

Designing the ultimate trail experience

Whether traveling on two wheels or two feet, we help communities stay active and sustainable.



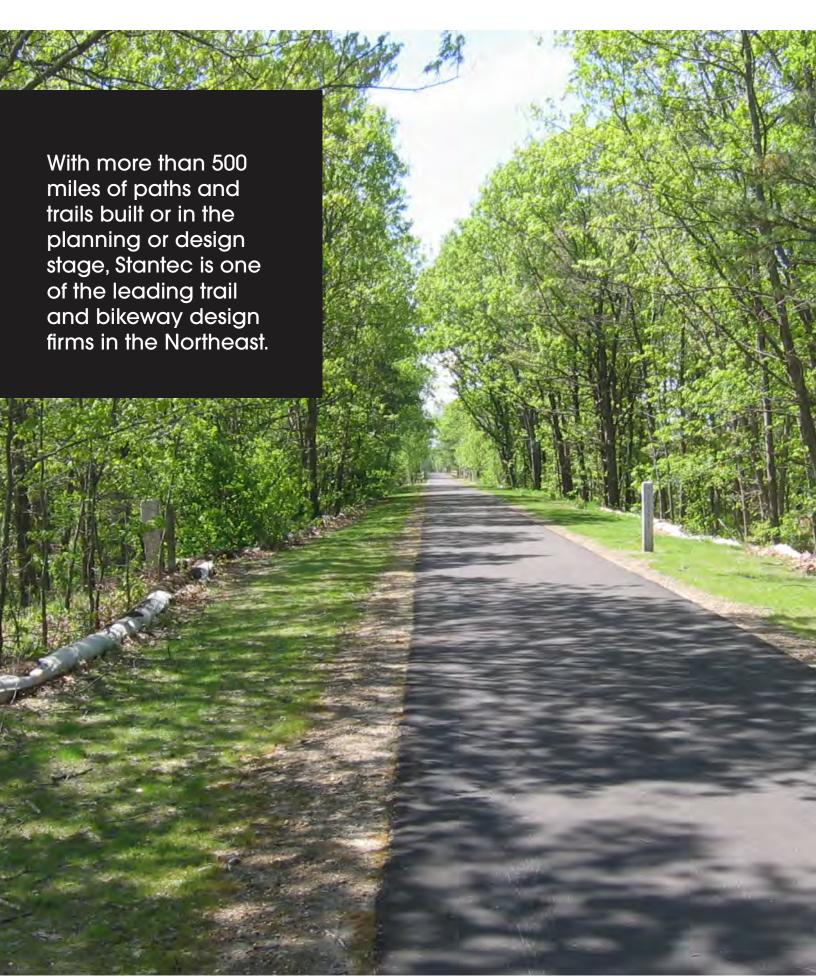


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Our Team



Old Eastern Marsh Trail | Salisbury , MA



Overview

About Us

STANTEC brings strong expertise in all elements of trail development and design. Stantec has undertaken feasibility studies for many miles of multi-use trails, addressing such features as alignment/route selection; GIS mapping; civil, structural, hydraulic, and other elements of engineering design; environmental permitting; grant applications; and public involvement. Our staff has handled comprehensive design and construction phase services for many new and upgraded trails throughout the region, and accompanying signing, site furnishings, and roadway markings.

Members of Stantec's Bike Team are actively involved in development of pedestrian and bicycle facilities

as volunteers in their hometowns. They offer their skills to communities and design such facilities as the first wheelchair accessible trail in northeastern Massachusetts or a 10-mile hiking trail through various Town open spaces, as well as organize National Trails Day events to promote these local assets.

Included on the following pages are overviews of some of our recent trail design projects. Also included is listing of our ongoing trail planning and design projects, as well as a table of the firm's trail projects in New England over the years.

We've also provided brief overviews of the experience of the core members of our Bike Team.





