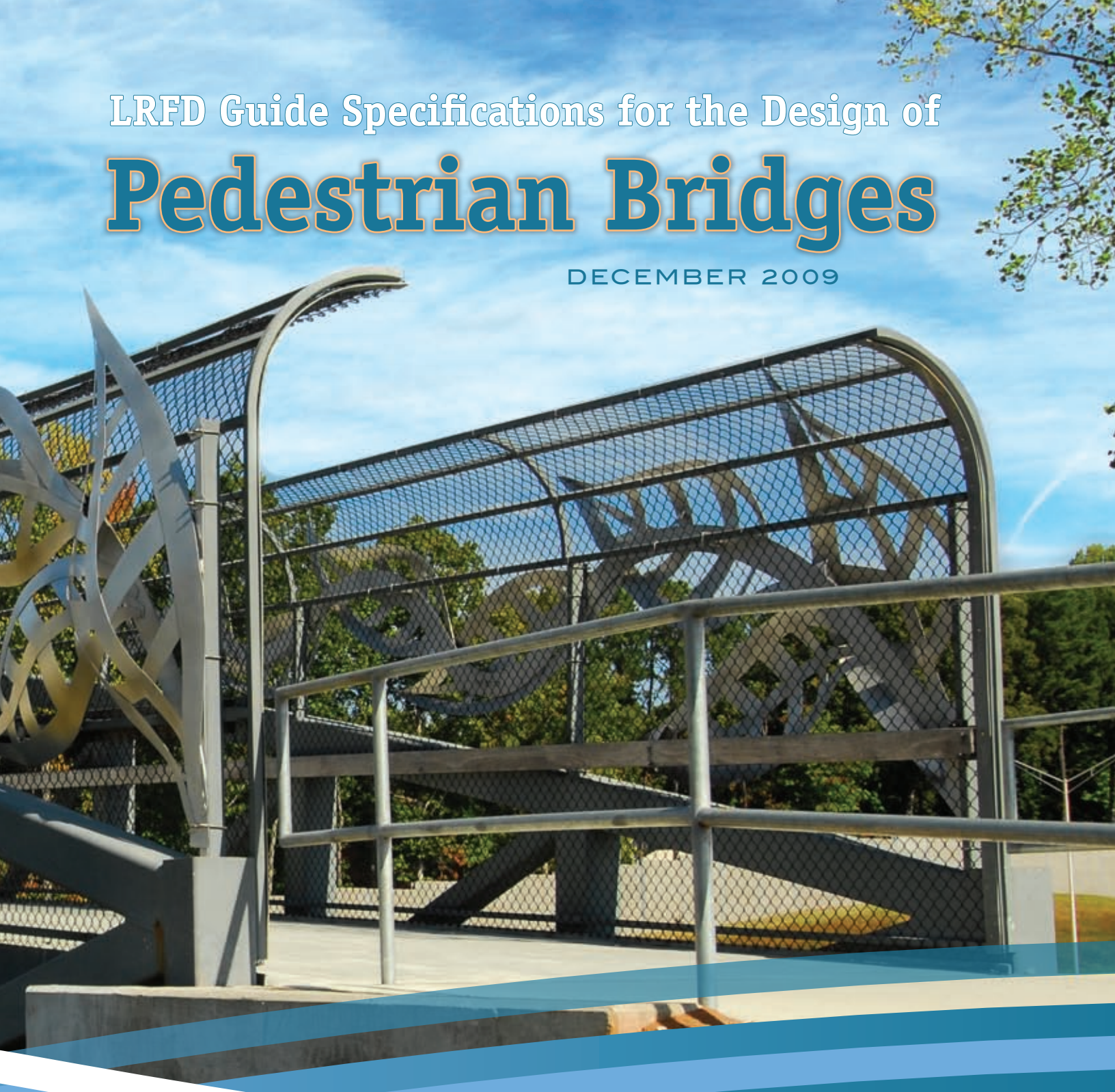
LRFD Guide Specifications for the Design of

Pedestrian Bridges

DECEMBER 2009



AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF

PEDESTRIAN BRIDGES



DECEMBER 2009

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

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LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES

1—GENERAL

1.1—SCOPE

These Guide Specifications address the design and construction of typical pedestrian bridges which are designed for and intended to carry primarily pedestrians, bicyclists, equestrian riders, and light maintenance vehicles, but not designed for and intended to carry typical highway traffic. Pedestrian bridges with cable supports or atypical structural systems are not specifically addressed.

These Guide Specifications provide additional guidance on the design and construction of pedestrian bridges in supplement to that available in the *AASHTO LRFD Bridge Design Specifications* (*AASHTO LRFD*). Only those issues requiring additional or different treatment due to the nature of pedestrian bridges and their loadings are addressed. In Article 3 of this document, the load definitions and abbreviations are taken from *AASHTO LRFD*. Aluminum and wood structures are adequately covered in *AASHTO LRFD*, and as such are not specifically addressed herein.

Implementation of the wind loading and fatigue loading provisions require reference to the *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* (*AASHTO Signs*).

C1.1

This edition of the Guide Specifications was developed from the previous Allowable Stress Design (ASD)- and Load Factor Design (LFD)-based first edition (AASHTO 1997). An evaluation of available foreign specifications covering pedestrian bridges, and failure investigation reports, as well as research results related to the behavior and performance of pedestrian bridges was performed during the development of the LRFD Guide Specifications.

1.2—MANUFACTURER-DESIGNED SYSTEMS

Where manufacturer-designed systems are used for a pedestrian bridge crossing, the engineer responsible for the design of the system shall submit sealed calculations prepared by a licensed Professional Engineer for that system.

C1.2

It is important to clearly delineate the responsibilities of each party when proprietary bridge systems are used. All portions of the design must be supported by sealed calculations, whether from the bridge manufacturer, or the specifying engineer. The interface between the manufacturer-designed system and the project-specific substructures and foundations needs careful attention.

1.3—COLLISION MITIGATION

AASHTO LRFD Article 2.3.3.2 specifies an increased vertical clearance for pedestrian bridges 1.0 ft higher than for highway bridges, in order to

C1.3

In most cases, increasing vertical clearance is the most cost-effective method of risk mitigation.

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