Welcome to Webinar on Accelerated Bridge Construction

Partial-Depth Precast Deck Panel Design and Construction in Texas

Sponsored by
Accelerated Bridge Construction University Transportation Center (ABC-UTC) at Florida International University

Website: abc-utc.fiu.edu
Email: abc@fiu.edu

April 19, 2018 – 1:00 p.m. to 2:00 p.m. Eastern
FIU News
Pedestrian Bridge FAQs
(https://news.fiu.edu/2018/03/pedestrian-bridge-faq)

• FIU awarded a Design-Build contract for the bridge through a competitive, public process as described in the FAQs

• FIU and its affiliated entities, including the Accelerated Bridge Construction University Transportation Center (ABC-UTC), did not design or build the bridge.

Also see https://www.ntsb.gov/investigations/
Today’s Monthly Webinar

ABC Announcements (10 minutes)
Featured Presentation (35 minutes)

Partial-Depth Precast Deck Panel Design and Construction in Texas

Gregg Freeby, P.E., Director, Bridge Division, Texas Department of Transportation; Sara Watts, E.I.T., Bridge Design Engineering Assistant, Bridge Division, TxDOT; and Leon Flournoy, P.E., Bridge Construction & Maintenance Engineer, Bridge Division, TxDOT

Question and Answer (15 minutes)

Please post your questions in the question box
What is ABC?
https://abc-utc.fiu.edu/
Project & Research Databases

Project Database

The ABC-UTC is working in cooperation with FHWA, bridge owners, and other bridge professionals to accumulate available completed construction projects in which ABC technologies are used and research projects in which ABC technologies have been investigated. The Project Database has been expanded from its origin, the FHWA National ABC Project Exchange.

A user guide was developed to familiarize users with the database (Project Database – User Guide). Any additional questions on the database can be directed to David Garber (dgarber@fiu.edu).

Keywords for Database Search

The Project Database and Research Database both utilize lists of ABC-related “Keywords” that have been used to classify and describe each ABC project. These keywords should be used in searching the databases and also for entering new projects into the databases.
Keywords for Database Search

(ABC Terminology)

https://abc-utc.fiu.edu/technology-transfer/project-research-databases/project-database-keywords/

Accelerated Bridge Construction (ABC)

ABC is bridge construction that uses innovative planning, design, materials, and construction methods to reduce the on-site construction time that occurs when building new bridges or replacing and rehabiliting existing bridges.

Categories of ABC types:

• Project Planning
• Geotechnical Solutions
• Structural Solutions
Keywords for Database Search
(ABC Terminology)

STRUCTURAL SOLUTIONS

Prefabricated Bridge Elements and Systems (PBES)

PBES are the structural components of a bridge that are built off-site or near the site of a bridge, and include features that reduce the on-site construction time and mobility impact time that would occur if conventional construction methods were used.

Prefabricated Elements

Prefabricated elements are a category of PBES which comprise a single structural component of a bridge.

Deck Elements

- Full-Depth Precast Deck Panel w/PT
- Full-Depth Precast Deck Panel w/o PT
- Partial-Depth Precast Deck Panel
- FRP Deck Panel {fiber-reinforced polymer deck panel}
- Steel Grid (open) Deck
- Steel Grid (concrete filled) Deck
- Aluminum Deck
- Exodermic Deck
- Orthotropic Deck
- UHPC Waffle Deck
- Other Deck Element
Keywords for Database Search
(ABC Terminology)

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Prefabricated Systems

Prefabricated systems are a category of PBES that consists of an entire superstructure, an entire superstructure and substructure, or a total bridge that is procured in a modular manner such that traffic operations can be allowed to resume after placement. Prefabricated systems are rolled, launched, slid, lifted, or otherwise transported into place, having the deck and preferably the parapets in place such that no separate construction phase is required after placement.
Prefabricated Bridge ELEMENTS
Currently of Most Interest Nationally

Modular Decked Beams

Steel

Concrete

MA – 2011

VT - 2011
Prefabricated Bridge SYSTEMS
Currently of Most Interest Nationally

Superstructure Span Moves

Self-Propelled Modular Transporters (SPMTs)

Lateral Slides

Most appropriate for:
- Bridges over heavily trafficked roadways
- Stream crossings & low-volume underpasses

FL - 2006
OR - 2008
History of ABC
Implementation in the U.S.
Call for Papers

ASCE Journal of Bridge Engineering – Special Online Collection of Accelerated Bridge Construction

Extended Deadline for Paper Submissions: April 30, 2018

Types of papers that you can submit:
• Case studies of unique ABC projects
• Technical papers contributing to ABC
• Technical notes – short technical information
Call for Papers

ASCE Journal of Bridge Engineering – Special Online Collection of Accelerated Bridge Construction
Sponsored by American Society of Civil Engineers (ASCE)
https://www.asce.org/

Note: All papers submitted through this solicitation will undergo the standard journal peer review process. Accepted papers will be published in regular issues of the ASCE Journal as they are accepted and will be added to the special online collection.

Paper Submission Deadline: Papers will be accepted until end of April. But please submit them asap

Guest Editor: Dr. Atorod Azizinamini

For questions, contact Chief Editor: Dr. Anil K. Agrawal, jbe.agrawal@gmail.com

Submit papers online: https://www.editorialmanager.com/jrnbeeng/
Upcoming Events

2018 AASHTO-NSBA Collaboration Spring 2018 Meeting – Minneapolis, MN
May 1-3, 2018
Sponsored by American Association of State Highway and Transportation Officials (AASHTO) and National Steel Bridge Alliance (NSBA)

https://www.transportation.org/
https://www.aisc.org/nsba/

For more information:
https://www.aisc.org/nsba/nsba-publications/aashto-nsba-collaboration/

Jeff Carlson, NSBA, carlson@steelbridges.org
Upcoming Events

2018 International Bridge Conference – National Harbor, MD
June 11-14, 2018
Sponsored by Engineers’ Society of Western Pennsylvania
http://www.eswp.com/bridge/<br><br>ABC-related Workshop – Tues., June 12, 1:00-4:30 p.m.:
W-4, FRP Composite Bridge Materials: Design, Build, Strengthen
Sponsored by the American Composites Manufacturers Association, http://www.acmanet.org<br><br>For more information: Contact John Busel at jbusel@acmanet.org
ABC-UTC
2018 In-Depth Web Training

NEW DATE: Tuesday, September 4, 2018
11:00 a.m. to 3:00 p.m. Eastern

VTrans’ Programmatic Implementation of ABC
by
Vermont Agency of Transportation (VTrans)

Six 40-minute modules
ABC-UTC
Quarterly Research Seminar
Friday, April 27, 2018 – 1:00-2:00 p.m. Eastern

Alternative ABC Connections
Utilizing UHPC:
Cap-to-Column Connections
in Seismic and Non-Seismic Regions

Atorod Azizinamini, Ph.D., P.E., Principal Investigator
Mohamadreza Shafieifar, Ph.D. Student
ABC-UTC / Florida International University

To register, go to:
http://abc-utc.fiu.edu/
Next Monthly Webinar
Thursday, May 17, 2018 – 1:00-2:00 p.m. Eastern

Featured Presentation
Owner Perspective on ABC – Spotlight on SHRP2 R04 Fort Goff Creek Project and Caltrans’ Laurel Street Overcrossing Project

by
Pamela Hutton, P.E., SHRP2 Implementation Manager, AASHTO; and Dorie E. Mellon, P.E., Senior Bridge Engineer, Caltrans

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