

Overview of Current and Recently Completed CMF-Related NCHRP Projects

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Overview of 4 NCHRP Projects

- NCHRP 17-63: Guidance for the Development and Application of Crash Modification Factors
 - Project completed in 2017 (Materials published in 2022)
- NCHRP 17-95: Crash Modification Factors for Intelligent Transportation System (ITS) Applications
 - Will be completed in 2023
- NCHRP 17-104: Enhancement of Roadside Design Safety Prediction Models for the Highway Safety Manual
 - Will be completed in 2025
- NCHRP 17-108: Developing Crash Modification Factors for Alternative Intersections
 - Will be completed in 2025

NCHRP 17-63 Research Products

- Procedure for Estimating the Effect of a Proposed Treatment at a Subject Site (Appendix A)
- Procedure for Estimating the Combined Safety Effect of Two Treatments (Appendix B)
- Guidance for Developing Crash Modification Functions (Appendix C)
- CMF Regression Software – Supports procedures of Appendix A.
- CMF Combination Tool – Supports procedures of Appendix A.

Availability of Products from NCHRP 17-63

- NCHRP recently published the products from NCHRP 17-63 as NCHRP Research Report 991
 - <https://www.trb.org/Publications/Blurbs/182603.aspx>
- Videos explaining some of the procedures developed in NCHRP 17-63 (developed with support from FHWA):
 - <https://www.youtube.com/watch?v=OPvAjUpT6Dg>
 - <https://www.youtube.com/watch?v=48M7TBKTCM0>
 - http://www.cmfclearinghouse.org/using_cmfs.cfm (look for section called Trainings)

Poll

- How does your agency estimate the combined safety effect of two treatments (select all that apply)?
 - Use quantitative procedures based on NCHRP 17-63 or other sources
 - Engineering judgment

NCHRP 17-95: CMFs for ITS Treatments

- Develop CMFs for commonly deployed ITS applications
 - Variable/dynamic/changeable message signs;
 - Closed-circuit television (CCTV) cameras;
 - Traffic monitoring stations;
 - Ramp meters; and
 - Road weather information systems (RWIS)

Current Activities

- Completed Phase 1 of the project
 - Literature review
 - Survey of States
 - Data assessment
- Using data from Utah, Pennsylvania, and Arizona (and probably one other State)

NCHRP 17-104: CMFs and SPFs for Roadside Elements

- Objectives
 - Validate Roadside SPFs and associated CMFs developed in NCHRP Project 17-54
 - Develop or enhance roadside SPFs to supplement or replace existing models
 - Coordinate the research products with planner content for other manuals such as Green Book and the Roadside Design Guide (RDG)
- Project started September 2022

Current Activities

- Completed review of recent literature
- Developed a survey to determine priorities and availability of data
- Review SPFs and CMFs estimated in NCHRP Project 17-54
- Assess data compiled in other studies

NCHRP 17-108: Developing Crash Modification Factors for Alternative Intersections

- Objective:
 - Develop SPFs, CMFs, and crash severity distributions to quantify the safety effects of different alternative intersection types
- Project started September 2022

Current Activities

- Completed review of recent literature
- Developing a survey to determine priorities and availability of data
 - The survey will be sent out to practitioners in February 2023