



Strengthening of Bridges with Fiber-Reinforced Polymer (FRP) Systems

October 20, 2022 / 2 p.m. EDT

The fiber-reinforced polymer (FRP) composite materials that have been used for decades in the aerospace industry are now being used to strengthen existing concrete structures. The use of these materials as external reinforcement for concrete structures has become the preferred method of strengthening over more traditional techniques, such as section enlargement, external post-tensioning and steel-plate bonding.

Whether used to increase the load-bearing capacity of a structure, or to restore loss of capacity from damage or deterioration, seismic retrofit or blast hardening, the *MapeWrap*® FRP strengthening system offers a simple, cost-effective method to address structural deficiencies.

This presentation will introduce the unique characteristics of FRP materials, the various components of the *MapeWrap* FRP system, and general design considerations and limitations. Several case studies will be covered, including those focusing on corroded bridges, structurally deficient bridges and general repair of bridges.

Attendees will leave with a greater understanding of which materials should be specified for particular applications, the advantages and limitations of FRP versus traditional strengthening techniques, available design guidelines and codes, and engineering assistance that is available from MAPEI Corporation.

Attendees will:

- Learn about the types of FRP systems that are available for the strengthening and repair of concrete bridges.
- Gain an understanding of the different types of fibers that are used, as well as the advantages and disadvantages of each type.
- Learn the various applications of bridge strengthening where FRP systems can be used (e.g., flexural, shear, seismic, etc.).

This is a presentation with *Roads & Bridges* magazine.

WEBINAR

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October 20 at 2 p.m. EDT

Duration: 60 min.*

* The Webinar will include a question-and-answer period.



Register here:

<https://www.roadsbridges.com/webinars/webinar/21415291/strengthening-of-bridges-with-fiberreinforced-polymer-frp-systems?sti=mapei>



About the presenter

Brian Stratman

Brian Stratman, P.E., is the Business Development Leader for Corrosion and Structural Strengthening with MAPEI Corporation. Brian's work experience includes structural design of commercial and retail structures, territory sales manager for power and industrial concrete repairs and grouting, and business development manager for steel piling, fiber-reinforced polymer (FRP) strengthening and corrosion mitigation. In his current role, Brian is responsible for business development and engineering support that is related to MAPEI's structural strengthening and corrosion product lines. He has more than a decade of experience that is related to the design and installation of FRP strengthening systems for concrete and masonry structures, and he is also a NACE-certified Cathodic Protection Technician (CP2). Brian is also an active member of the ACI 440 Strengthening Committee and ICRI Strengthening and Corrosion Committees.

