

Fiber Reinforced Polymer Composites in Heavy Civil Infrastructure

Abstract:

Fiber reinforced polymer (FRP) composites have traditionally been associated with strengthening concrete structures and reinforcing concrete. However, their use has expanded significantly into a broader range of heavy civil and infrastructure applications.

FRPs are currently being used by a number of public and private sector agencies to construct pedestrian bridges, bridge decks, commuter rail platforms, bridge protection systems, large Navy berthing structures, and hydraulic structures used by the Corps of Engineers.

This seminar will introduce the basic characteristics of FRP materials, common product forms, and manufacturing methods. A variety of infrastructure projects will be presented to illustrate how FRPs are used and the factors considered in selecting FRP over conventional materials.



Gregg Blaszak, P.E.
President
Coastline Composites, Inc.

Bio:

Gregg Blaszak holds BS and MS degrees in Aeronautical Engineering and Civil Engineering, respectively, from the University of Illinois. Early in his career, he worked for McDonnell Aircraft (now Boeing Military), where he was responsible for developing design values for composite materials, adhesives, and connections for a classified aircraft program. After earning his MS degree, Gregg joined J. Muller International, where he worked on numerous award-winning bridge projects, including the Confederation Bridge. He subsequently focused exclusively on advancing the use of FRP materials in bridge, marine, rail, tunnel, and waterfront applications. He has more than 25 years of experience with FRP materials and structures. A recognized expert in the use of FRPs for strengthening concrete structures, Gregg has played a key role in developing industry design standards and has chaired numerous technical committees. Most recently, he led the task group responsible for drafting the 2nd Edition of AASHTO's LRFD Guide Specifications for the Design of FRP Pedestrian Bridges. As President of Coastline Composites, Gregg leads a respected technical sales and consulting firm specializing in innovative FRP solutions for infrastructure applications.



Eric O. Johnson, P.E., S.E.
Composites Program Manager,
Inland Navigation Design Center
US Army Corps of Engineers

Bio:

Eric O. Johnson is the Composites Program Manager for the Corps of Engineers. He is part of the national Inland Navigation Design Center located at Rock Island, Illinois. Eric has 23 years of structural engineering experience working mostly on waterborne infrastructure such as river locks and dams. Since 2018, he has been involved with composite hydraulic structures of all shapes and sizes around the nation. He is a professional member of ASCE, SEI and PIANC. Eric is a proud graduate of the UIUC CEE Structural program with Bachelors and Masters degrees (although he has had to take courses in composites structural design through West Virginia University).

Monday, October 19, 2026 4:00 – 5:00 p.m.

1310 Yeh Student Center