

# HSM2 Progress Review

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April 26, 2017

SCOHTS and Safety Management 2017 Meeting

# Agenda

- ▶ AASHTO HSM 2
  - Review Schedule
  - Review Process
- ▶ Overview of comments Draft 1
- ▶ Major Decisions
  - Human Factors
  - Part D

# Schedule for Circulation of Drafts (as of 11/2016)

HSM 2 <sup>nd</sup> ed., Draft #	Materials Included	Plan for Changes due to Panel	Deadline for Panel Approval of Plan for Changes	HSM 2nd Ed. Drafts Due to Panel/ Stakeholders	Deadline for Comments from Stakeholders	Deadline for Comments from Panel
1	First draft of: Part A Introduction, Chapter 1, Annotated Outline for Chapter 2, Chapter 3, Part A Appendix, Part B Introduction, Part B Appendix, Chapter 4, Chapter 7, Chapter 8, Chapter 9	April 1, 2016 (Task 3)	July 15, 2016 (Task 5)	<b>December 1, 2016</b>	January 17, 2017	February 28, 2017
2	First draft of: Chapter 2, Chapter 5, Chapter 6, All of Part D, Part C Introduction, Part C Appendix, Chapter 18	March 15, 2017 (Subtask 8.2)	April 15, 2017 (Subtask 10.1)	<b>August 15, 2017</b>	September 15, 2017	October 31, 2017
3	First draft of: Chapter 10, Chapter 11, Chapter 12, Chapter 19	Changes made based on previous Plan for Changes Provided in Subtask 10.1		<b>April 1, 2018</b>	May 1, 2018	August 13, 2018
Final draft	Final drafts of: All chapters and appendices	Edits made based on previous comments from Panel and Key Stakeholders		<b>March 1, 2019</b>	No Review for Key Stakeholders	June 1, 2019



# Fundamentals of the Project 17-71 Effort

- ▶ This is not a rewrite of the HSM
- ▶ Main purpose is to:
  - integrate new research findings
  - correct errors and omissions
  - improve usability
- ▶ Structure and format of the HSM will remain basically the same
- ▶ Will remain a print manual per AASHTO direction

# Background and Summary

- ▶ Volunteer reviewers have an opportunity to review the draft chapters and provide advice and recommendations to the Project Panel
- ▶ Volunteer reviewers are drawn from:
  - AASHTO HSM Steering Committee
  - TRB Highway Safety Performance Committee
- ▶ Each Committee provide:
  - Coordinator for each HSM part
  - Coordinator for each HSM chapter
  - Individual chapter reviewers

# Draft 1 Included:

- Part A Chapters 1 Introduction and Overview
- Part A Chapter 3 Fundamentals
- Part B Chapter 4 Network Screening
- Part B Chapter 7 Economic Appraisal
- Part B Chapter 8 Prioritize Projects
- Part B Chapter 9 Safety Effectiveness Evaluation
- Introductions to Volume 1, Part B

# Draft 1 Progress

- ▶ Webinar for reviewers held on November 17, 2016
- ▶ Draft 1 received on December 1, 2016
- ▶ Volunteer commenting closed on January 3, 2017
  - 800 total comments received
  - 497 comments on Chapters 3 and 4 alone
- ▶ Chapter Review was completed, Jan. 4 - 12
- ▶ Part Review was completed, Jan. 12 - 17



# Thank you - Chapter and Part Leads!

PART	CHAPTER	AASHTO	TRB
A	Chapter 1 & Volume 1 Preface	Bonnie Polin	Ida van Schalkwyk
	Chapter 2	Kohinoor Kar	Tim Neuman
	Chapter 3 & Appendices	Derek Troyer, Jerry Roche	Tim Neuman
B	Part B Intro	Stephen Read	Doug Harwood
	Chapter 4 & Appendices	April Renard	Beth Wemple
	Chapter 5 & Appendices		John Nitzel
	Chapter 6	Scott Jones	Adam Weiser
	Chapter 7 & Appendices	Scott Jones	Ida van Schalkwyk
	Chapter 8 & Appendices	Tim Barnett	Tim Neuman
	Chapter 9 & Appendices	Adam Weiser	Daniel Carter
	Part C Intro		John Ivan
C	Chapter 10 & Appendices		Ida van Schalkwyk
	Chapter 11 & Appendices		Ida van Schalkwyk
	Chapter 12 & Appendices	Scott Jones	Mike Dimaiuta
	Chapter 18 & Appendices	Scott Jones	John Ivan
	Chapter 19 & Appendices	Scott Jones	John Ivan
	Chapter 13		
D	Chapter 14		
	Chapter 15		
	Chapter 16		
	Chapter 17		

PART	AASHTO	TRB
A	Jason Siwula	Ida van Schalkwyk
B	Stephen Read	Doug Harwood
C	Bonnie Polin	Karen Dixon, John Ivan
D		John Ivan

# Overview of Draft 1 Part B

## ▶ Adding/Dropping Methods

- Consider options regarding the inclusion of simple, obsolete or otherwise not-recommended methods in Chapter 4
  - Include these methods in the body of the text with discussion of pros and cons.
  - Mention these methods in the body of the text, but relocate all discussion to a chapter appendix or an online repository.

## ▶ Statistical Methods

- TRB committee to review the statistical and technical methods suggested in the Chapter 4 comments.
  - If appropriate, consider them for possible future research topics to determine if and how their content could be included in future editions of the HSM.

# Overview of Draft 1 Part B

## ▶ Systemic Approach

- NCHRP 17-77 is developing a guide for quantitative approaches to systemic safety analysis; consider adding interim report to HSM2

## ▶ Economic Cost

- FHWA developing material to aid in the discussion; pros and cons of having nation-wide crash cost values developed
- Workshop at TRB 2017 midyear meeting; result recommendation from the TRB committee for AASHTO's consideration

# Overview of Draft 1 Part B

## ▶ Chapter 7 Methods

- ▶ The TRB and AASHTO Chapter and Part Reviewers concur with the current additions to the Chapter 7 methods and recommend that the added methods are thoroughly explained and prioritized in the text body.

# Human Factors

- ▶ White paper identified options
- ▶ TRB and AASHTO discussed the issues with the Options
- ▶ AASHTO HSM2 Steering Committee recommended Option 3
  - Includes a set of revisions for Chapter 2 of the HSM to make it more actionable
  - Increases cross-referencing of Chapter 2 material and NCHRP's Human Factors Guidelines (NCHRP 600)
  - Added Human Factors discussion throughout all HSM chapters
  - Allows for better integration of human factors in all elements of the HSM methods

# HSM2 Part D

- ▶ White paper identified options
- ▶ TRB and AASHTO discussed the issues with the Options
- ▶ AASHTO HSM2 Steering Committee recommended Option C
  - Removes all CMFs from HSM and directs users to FHWA's CMF Clearinghouse
  - PDF static file of HSM2 CMFs developed on a regular basis for downloading
  - Retains guidance for using and developing and applying CMFs
  - Allows for flexibility, continual updating, and improved accessibility

# Other considerations

- ▶ Bicycle and pedestrian safety
- ▶ Sample problem format
- ▶ “Real world” case studies

# AASHTO HSM2 Draft 2 Review

## ▶ Draft 2 Includes

- Chapter 2, Chapter 5, Chapter 6, Part D, Part C Introduction, Part C Appendix, Chapter 18

▶ Draft 2 planned to reviewers on August 15, 2017

▶ Volunteer commenting closing on September 1, 2017

▶ Chapter Review complete by September 8, 2017

▶ Part Review complete by September 15, 2017



# Discussion, Next Steps