

Thompson Oaks Greenway Trail Boardwalk



Location: **West St. Paul, Minnesota**

Owner: **Dakota County**

Designer: **Stantec**

Installer: **Peterson Companies**

Challenge

The Dakota County council decided to turn a closed municipal golf course into a restored natural wetland to enhance their community and broader water systems. Combining city, county, and state funds, the nearly \$6 million project consisted of removing around 200 dump truck loads of contaminated soil, creating a natural filtering process to clean city runoff, and adding a new segment to the River to River Greenway Trail with a boardwalk for users to enjoy the revitalized surroundings.

When it came to building the boardwalk, the location posed some notable challenges as it would be situated in a marshy northern environment prone to freezing conditions and slippery ice several months of the year. The designers were also looking to use a helical pier foundation; however, the boardwalk needed to be much farther off the ground than what typical helical piers could accomplish. With these requirements in mind, the designers knew a strong elevated structure, ease of construction, and ability to withstand harsh winters would be key necessities.

Solution

PermaTrak's engineering and design team provided the ideal solution, addressing the need for environmental protection and long-term maintenance-free durability that can withstand severe winter seasons. Precast concrete, known for its resilience in challenging environments, was selected due to its resistance to warping, bowing, and twisting, ensuring longevity even in extreme weather conditions. With a design life of 50-75 years, the reinforced precast concrete PermaTrak system guaranteed a lasting solution.

The newly enhanced Greenway Trail segment now features a 400-foot boardwalk made of precast concrete. PermaTrak's engineering team assisted designers with an innovative 8-inch helical pier foundation, large enough to accommodate the extra height needed. This boardwalk also features a precast approach slab to smoothen the transition from the land trail.

Located by a library, multi-family development, and a future amphitheater, the wetland has rapidly become a popular community destination. In a Dakota County press release, West St. Paul Mayor Dave Napier expressed gratitude to the visionaries behind the project, stating "I want to thank the current council and past council to have the vision to change... with the idea that we can do something bigger and better for the whole community."

TECHNICAL DESCRIPTION

Boardwalk Length(s): 376 ft

Tread Width(s): 13ft. 3in.

Color: Natural Concrete

Texture: Beachsand

Installation Date: May 2023