Pedestrian and Bicycle Safety Performance Functions for the Highway Safety Manual (NCHRP 17-84) Project Update

TRB ACS20 Safety Performance and Analysis Midyear Meeting 2021

High Priority Items to Expand Content of HSM2 that Will Require Additional Resources

HSM2 Chapter	High Priority Items to Expand Chapter Content
Front Matter	
Preface	
Ch 1. Introduction and Overview to the Highway Safety Manual	
Part A – Fundamentals	
Introduction to Part A	
Ch 2. Highway Safety Principles	• Reorganize chapter for better flow and presentation of material/information. • Update to incorporate material from HSM1 appendices (e.g., 3A, 3B, and 3D), including effect of speed.
Ch 3. Human Factors	• Reorganize chapter for better flow and update text so it reads better (i.e., less academic). • Develop sample problems with human factors emphasis. The sample problems could be in this chapter or presented in other chapters as deemed appropriate.
Ch 4. Pedestrians and Bicyclists	
Part B-Roadway Safety Management Process	
Introduction to Part B	
Ch 5. Macro-Level Safety Planning	
Ch 6. Network Screening	• Provide guidance for applying freeway safety performance functions (SPFs) for network screening.
Ch 7. Diagnosis	• Add additional material on human factors. • Add practical details on crashes involving vulnerable road users.
Ch 8. Countermeasure Selection	• Add additional material on human factors.
Ch 9. Economic Appraisal	• Clarify, with examples, when an analyst might use certain analysis methods.
Ch 10. Project Prioritization	• Add real world practical information like the fact that other factors may come into play.
Ch 11. Safety Effectiveness Evaluation	
Ch 12. Systemic Safety Management	• Address non-crash-based approaches. • Develop non-crash-based sample problems.
Part C – Predictive Method	
Introduction to Part C	
Ch 13. Developing, Calibrating, and Using Safety Performance Functions and Crash Prediction Models	
Ch 14. Predictive Method for Rural Two-Lane, Two-Way Roads	• Perform single-state-calibration, as needed. • Develop sample problems (across select chapters).
Ch 15. Predictive Method for Rural Multilane Highways	• Perform single-state-calibration, as needed. • Develop sample problems (across select chapters).
Ch 16. Predictive Method for Urban and Suburban Arterials	• Perform single-state-calibration, as needed. • Develop sample problems.

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Ch 17. Predictive Method for Freeways	• Perform single-state-calibration, as needed. • Develop sample problems. • Resolve rumble strip CMF issue. • Resolve issues associated with models developed in NCHRP Project 17-89 and 17-89A.
Ch 18. Predictive Method for Ramps	• Perform single-state-calibration, as needed.
Part D – Crash Modification Factors	
Introduction to Part C	
Ch 19. Selecting Crash Modification Factors	
Ch 20. Applying Crash Modification Factors	• Develop sample problems.
Glossary	