

CONTRIBUTING AUTHORS



Frederick Gottemoeller is an engineer and architect, who specializes in the aesthetic aspects of bridges and highways. He is the author of *Bridgescape*, a reference book on aesthetics and was deputy administrator of the Maryland State Highway Administration.



Dr. Benjamin A. Graybeal is the team leader for bridge and foundation engineering within the U.S. Federal Highway Administration's Office of Infrastructure Research. He also leads the structural concrete research program.



Dr. Dennis R. Mertz is professor of civil engineering at the University of Delaware. Formerly with Modjeski and Masters Inc. when the *LRFD Specifications* were first written, he has continued to be actively involved in their development.

MANAGING TECHNICAL EDITOR



Dr. Henry G. Russell is an engineering consultant, who has been involved with the applications of concrete in bridges for over 35 years and has published many papers on the applications of high-performance concrete.

Photo:
Ted Lacey Photography.

Correction

Spring 2014

On page 13 of the Spring 2014 issue, the post-tensioning material supplier was inadvertently left off the profile listing. The post-tensioning material supplier was DSI/Dywidag-Systems International, Bollingbrook, IL.

We regret this error. An updated PDF of this article has been uploaded to the *ASPIRE*™ website at www.aspirebridge.org.

CONCRETE CALENDAR 2014/2015

For links to websites, email addresses, or telephone numbers for these events, go to www.aspirebridge.org and select "EVENTS."

July 21-25, 2014

PCA Professors' Workshop
PCA Campus, Skokie, Ill.

July 27-August 1, 2014

AASHTO Subcommittee on Materials
The Depot Renaissance Minneapolis Hotel
Minneapolis, Minn.

September 6-9, 2014

PCI Annual Convention and Exhibition and National Bridge Conference
Gaylord National Resort and Convention Center
National Harbor, Md.

October 26-30, 2014

ACI Fall Convention
Hilton, Washington
Washington, D.C.

October 27-28, 2014

ASBI 26th Annual Convention
Hartford Marriott Downtown
Hartford, Conn.

December 4-5, 2014

2014 National Accelerated Bridge Construction Conference
Hyatt Regency, Miami, Fla.

January 11-15, 2015

94th Annual Meeting
Transportation Research Board
Walter E. Washington Convention Center
Washington, D.C.

February 2-6, 2015

World of Concrete 2015
Las Vegas Convention Center
Las Vegas, Nev.

April 6-7, 2015

ASBI 2015 Grouting Certification Training
J. J. Pickle Research Campus
The Commons Center
Austin, Tex.

June 8-11, 2015

International Bridge Conference
David L. Lawrence Convention Center
Pittsburgh, Pa.



The PCI State-of-the-Art Report on Seismic Design of Precast Concrete Bridges

Seismic design of precast concrete bridges begins with a global analysis of the response of the structure to earthquake loadings and a detailed evaluation of connections between precast elements of the superstructure and substructure. Because modeling techniques have not yet been implemented for jointed details, the focus of this report is on procedures for the evaluation of system response and the detailing of connections for emulative behavior.

Seismic analysis procedures are discussed with the primary emphasis on force-based analysis procedures. Displacement-based analysis and computer modeling are also discussed. Relevant seismic design criteria of early years are summarized along with the current criteria of the AASHTO Specifications, Caltrans criteria, Japan's bridge design, and the New Zealand Bridge Manual requirements.

This ePublication is available on line at <http://www.pci.org/epubs>