Bridge Load Rating in accordance with the AASHTO LRFR Bridge Specifications

September 9, 2008
Columbus, Ohio

Course Description

This one-day bridge load rating seminar is sponsored by the Federal Highway Administration in cooperation with the Ohio Department of Transportation. The seminar will provide guidance on implementing the AASHTO Load and Resistance Factor Rating (LRFR) methodology for bridges designed with the AASHTO LRFD Specifications as well as bridges designed in accordance with previous versions of the AASHTO Standard Specifications.

Why Attend?

The American Association of State and Highway Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) have set a transition date of October 1, 2007 after which all new bridges shall be designed in accordance with the AASHTO LRFD Bridge Design Specifications. This has created an opportunity for rating and design engineers to convert their practice to the new Load and Resistance Factor Rating (LRFR) Methodology when rating bridges designed by LRFD. The seminar will also demonstrate the advantages of utilizing LRFR when rating existing bridges designed with previous versions of the AASHTO Standard Specifications. There are numerous safety benefits to utilizing the LRFR approach for load rating new and existing bridges. Participants will learn how to apply the LRFR methodology to achieve these benefits.

To assist the bridge community in a successful transition to LRFR, this seminar will serve as an introduction level portion of a series of educational seminars and training courses that will be available through the FHWA and the National Highway Institute. The seminar will include an introduction to the AASHTO Manual for Bridge Evaluation (2008), the load rating process, load models and load factors for LRFR. Two simple rating examples of steel and concrete bridges will demonstrate both strength and serviceability rating for design, legal and permit loads.

Registration Fee

The course is free of charge to those attending, but is offered on a ‘reservation-only’ basis and limited to seats availability.

Course Location

ODOT Auditorium, Central Office, Lower Level
1980 West Broad Street, Columbus, OH 43223
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Seminar Agenda

8:00 am  Registration
8:30 am  Welcome and Introductions – Ohio DOT
8:40 am  Introduction to LRFR and the AASHTO LRFR Manual – Mr. Thomas Saad, FHWA
9:40 am  Load Models for LRFR Evaluation - Mr. Bala Sivakumar, HNTB
10:00 am Break
10:15 am Load Models for LRFR Evaluation (continued)
10:45 am LRFR Load Rating Equation and Load Rating Process - Mr. Bala Sivakumar, HNTB
11:30 am LRFR Limit States, Reliability Indices and Load Factors - Mr. Bala Sivakumar, HNTB
12:00 noon Lunch (on-your-own)
1:00 pm LRFR Limit States, Reliability Indices and Load Factors (continued)
1:30 pm New AASHTO Manual for Bridge Evaluation - Mr. Bala Sivakumar, HNTB
2:00 pm PSC Girder Load Rating Example - Mr. Thomas Saad, FHWA
2:30 pm Steel Stringer Bridge Load Rating Example - Mr. Bala Sivakumar, HNTB
3:00 pm Q&A - All
3:30 pm Adjourn

Instructor Bios:

Bala Sivakumar, P.E., is Vice President and Director of Special Bridge Projects with HNTB Corporation, New York. He was the Co-Principal Investigator and the primary author of the 2003 AASHTO Guide Manual for Load and Resistance Factor Rating of Highway Bridges, developed to be consistent with the AASHTO LRFD Bridge Design Specifications. In 2005 AASHTO approved a resolution to update the LRFR Manual and adopt it as the new “Manual for Bridge Evaluation” to replace the “1994 AASHTO Manual for Condition Evaluation of Bridges”. Mr. Sivakumar was selected by AASHTO to prepare this new Manual, which was completed in 2007. He recently assisted Oregon DOT in their recalibration of LRFR live load factors using Oregon WIM data and in their State-wide implementation of LRFR. He is currently assisting NYSDOT and HIDOT with the LRFR implementation. He served as the Principal Investigator of NCHRP Project 12-63 that proposed revisions to AASHTO rating loads and legal loads for posting and is currently the Principal Investigator for NCHRP 12-76 that will develop protocols for collecting and using weigh-in-motion data in AASHTO LRFD bridge design. He has conducted LRFD and LRFR training courses for several States. He currently serves as the Technical Consultant to AASHTO Committee T18 on Bridge Management and is frequently invited to make technical presentations to the AASHTO Bridge Sub-Committees during their annual meetings.

Email: bsvivakumar@hntb.com  Tel: (212) 915-9532
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Thomas K. Saad, P.E., is a Structural Design Engineer with the Federal Highway Administration in the Resource Center in Chicago, Illinois. He received a Bachelor of Technology in Civil Engineering from Michigan State University and a Master of Science in Civil Engineering degree from the Georgia Institute of Technology. Tom has served as a Structural Engineer with the FHWA for 20 years in the Federal Lands Highway Division and the States of Connecticut, Louisiana, Georgia and Indiana. He is currently responsible for developing and delivering programs and products to aid State Highway Agencies in the implementation of LRFD and LRFR and has delivered training seminars on bridge design in more than 25 states. Tom is a registered Professional Engineer in the State of Indiana.

Email: thomas.saad@fhwa.dot.gov  Tel: (708) 283-3521