

**California Amendments  
to the AASHTO LRFD Bridge Design  
Specifications  
(Fourth Edition)**

November 2011



DEPARTMENT OF TRANSPORTATION  
STATE OF CALIFORNIA

# Foreword

In 1993, the AASHTO Subcommittee on Bridge and Highway Structures (SCOBS) voted to accept the *AASHTO LRFD Bridge Design Specifications* as an alternate design specification. In 1999, SCOBS voted to no longer update the *Standard Specifications for Highway Bridges*, which was the basis for the *Caltrans Bridge Design Specifications (BDS)*, and support load and resistance factor design as the primary design code. In June 2000, FHWA mandated that LRFD be used on all new bridge design commencing on or after October 1, 2007 and provided additional information in a clarification memorandum dated January 22, 2007.

In 1999, California Department of Transportation (Caltrans) began developing amendments to the *AASHTO LRFD Bridge Design Specifications* that were necessary to adopt the national code into California's bridge design practice. In December 2004, Richard D. Land, former State Bridge Engineer, established April 2006 as the transition date to use the LRFD specifications for bridges designed by the State. Similarly, October 2006 was established for using the LRFD specifications for bridges designed by Local Agencies or others located within state right-of-way.

In April 2006, Kevin J. Thompson, State Bridge Engineer, confirmed that all structural components for bridges designed by the State that had not received Type Selection approval, shall conform to the *AASHTO LRFD Bridge Design Specifications, Third Edition, with 2005 Interim Revisions, as amended by Caltrans*. Similarly, October 1, 2006 was confirmed for the LRFD structural design for bridges, without Type Selection approval, designed by Local Agencies or others located within state right-of-way. Full implementation of the complete *AASHTO LRFD Design Specifications* including the geotechnical design of foundations was set for April 1, 2007 for bridges designed by the State and October 1, 2007 for bridges designed by others.

In December 2008, Kevin J. Thompson, State Bridge Engineer, approved the *AASHTO LRFD Bridge Design Specifications, Fourth Edition with the California Amendments*, as the primary Caltrans bridge design specifications. In September 2010, Tony Marquez, State Bridge Engineer, approved updates to the California Amendments for earth retaining systems, abutments, and buried structures in Sections 11 and 12 respectively. In November 2011, Barton Newton, State Bridge Engineer, approved updates to Sections 2, 3, 4, 5, 6, 10, 11, 12 and 13.

The LRFD Specifications with the most current California amendments shall be the basis for all advance planning studies, geotechnical investigation, bridge design and other project supporting documentation and bridge design guidance material.

# **PREFACE**

**to**

## **CALIFORNIA AMENDMENTS**

### **CALTRANS STANDARD SPECIFICATIONS (CURRENT VERSION):**

Shall supercede all references to the *AASHTO LRFD Bridge Construction Specifications* within the *LRFD Bridge Design Specifications*. However, the AASHTO Construction Specifications are recommended as reference.

### **CALTRANS SEISMIC DESIGN CRITERIA (CURRENT VERSION):**

Shall supercede all provisions for seismic design, analysis, and detailing of bridges contained in the *AASHTO LRFD Bridge Design Specifications*. The Caltrans Seismic Design Criteria is used in conjunction with the Extreme Event I Load Combination specified in AASHTO LRFD.

The AASHTO Specifications shall be adhered to in areas where the California Specifications, design criteria, and/or the Contract Documents are silent.

### **CALTRANS HIGHWAY DESIGN MANUAL (CURRENT VERSION):**

Shall supercede all provisions for highway design contained in the *AASHTO LRFD Bridge Design Specifications*.

### **THE GENERAL PLAN TITLE BLOCK SHALL SPECIFY THE DESIGN LIVE LOAD AS:**

**“Load and Resistance Factor Design”, and “HL93 w/ „Low-Boy’ and Permit Design Vehicle”**

### **THE GENERAL NOTES SHALL BE TITLED:**

“Load and Resistance Factor Design” and list the “*AASHTO LRFD Bridge Design Specifications*, 4<sup>th</sup> edition with California Amendments”.

### **LEGEND:**

Amendments originating December 2008 and unchanged since that time are denoted using single-underlines and ~~single-strikethroughs~~.

Amendments originating September 2010 and unchanged since that time are denoted using dotted single-underlines and ~~dotted single-strikethroughs~~.

Amendments originating November 2011 and unchanged since that time are denoted using double-underlines and ~~double-strikethroughs~~.