

Chapter 3



BRIDGE MAINTENANCE MANUAL CHAPTER 3 FIELD GUIDE INTRODUCTION

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3.1 OVERVIEW

The Field Guide (Chapters 3-8) of the Bridge Maintenance Manual (BMM) is intended to provide detailed descriptions of maintenance activities and procedures for the use of bridge owners, bridge designers, and bridge maintenance crews performing the work.

Chapters 4 through 7 discuss specific bridge component (i.e. deck, joints, superstructure and substructure) maintenance activities. Chapter 8 includes guidance for maintenance painting of steel bridge structures.

These chapters describe cyclical and condition-based preservation activities that bridge owners can perform to reduce the rate of deterioration of critical bridge elements. These activities, when undertaken at appropriate regular intervals, can significantly reduce or sometimes eliminate the occurrence of advanced deterioration. These activities are essential for a bridge to reach its maximum useful life and maintain its designed level of service.

Effective management of the bridge network requires that resources are allocated to the correct asset management component at the correct time. This ensures that service life is maximized, lifecycle costs are minimized and our bridges safely fulfill their transportation function.

Bridge Maintenance is generally identified through the inspection and assessment process and can be divided into two categories: Preventive and Reactive.

- Preventive Maintenance includes routine maintenance activities performed according to an assigned frequency, as well as periodic minor repairs with the intent of preserving the bridge. These routine maintenance activities increase the lifespan of the bridge by slowing the deterioration caused by traffic and the environment.
- Reactive Maintenance is scheduled in response to an identified condition that may compromise public safety or bridge structural function.

Field notes are utilized throughout the Field Guide to highlight tips and methods that are important for that specific task or to point the user to a location where additional information may be found.

Maintenance Field Note:

Text in this format symbolizes an important note or tip that is vital to the field work for the specific task.

Information presented in the Field Guide is intended to assist bridge maintenance personnel with performing routine bridge maintenance activities. However, certain bridge maintenance activities may require consultation with the Bridge Engineer or Regional Bridge Construction Engineer prior to performing the work.



Text in this format indicates that there may be concerns or additional guidance associated with the maintenance task. The Agency Bridge Engineer or Regional Bridge Construction Engineer should be consulted prior to performing these types of repairs.



Text in this format indicates an important note or tip regarding potential safety hazards. Consult the Bridge Maintenance Supervisor or the Agency Bridge Engineer if there are any questions or concerns about safety.

This guide is primarily intended to assist MnDOT Bridge Maintenance Operations. It may also be applicable to local agencies and engineering consultants. Local agencies may wish to refer to these standards and implement the practices mentioned herein. This guide may serve as a technical recourse for local agencies regarding the implementation of these practices. However, MnDOT will not be responsible for monitoring local agency performance nor compliance under these standards and practices. All repairs need to be approved by the governing agency Bridge Engineer.

Go to [Bridge Maintenance Manual](#) to download a PDF version.