

Galveston Island State Park Dune Crossing



Location: **Galveston Island, TX**

Owner: **Galveston Island State Park**

Designer: **SWA Group**

Contractor: **Millis Development & Construction**

Challenge

Part of a major renovation of Galveston Island State Park, designers needed boardwalks that would allow tourists to reach the gulf, walk along the coast, and experience the park without pedestrians causing erosion and destroying the beach's historic sand dunes.

In selecting the right boardwalk material, designers considered the harsh coastal environment: consistent exposure to sunlight, saltwater, and high humidity levels. The boardwalk needed to be durable and be able to withstand these conditions, and timber tends to deteriorate leading to splinters and exposed nail heads.

With so many tourists visiting the park on an annual basis, designers also factored in slip-resistance. The Texas gulf coast is a wet place with storm surges, frequent showers, and high humidity. Designers were looking for a material that would reduce the possibility of slippage and injury.

Solution

PermaTrak's precast concrete boardwalks were chosen for the project's goals of low environmental impact, durability, and slip resistance.

Concrete is a durable material, well suited to many environments whether cold, hot, dry, or damp. It doesn't bow, warp, or twist like pressure treated wood or timber tends to do. Instead, the reinforced precast concrete PermaTrak system is actually built to get stronger over time and has a design life of 50-75 years.

The PermaTrak boardwalk is also more slip-resistant than other materials: the texture of the treads creates more friction than timber and composite, even when it is wet.

For their durability and low environmental impact, the boardwalk was installed with helical piles, a deep foundation option.

Gradually sloping up and down, reaching about 5 feet in elevation at their peak, the boardwalks include a changing and cleaning station for visitors to use for years to come.

TECHNICAL DESCRIPTION

Boardwalk Lengths: 218 ft., 194 ft., 241 ft. & 116ft.

Color: Natural Concrete

Texture: Sandblast

Installation Date: May 2021