PREFACE

This document presents guidelines developed by the AASHTO/NSBA Steel Bridge Collaboration. The primary goal of the Collaboration is to achieve steel bridge design and construction of the highest quality and value through standardization of the design, fabrication, and erection processes. Each document represents the consensus of a diverse group of professionals.

It is desired that Owners adopt and support Collaboration guidelines in their entirety to facilitate the achievement of standardization. It is understood, however, that local statutes or preferences may prevent full adoption of the guidelines recommended herein. In such cases Owners may adopt these guidelines with the exceptions they feel are necessary.

DISCLAIMER

The information presented in this publication has been prepared in accordance with recognized engineering principles and is for general information only. While it is believed to be accurate, this information should not be used or relied upon for any specific application without competent professional examination and verification of its accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.

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AASHTO Document No: NSBASBF-3-OL

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INTRODUCTION

SPECIFICATION

This guide specification governs steel bridge fabrication. Provisions are intended to result in the achievement of high quality and value. It is intended to be included in contract documents by reference from the Owner's specifications. Parts designated as "commentary" are not contractual.

This standard is intended to be used in close tandem with AASHTO/NSBA Steel Bridge Collaboration S4.1, *Steel Bridge Fabrication QC/QA Guide Specification.*

For new painted steel bridges using a zinc-rich primer system, Owners are encouraged to adopt AASHTO/NSBA Steel Bridge Collaboration S8.1, *Guide Specification for Application of Coating Systems with Zinc-Rich Primers to Steel Bridges.*

The Collaboration also publishes a guide specification for steel bridge erection, AASHTO/NSBA Steel Bridge Collaboration S10.1*, Steel Bridge Erection Guide Specification,* which Owners are encouraged to adopt.

In this standard, imperatives are directed to the Contractor and Fabricator. Many references are made to the AASHTO/AWS D1.5M/D1.5M/D1.5 *Bridge Welding Code*, referred to in this standard as AASHTO/AWS D1.5M/D1.5. Specific section numbers are based on the 2015 edition, and subsequent editions may modify section numbers or content, but the AASHTO/AWS D1.5M/D1.5 current at time of contract advertisement should apply.

COMMENTARY

The primary objective of this guide specification is to achieve quality and value in the fabrication of steel bridges. The Collaboration's intent is for transportation authorities to adopt this guide specification by direct reference in their standard specifications. This will help standardize steel bridge fabrication across the nation.

Historically, State Departments of Transportation (DOTs) have written their specifications based on AASHTO standards and their own individual experiences. Though this approach has worked fairly well, many agencies and Fabricators recognized that all would benefit from a common specification because:

- Variations among projects in the shop would be minimized because Fabricators would not need different practices, procedures, and operations for each state, and minimizing variation improves quality and reduces errors.
- Economy in bridge fabrication would improve because Fabricators would not have to change their methods and production variables from state to state.
- Expertise in steel bridge fabrication could be shared among states, resulting in a well-rounded, consistent fabrication standard.
- Owners would be able to share their resources, minimizing the effort each would otherwise have to expend to maintain a bridge fabrication specification.

This guide specification was written by experienced representatives from a number of fabricators, state DOTs, consultants, and the Federal Highway Administration (FHWA). The work was based on existing state specifications, AASHTO/AWS D1.5M/D1.5, and the AASHTO *LRFD Bridge Design Specifications* and *LRFD Bridge Construction Specifications.*