

CONCRETE CONNECTIONS

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

IN THIS ISSUE

<https://transedlrt.ca/updates/valley-line-southeast-milestone-the-tawatina-bridge-is-connected>

This web page features a video of the three-span, extradosed Tawatinâ Bridge. Arup, featured in the Focus article on page 6, is the lead designer for this Edmonton, Alberta, project.

https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

The Focus article on page 6 mentions that the United Nations (UN) Sustainable Development Goals are key to Arup's business philosophy and strategies. This is a link to the 2015 UN resolution adopting these goals.

<https://newgdbridge.com>

The designer for the new Gerald Desmond Bridge at the Port of Long Beach, Calif, was Arup, the subject of the Focus article on page 6. The innovative erection equipment used to construct concrete segmental box-girder approach spans is discussed in the Concrete Bridge Technology article on page 33. This website has videos, photos, and news about the project.

<http://www.sfigdb.com>

The mobile scaffold system used to construct the concrete box-girder approach spans leading to the cable-stayed main span of the Gerald Desmond Bridge is featured in the Concrete Bridge Technology article on page 33. This website has a video of bridge construction activities.

<https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3951>

National Cooperative Highway Research Program (NCHRP) Report 950, *Proposed AASHTO Guides for Bridge Preservation Actions*, which is discussed in the Perspective article on page 14, can be downloaded from this link.

[http://wekivaparkway.com/wpcms/data/img/uploads/files/WRBC%20CFX%20Construction%20Update%20\(Exec%20Update\)%20120516.pdf](http://wekivaparkway.com/wpcms/data/img/uploads/files/WRBC%20CFX%20Construction%20Update%20(Exec%20Update)%20120516.pdf)

This link is to an archived presentation that includes construction photos of Section 2B of the Wekiva Parkway project near Orlando, Fla., including the U-beam bridges in the Wekiva Parkway #204 Systems Interchange featured in the Project article on page 20.

<http://www.aspirebridge.com/magazine/2020Fall/Project-InnovationCentralFloridaWekivaRiver.pdf>

This is a link to a Project article in the Fall 2020 issue of *ASPIRE*® about another portion of the Wekiva project that used three cast-in-place segmental concrete box-girder bridges and approach spans with prestressed concrete Florida I-beams to minimize the project's impact on the sensitive environment.

<https://doi.org/10.15554/pcij65.6-06>

The Concrete Bridge Technology article on page 38 discusses the *PCI Recommended Practice to Assess and Control Strand/Concrete Bonding Properties of ASTM A416 Prestressing Strand*, which provides criteria to use when specifying

strand for bonded, pretensioned applications. The entire recommended practice from the November–December 2020 issue of *PCI Journal* is available at this link.

<https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/standard/bridge/mebcsts1.pdf>

The Concrete Bridge Technology article on page 41 outlines changes that the Texas Department of Transportation (TxDOT) made to prestressed concrete I-girder bracing requirements. The revised standard drawings are available at this link.

https://ctr.utexas.edu/wp-content/uploads/pubs/0_5706_1.pdf

Some of the revised TxDOT prestressed concrete girder bracing details presented in the Concrete Bridge Technology article on page 41 resulted from a research study, *Impact of Overhang Construction on Girder Design* (Report FHWA/TX-10/0-5706-1). The report is available at this link.

https://www.pci.org/PCI_Docs/Certification/Arch/PCI%20Arch%20Cert%20Brochure.pdf

PCI is revising its Architectural Certification Program. The new categories and their requirements are presented in the Creative Concrete Construction article on page 30. The PCI Architectural Certification brochure is available at this link.

https://international.fhwa.dot.gov/programs/mrp/electrically_isolated_tendons.cfm

The Federal Highway Administration article on page 47 highlights a recent study of European practices for electrically isolated tendon (EIT) technology. The report, *Electrically Isolated Tendons in European Transportation Structures*, is available from this link.

<http://www.aspirebridge.com/magazine/2019Spring/CBT-ImplementationOfAnElectricallyIsolatedTendon.pdf>

This is a link to the Spring 2019 *ASPIRE*® Concrete Bridge Technology article about the first EIT demonstration project in the United States. EIT technology is the topic of the FHWA article on page 47.

www.pci.org/AnchoringToConcreteImp

As mentioned in the LRFD article on page 53, Article 5.13 of the *AASHTO LRFD Bridge Design Specifications* has adopted the provisions for anchors in concrete from ACI 318-14. With the sponsorship of the National Cooperative Highway Research Program, PCI developed a webinar series for bridge engineers on the requirements for designing, detailing, and installing concrete anchors. This link provides access to a Dropbox folder with the recorded webinar series, course handouts, and resources.

<https://www.concreteanchors.org/publications>

In the LRFD article addressing anchors in concrete on page 53, the author recommends that *Special Inspection Guidelines for Post-Installed Anchors* by Silva and Mattis be read by those writing specifications or planning field-testing programs for anchors. The publication was developed by the Concrete and Masonry Anchor Manufacturers Association and can be accessed from this website.