Quequechan River Rail Trail | Fall River, MA







Quequechan River Rail Trail Phases 2 & 3

LOCATION: FALL RIVER, MASSACHUSETTS

PROJECT SIZE: 1.6 MILES

The City of Fall River has been working towards its goal of converting a former railroad corridor along the Quequechan River into a shared-use trail for bikes and pedestrians. Phase 1 of the Quequechan River Rail Trail was constructed in 2008. Stantec completed design of Phases 2 & 3 of the project. The total length of Phases 2 & 3 is approximately 8,300 linear feet including the spur trail. The trail consists of a 10 foot wide paved surface with 2 to 3 foot soft surface shoulders.

The six timber trestle bridges along the corridor will be replaced with timber boardwalks due to the advanced deterioration of the structural elements. The boardwalks were designed for vehicular access for both maintenance and emergency vehicles. Helical pile foundations were selected due to the difficulty in accessing the site with heavy equipment to construct wooden piles and because of the environmental constraints/impacts driving wooden piles would cause. Seven boardwalks totaling 1,260 feet are included in this project. Other enhancements include site furnishings, informational and directional signage, and landscaping. The trail has been designed to minimize impacts to adjacent environmental resource areas. Environmental approvals required for this project include an Environmental Notification Form under the Massachusetts Environmental Policy Act (MEPA), Water Dependent Chapter 91 License with the Massachusetts Department of Environmental Protection, and Notice of Intent/Order of Conditions with the Fall River Conservation Commission.



"It is gorgeous...
and residents and all
users LOVE IT!"

— Julianne Kelly, Coordinator, Mass in Motion - Fall River



Fast track design



Cape Cod Rail Trail

LOCATION: DENNIS - WELLFLEET, MASSACHUSETTS

PROJECT SIZE: 22 MILES

The Cape Cod Rail Trail follows a former railroad right-of-way for 22 miles through six communities. This shared use path is a key recreational and transportation resource for residents and visitors alike. Not only is it historically significant as the first rail trail in the nation, it also serves as a major cultural resource and economic engine for local businesses.

When it was time to rehabilitate and redesign the 25-yearold trail, the Massachusetts Department of Conservation & Recreation selected Stantec. We set out to upgrade the trail to meet today's design standards for shared-use paths and provide safety improvements. Stantec completed the fast track design within 6 months to meet the intensive schedule deadline. The design included location-specific and corridor-wide improvements including trail widening, intersection treatments, parking lots, signage, fencing, root barrier installation, and vegetative clearing. Also included were landscaping and trail amenities to enhance the overall trail experience.

Recognizing the need to balance completing the project in timely manner and the mobility and economic impact construction would have upon the communities, Stantec developed a two-phase construction sequencing plan to minimize these effects.

Old Eastern Marsh Trail

LOCATION: SALISBURY, MASSACHUSETTS

PROJECT SIZE: 1.4 MILES

The Salisbury Rail Trail, also known as the Old Eastern Marsh Trail, extends from the Merrimack River to Mudnock Road in Salisbury. This 1.4-mile segment is an important link in the regional Border to Boston Trail, a proposed 30-mile trail linking eight Essex County communities. The trail begins with a scenic overlook at the Merrimack River and continues north through the picturesque Great Marsh, the largest salt marsh in New England.

Our team was hired by the Town to design and permit the trail through the MassDOT design review and project approval process. Following the 25% Design submission, construction funding became unexpectedly available on the regional Transportation Improvement Program. Stantec committed to fast track the final design phases to meet the construction advertisement date. We completed the entire project design within a 12 month time-frame to meet the funding deadline.

