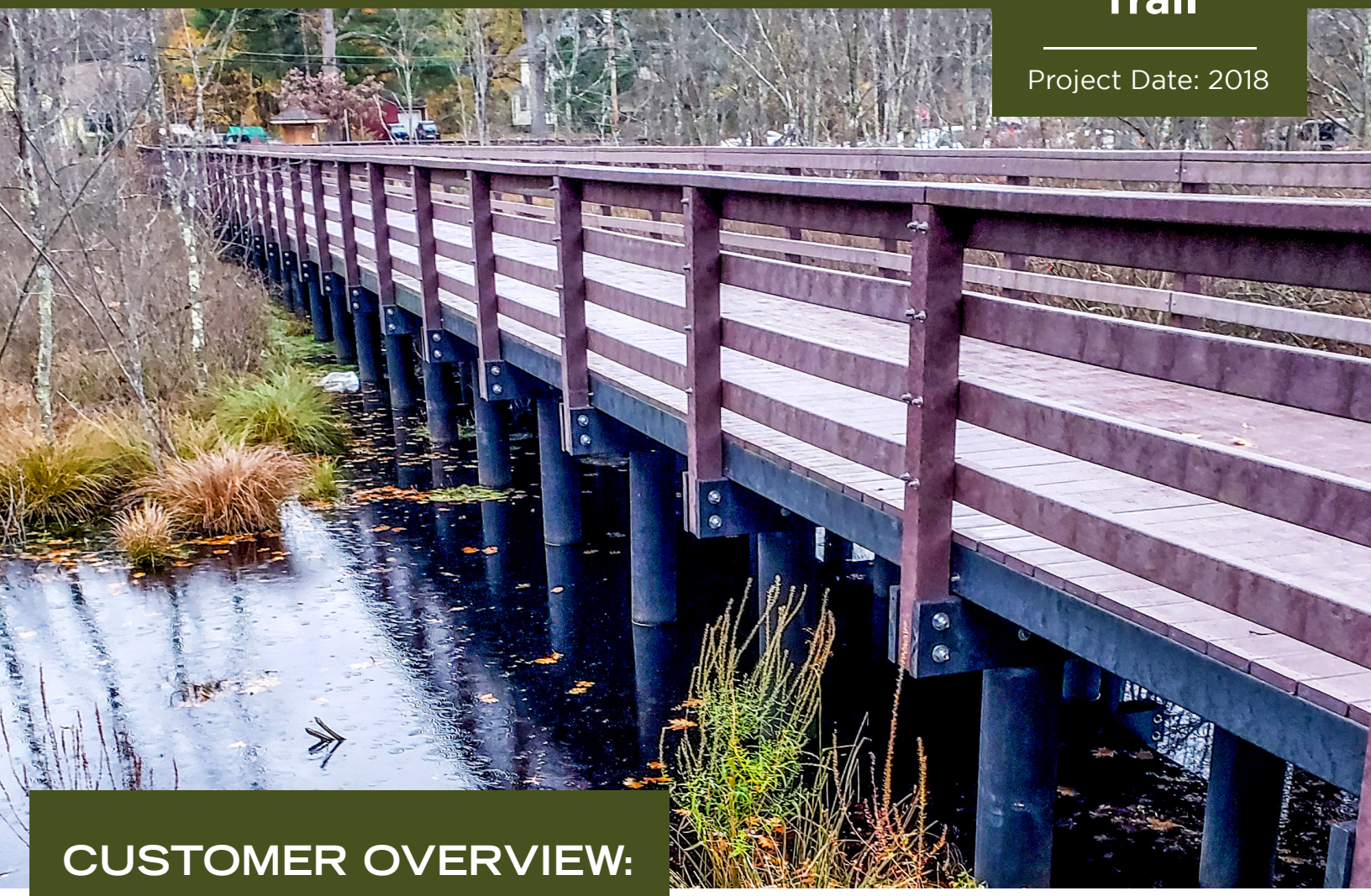
TANGENT™

Assabet River Rail Trail

Project Date: 2018



CUSTOMER OVERVIEW:

The Massachusetts DOT works to provide the safest and most reliable transportation systems in the State of Massachusetts,to strengthen both the economy and quality of life. They partnered with cities and towns, public agencies, and private business sectors, to support the environmental and transportation goals of the Commonwealth. The MassDOT saw an opportunity to convert the Assabet River Rail Trail for pedestrian use to help bring the communities together.

The Story

The Assabet River Rail Trail in Massachusetts is a multi-use recreational trail that passes through the Marlborough, Hudson, Stow, Maynard and Acton communities. Spanning over 12 miles, this trail not only connects these 5 communities, it also provides a safe path for pedestrian activities like biking and hiking. Built along the Marlborough Branch Railroad, which was active between 1853 and 1980, the now abandoned railroad was converted for pedestrian use in 2016, and as a part of the conversion, 450 feet of boardwalk spanning over wetlands needed to be constructed.

"The Assabet River Rail Trail continues to be updated, with only the Stow section remaining. The environmentally-friendly boardwalk has been a great addition to our communities. Average traffic has been 100+ bikes and walkers per day."

Tom Kelleher - President of Assabet River Rail Trail

The Challenge

The Assabet River Rail Trail is located in Middlesex County, Massachusetts. A new boardwalk was designed to accommodate activities like hiking and biking. Many components including substructure, top boards and piles were included in the walkway design. Each component had unique performance requirements, and the building material needed to meet each specification. The piles would be partly submerged in water; rot, mold and degradation are common with traditional wood in wet conditions, so the new material needed to withstand these environments. The substructure needed to support light vehicular and pedestrian traffic, so load-bearing requirements were important for this component. The top boards needed to be aesthetically pleasing and hold up against wear-and-tear from biking, hiking and in-line skating activities. Finding a versatile and durable building material that met all requirements was crucial to for the projects' success.

The Solution

Tangent Piling and Marine Decking solved the design challenge. Structural recycled plastic lumber met the project requirements for all of the trail pathway components. Tangent engineered the design and was able to reduce the amount of material used, which lowered the cost for the installation. This product doesn't rot, mold or degrade when submerged in water, which met the durability requirement for the piles. Tangent Piling and Marine Decking also provided better structural performance when compared to traditional wood for the substructure joist and stringer beams. The stone design finish on the deck boards provided non-slip properties that were safe for pedestrians and light-duty vehicular traffic.

The Results

The MassDOT used Tangent Piling and Marine Decking, which solved all of their project requirements and challenges. The biggest driver for using recycled plastic lumber was that it is a long-term building material that is built to last and doesn't need to be replaced like traditional treated wood. Structural recycled plastic lumber was the best solution for all components including the piles, substructure and decking because it provides a long-lasting, safe, and environmentally-friendly trail for pedestrians and vehicles.

(630) 264-1110 1001 Sullivan Rd., Aurora, IL 60506 www.tangentmaterials.com