Research Meets Practice: Identifying and Applying CMFs

Monday, Dec. 16, 2013

Introduction and Housekeeping

Karen Scurry, P.E.
FHWA Office of Safety Programs

Agenda

Daniel Carter, P.E. – *CMF Clearinghouse website search improvements*
Engineering Research Associate, UNC Highway Safety Research Center

Frank Gross, Ph.D., P.E. – *Issues and guidance in applying multiple CMFs*
Highway Safety Engineer, Vanasse Hangen Brustlin, Inc.

Ashley Reinkemeyer, P.E. – *Using CMFs in roadside analysis*
Central Office Traffic and Highway Safety Division, Missouri Department of Transportation

Jeremy Fletcher, P.E., P.S.M. – *Using CMFs in design exceptions*
State Quality Assurance Engineer, Florida Department of Transportation

Questions (submit any time in question box)

Poll

- How many people are attending the webinar at your location?

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Questions?

www.CMFClearinghouse.org

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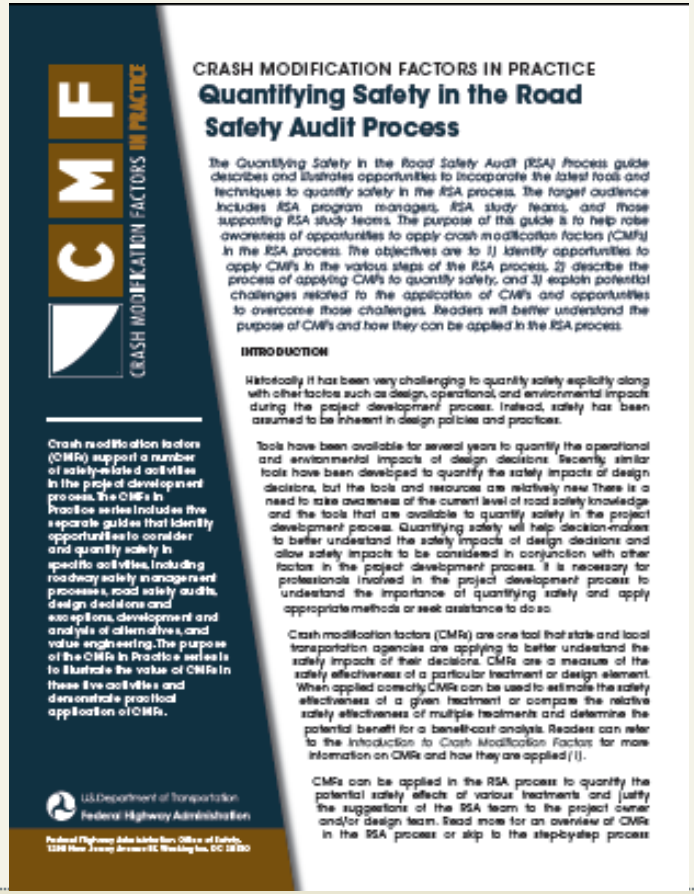
CRASH MODIFICATION FACTORS IN PRACTICE

Also includes…
Intro to CMFs
Intro to SPFs

The **CMFs in Practice** series shows how CMFs are applied in the following types of activities:

- Roadway safety management
- Road safety audits
- Development and analysis of alternatives
- Design decisions and exceptions
- Value engineering


CRASH MODIFICATION FACTORS IN PRACTICE

Quantifying Safety in the Road Safety Audit Process

The Quantifying Safety in the Road Safety Audit (RSA) Process guide describes and illustrates opportunities to incorporate the latest tools and techniques to quantify safety in the RSA process. The target audience includes RSA program managers, RSA study teams, and those supporting RSA study teams. The purpose of this guide is to help raise awareness of opportunities to apply crash modification factors (CMFs) in the RSA process. The objectives are to 1) identify opportunities to apply CMFs in the various steps of the RSA process, 2) describe the process of applying CMFs to quantify safety, and 3) explain potential challenges related to the application of CMFs and opportunities to overcome those challenges. Readers will better understand the purpose of CMFs and how they can be applied in the RSA process.

INTRODUCTION

Historically it has been very challenging to quantify safety explicitly along with other factors such as design, operational, and environmental impacts during the project development process. Instead, safety has been assumed to be inherent in design policies and practices.

Tools have been available for several years to quantify the operational and environmental impacts of design decisions. Recently, similar tools have been developed to quantify the safety impacts of design decisions, but the tools and resources are relatively new. There is a need to raise awareness of the current level of road safety knowledge and the tools that are available to quantify safety in the project development process. Quantifying safety will help decision-makers to better understand the safety impacts of design decisions and allow safety impacts to be considered in conjunction with other factors in the project development process. It is necessary for professionals involved in the project development process to understand the importance of quantifying safety and apply appropriate methods or seek assistance to do so.

Crash modification factors (CMFs) are one tool that state and local transportation agencies are applying to better understand the safety impacts of their decisions. CMFs are a measure of the safety effectiveness of a particular treatment or design element. When applied correctly, CMFs can be used to estimate the safety effectiveness of a given treatment or compare the relative safety effectiveness of multiple treatments and determine the potential benefit for a benefit-cost analysis. Readers can refer to the *Introduction to Crash Modification Factors* for more information on CMFs and how they are applied (1).

CMFs can be applied in the RSA process to quantify the potential safety effects of various treatments and justify the suggestions of the RSA team to the project owner and/or design team. Read more for an overview of CMFs in the RSA process or skip to the step-by-step process

Crash modification factors (CMFs) support a number of safety-related activities in the project development process. The CMFs in Practice series includes five separate guides that identify opportunities to consider and quantify safety in specific activities, including roadway safety management processes, road safety audits, design decisions and exceptions, development and analysis of alternatives, and value engineering. The purpose of the CMFs in Practice series is to illustrate the value of CMFs in these five activities and demonstrate practical application of CMFs.

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