



FiberSPAN Decking Spells Design Flexibility And Functional Features

A growing number of architects and engineers are turning to FiberSPAN decking for its design flexibility, a diverse range of sizes, shapes, depths and colors and the ability to integrate functional features in prefabricated panels. When combined, these elements provide a high performance, lightweight, zero maintenance FRP bridge system. The most recent example is coming to life in the shape of a pedestrian bridge spanning the Columbia River in City of Trail, British Columbia.



Function & Form

Each pedestrian bridge deck has different requirements when it comes to functional features. Composite Advantage prefabricates a wide range of features into panels before delivering the deck to the job site. We provide crowns, cross -slopes, curbs, rail attachments, drainage scuppers, rail post connection points and non-slip overlay.

Curbs are integrally molded with the deck in customized widths, heights and angles.



Crown or **Cross-slopes** are molded into the top surface while the bottom surface is flat.

Insets are molded into the panel bottom to clear steel girder splices.

Shapes, Sizes & Depths

FiberSPAN panel sizes are up to 50 feet by 12 feet. Depths range from 1.5 inch to 14 inch. Panels are molded in a range of shapes. The bridge design for the Columbia River Skywalk specified four different shapes ranging from wide to narrow including a trapezoid shape for transition and cut-outs to accommodate steel masts.











FiberSPAN Decking Spells Design Flexibility And Functional Features

Rail Post Attachments

Rail posts are attached to the FRP deck by bolting the posts into steel plates embedded in the FRP panel during the molding process. Holes are drilled and tapped in the shop when the post locations are defined. The posts can be attached to the top of the deck or attached to the side if the depth is enough.



Drainage Scuppers Drainage scuppers can be located where appropriate in deck panels. FRP grating meets loads and ADA requirements.

Expansion Joints

Expansion joints at bridge span ends account for movement from thermal expansion. Joint seals between panels prevent water intrusion on the steel superstructure. The seal and gap is covered



with an expansion cover plate. The plate is bolted to one deck panel and slides over the adjacent panel. The thickness at the panel end is stepped down so the cover plate is flush with the top surface.

Non-Slip Overlay

For safety, a non-slip overlay is applied in the shop to the top surfaces of pedestrian decks. CA offers three types of overlay with different levels of wear resistance depending on usage. The middle type is our standard overlay. It is quartz aggregate in a methylmethacrylate polymer. The quartz aggregate comes in a variety of colors. The overlay resists UV radiation and does not fade. It has excellent wear resistance.



The grand opening of the Columbia River Skywalk is planned for December 2016. Don't miss our next newsletter. It will include photographs of the newly completed bridge structure and explore the backstory on the bridge and why FRP was critical to the success of the project.