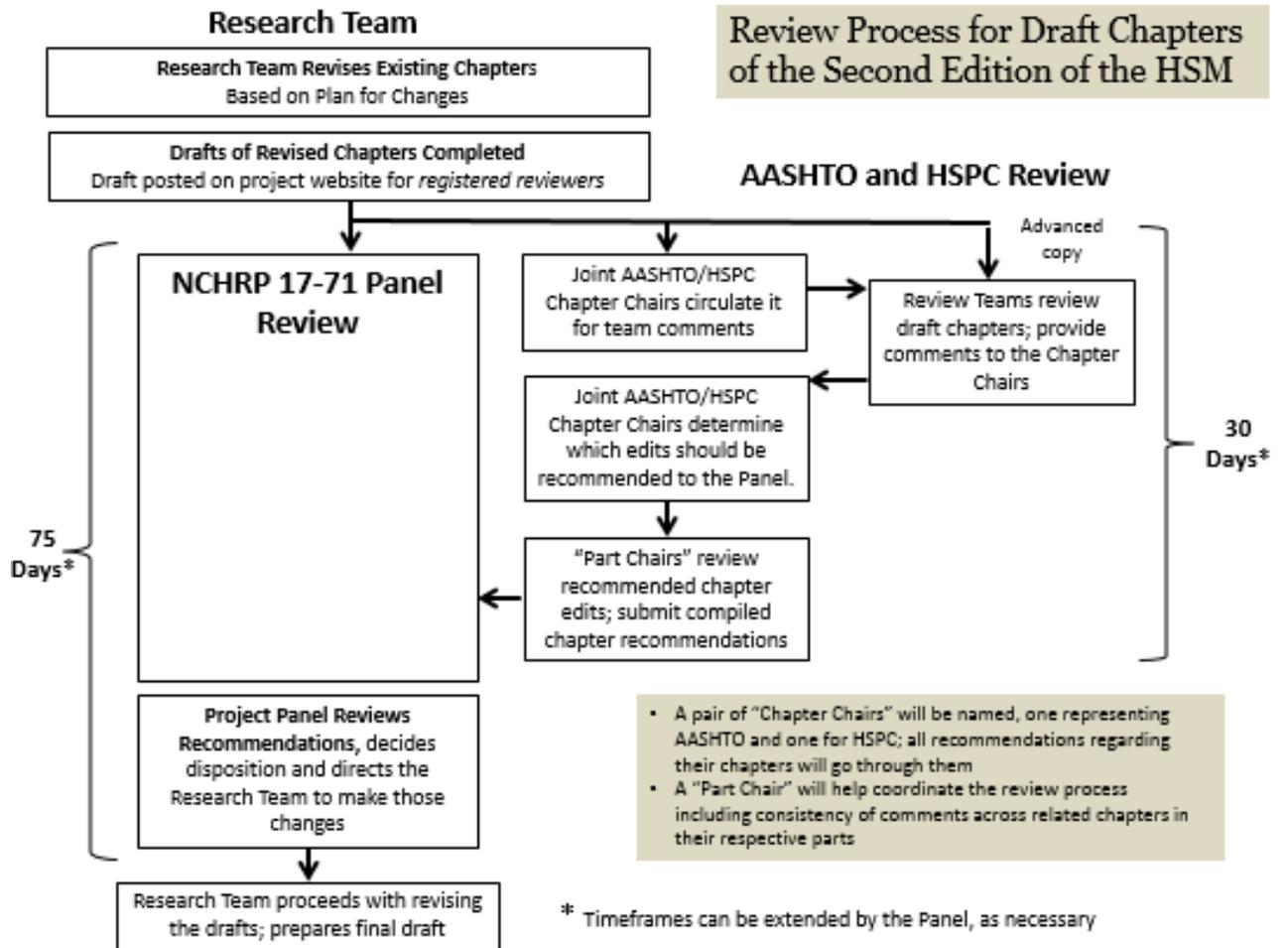
APPENDIX A – RESEARCH TO HSM PUBLICATION PROCESS



APPENDIX B – HSM GUIDING PRINCIPLES

- The HSM will provide a consistent methodology involving safety policy and project implementation decisions for individual situations or sites, corridors and transportation networks, including interactions with other transportation modes, for roadway planning, design, and operations and maintenance professionals. The HSM will focus on objective and quantitative measures of safety with a primary emphasis on transportation safety metrics such as crash type, crash frequency and severity.
- The HSM will not be a standard, policy, or legal document that mandates any decision.
- The HSM will be developed and implemented with support and encouragement from AASHTO, FHWA, TRB, and in consultation with various safety related organizations and transportation professionals.
- The HSM will be used in conjunction or integrated with other publications from AASHTO (A Policy on Geometric Design of Highways and Streets, Roadside Design Guide), TRB (The Human Factors Guide, Highway Capacity Manual), the Manual of Uniform Traffic Control Devices (MUTCD), and other related documents produced by FHWA and national, state, and local governments and organizations.
- The HSM will be based on research and data primarily from the United States. The HSM may prove valuable for international users where appropriate for local culture, environmental and transportation systems.
- The HSM will advance the science of safety and not be limited by current or customary practices. Identified limitations will be addressed through appropriate investment in continuing research and future releases of the HSM.
- All quantitative methods that appear in the HSM will meet established scientific criteria and include a comprehensive range of independent variables.
- The HSM will include surrogate measures if crash-based information is insufficient and there is a proven connection between the surrogate measures and crash frequency or severity.
- In the absence of scientifically valid quantitative information, qualitative information may be provided to support a specific practical need.
- Implementation of the HSM will include promoting use of advanced methodologies, training, and facilitating related software. The HSM will include practical examples, references to other supporting documents and resources, and a glossary of relevant terminology.

APPENDIX C – WORK PLAN FOR 2ND EDITION OF THE HSM



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