We developed a design that addressed existing deficiencies,

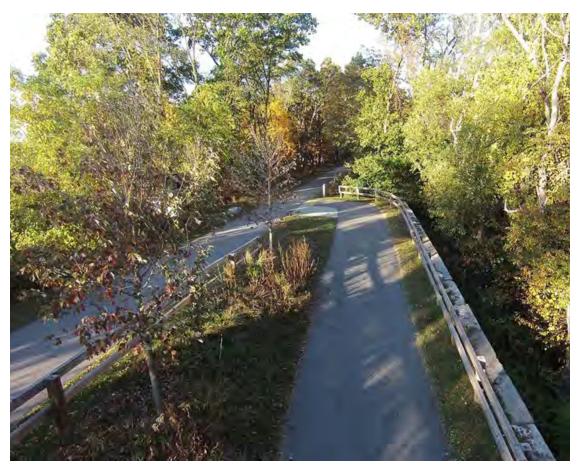
considered site constraints, protected environmental resource areas, and met community design goals. Design issues incorporated as part of the project include:

Developing typical cross sections to respond to the varying rail bed width and proximate resource areas;

Adjusting the vertical profile to create specific high/low points based on drainage patterns and the need to repair existing eroded areas;

Creating an ADA accessible trailhead parking area and spur trail connection at Friedenfels Road;

Identifying opportunities to enhance the corridor through the proper placement of trail amenities including site furnishings, signage, scenic vistas, and landscaping. One of the community's design goals was to highlight the corridor's natural beauty through interpretive elements.







The Grand
Opening of the
trail, attended by
4,000 people, was
a great success
and the location
of Stantec's 2010
Bike Fest



Border to Boston Trail

Connectiong 5 communities

LOCATION: BOXFORD - SALISBURY, MASSACHUSETTS

PROJECT SIZE: 19 MILES

The communities of Boxford, Georgetown, Newbury, and Salisbury, the Merrimack Valley Planning Commission, and MassDOT are advancing the design of the 19-mile Northern Section of the regional Border to Boston Trail. Although the Border to Boston Trail is a MassDOT administered project, the completed project will ultimately become a continuous corridor of locally managed trail segments.

Our team was selected to prepare design plans for the Northern Section of the Border to Boston Trail. Using a combination of former railroad corridor, utility rights of way, and local roadways, the proposed project will connect to two of our recently completed trails – the Clipper City Rail Trail in Newburyport and the Old Eastern Marsh Trail in Salisbury. The Border to Boston

Trail – Northern Section project includes the 14-mile trail segment from the Topsfield/Boxford line to the southern terminus of the Clipper City Rail Trail and the 2.3 mile trail segment from the northern terminus of the Old Eastern Marsh Trail to the New Hampshire border in Salisbury. When completed, the Northern Section will connect five communities – Boxford, Georgetown, Newbury, Newburyport, and Salisbury.

The design includes seven bridge structures, a boardwalk, 13 at-grade crossings, and two on-road segments. The trail is being designed to minimize both environmental and habitat-related impacts. Early and proactive agency coordination has been a key piece of properly permitting the project and maintaining the schedule.

Groveland Community Trail

LOCATION: GROVELAND, MASSACHUSETTS

PROJECT SIZE: 2 MILES

Our team designed approximately two miles of shared use path along National Grid's utility right-of-way, the former Georgetown Branch Railroad Corridor, through Groveland, Massachusetts. The project limits extend from King Street at the Georgetown border, to the intersection with Main Street, where it is planned to continue as a bike route along local roadways. The project includes a 10-foot wide paved trail with 2-foot soft shoulders; five roadway crossing treatments; regulatory signage and pavement markings; stormwater improvements; and the design of a trailhead parking area. The proposed trail will be a source of community pride and connect multiple Town assets including the Pines Recreation area, the proposed Center Street Greenway, Shanahan Field, Bagnall Elementary School, Perry Park School, Groveland Center, Elm Park, the Langley-Adams Public Library, the Groveland Town Hall, Police and Fire Departments, and multiple residential densities across Groveland.

