

CONCRETE CONNECTIONS

Concrete Connections is an annotated list of websites where information is available about concrete bridges. Links and other information are provided at www.aspirebridge.org.

IN THIS ISSUE

<http://www.aspirebridge.com/magazine/2018Fall/PROJECT-StCroisRiverCrossing.pdf>

The mile-long St. Croix River Crossing has the second extradosed bridge to be built in the United States as its main unit. The structure was constructed by a joint venture of Ames Construction, which is featured in the Focus article on page 6. The link leads to the Project article in the Fall 2018 issue of *ASPIRE*® that describes in detail the St. Croix Crossing structure.

azdot.gov/projects/central-district-projects/loop-202-south-mountain-freeway

As mentioned in the Focus article on page 6, Ames Construction was a partner in a joint venture for the first Arizona Department of Transportation public-private-partnership project, the construction of the South Mountain Freeway (Loop 202). This website has details and photos of the project.

www.fema.gov/media-library-data/1557508353169-d67f745e88e04e54a1f40f8e94835042/FEMA_P-58-6-GuidelinesForDesign.pdf

The Perspective article on resilient design on page 10 discusses the benefits of resilient design and how it differs from sustainability or green design. The Federal Emergency

Management Agency's *Guidelines for Performance-Based Seismic Design of Buildings* (FEMA P-58-6) can be downloaded from this website. Although the publication addresses seismic performance of buildings, the principles are also applicable to transportation structures and any hazard event.

www.wekivaparkway.com/project-6.php

This website has a video showing a bird's eye view of the construction progression of the Wekiva Parkway Bridges, including those featured in the Project article on page 14.

<http://www.aspirebridge.com/magazine/2018Fall/PERSPECTIVE-BenefitsOfTheFHWA-NHI.pdf>

The Concrete Bridge Technology articles on pages 28 and 32 discuss design and construction details of strut-and-tie models. This link is to an article from the Fall 2018 issue of *ASPIRE* that explains the fundamentals of strut-and-tie modeling.

www.fhwa.dot.gov/ipd/pdfs/alternative_project_delivery/bridge_bundling_guidebook_070219.pdf

Bundling of bridge projects is discussed in the Federal Highway Administration (FHWA) article on page 42. FHWA's recently published *Bridge Bundling Guidebook* can be downloaded from this website.

www.fhwa.dot.gov/innovation/everydaycounts/edc_5/docs/project-bundling-webinars-resource.pdf

Based on a fall 2018 webinar, this FHWA document provides resources on project bundling. Bridge bundling is the subject of the FHWA article on page 42.

www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/bridge-e.htm

This Texas Department of Transportation website contains standard drawings for bridge construction, including prestressed concrete beams and railing details. The use of standard details as a cost-effective measure is mentioned in the State article on page 50.

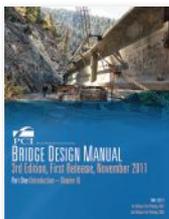
www.pci.org/AnchoringToConcreteImp

As mentioned in the LRFD article on page 54, Article 5.13 of the American Association of State Highway and Transportation Officials' *AASHTO LRFD Bridge Design Specifications* has adopted the provisions for concrete anchorage from the American Concrete Institute's *Building Code Requirements for Structural Concrete* (ACI 318-14) and *Commentary* (ACI 318R-14). Under the sponsorship of the National Cooperative Highway Research Program, PCI developed a five-part webinar series for bridge engineers on the requirements for designing, detailing, and installing concrete anchors. This link provides access to a Dropbox folder that contains the recorded webinar series, course handouts, and resources.



Add these free PCI Transportation resources to your eBook library. Download at pci.org.

A simple log-in to the PCI website is all that is needed to download these free resources.



PCI Bridge Design Manual

3rd Edition, Second Release, August 2014

This up-to-date reference complies with the fifth edition of the *AASHTO LRFD Bridge Design Specifications* through the 2011 interim revisions and is a must-have for everyone who contributes to the transportation industry. This edition includes a new chapter on sustainability and a completely rewritten chapter on bearings that explains the new method B simplified approach. Eleven LRFD up-to-date examples illustrate the various new alternative code provisions, including prestress losses, shear design, and transformed sections.

www.pci.org/MNL-133-11



The PCI State-of-the-Art Report on Full-Depth Precast Concrete Bridge Deck Panels

The *PCI State-of-the-Art Report on Full-Depth Precast Concrete Bridge Deck Panels* (SOA-01-1911) is a report and guide for selecting, designing, detailing, and constructing precast concrete full-depth deck panels for bridge construction. This report is relevant for new bridge construction or bridge-deck replacement.

www.pci.org/SOA-01-1911