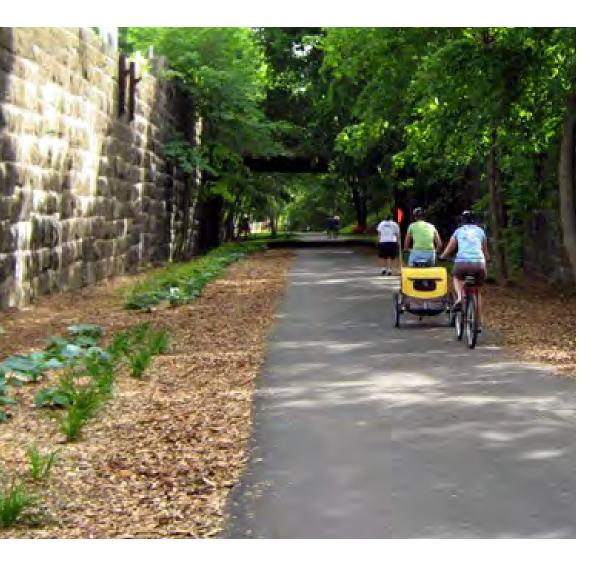
NGRID recently requested that all projects with overhead wires obtain the clearance of their wires above the proposed trail. This is to ensure that not only are the intended users safe but, that construction vehicles can access the corridor safely. Stantec purchased the required equipment necessary for these measurements, provided the measurements, and provided NGRID with the required plans.

In addition to completing design of the Groveland Community Trail, our team also completed a conceptual design memo to identify opportunities to improve on-road bicycle connectivity between the proposed Groveland Community Trail and the Groveland Town Offices by determining potential bike routes and recommending improvement options. Improved access will benefit residents, as the Groveland Community Trail is envisioned to be part of a larger bicycle transportation network with potential for connections to the Border to Boston Trail, Bradford Rail Trail, and the Bradford MBTA Commuter Rail Station.





Early utility coordination



Clipper City Rail Trail

LOCATION: NEWBURYPORT, MASSACHUSETTS

PROJECT SIZE: 1.5 MILES

With Phase I of the Clipper City Rail Trail project complete, our team is now working with the City of Newburyport on the realization of Phase II. This second phase will further the city's mission of providing improved public waterfront access along the banks of the Merrimack River, as well as opportunity for recreation and sustainable modes of transportation.

Phase II of the project will involve the construction of a 1.5 mile multi-use trail along a former Newburyport Railroad City Branch line. The path will begin at a boardwalk downtown, continue along the waterfront of the Merrimack River, and then turn inland, following the old rail through City neighborhoods.

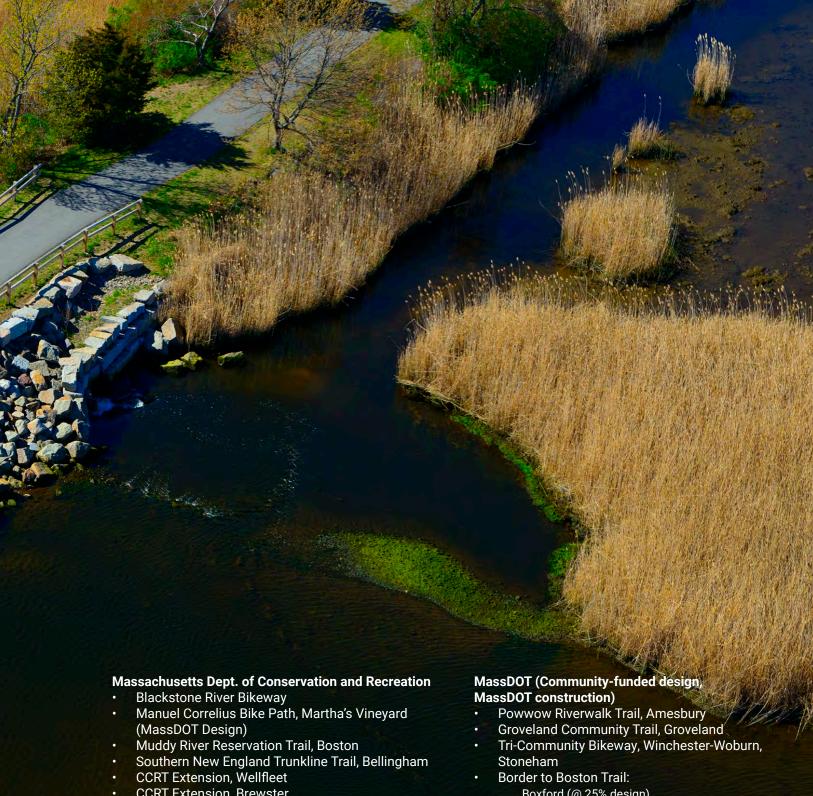
Like Phase I, Phase II of the project takes place in an area of priority habitat for several endangered species, and will require our designers and environmental scientists to coordinate with the Conservation Commission and the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife to obtain the required environmental permitting. Keeping the public involved and informed will also be of high importance, and we will coordinate several public outreach meetings throughout the design, implementation and completion of Phase II.











CCRT Extension, Brewster

Boston Redevelopment Authority

Narrow Gauge Trail, East Boston

Gateway Cities Projects

- Twin Cities Rail Trail, Fitchburg Leominster
- Concord River Greenway, Lowell
- Quequechan River Rail Trail, Fall River
- Methuen Rail Trail, Methuen
- Monoosnoc Brook Trail, Leominster
- Northern Strand Rail Trail, Everett, Malden, Revere, Saugus, Lynn

Boxford (@ 25% design)

Boxford to South Georgetown (@ 25% design) North Georgetown to Newbury (@25% design)

Salisbury (@ 75% design phase) Bradford Rail Trail, Haverhill

Community Trail (Design and construction funded by the community)

- Shining Sea Bikeway, Falmouth
- Clipper City Rail Trail, Newburyport
- Swampscott Rail Trail, Swampscott



| | AIL PROJECTS | Miles |
|--|--|-------|
| Name | Location | Miles |
| Ashburnham Rail Trail (25%) | Ashburnham, MA | 1.5 |
| Bike to the Sea Trail (Northern Strand) | Malden/Medford/Saugus/Everett/Lynn | 9 |
| Blackstone River Greenway Segment 1 | Millville & Blackstone, MA | 4 |
| Blackstone River Greenway Segment 7 | Worcester, MA | 1.5 |
| Border to Boston Rail Trail Study | Danvers – Newburyport, MA | 30 |
| Boxford Recreational Trail Study | Boxford, MA | 4.3 |
| Bruce Freeman Rail Trail Study | Acton, Concord & Sudbury, MA | 12.7 |
| Cape Cod Rail Trail Redesign | Dennis to Wellfleet, MA | 23 |
| Chelsea Greenway (On & Off-Road) | Chelsea, MA | 1.8 |
| Clipper City Rail Trail | Newburyport, MA | 4 |
| Cochituate Rail Trail Study | Natick, MA | 2.7 |
| Concord River Greenway | Lowell, MA | 0.9 |
| Discover Hamilton Trail | Hamilton, MA | 11 |
| Dow Brook Conservation Trail | Ipswich, MA | 1 |
| East Coast Greenway | Portland – Bangor, ME | 128 |
| East Coast Greenway | Portland – Ellsworth, ME | 154 |
| Emerald Necklace Bike Path | Boston, MA | 1 |
| Georgetown Recreational Path Study | Georgetown, MA | 4.5 |
| Groveland Community Trail | Groveland, MA | 2.0 |
| | Fairhaven, MA | 2.0 |
| Little Bay Bike Loop | | 1 |
| Lizzy's Trail | Hamilton, MA | - |
| Long Island Scenic Byway | East Hampton – Montauk, NY | 25 |
| Manuel Correllus State Forest Bike Path | West Tisbury & Edgartown, MA | 2.2 |
| Methuen Rail Trail | Methuen, MA | 2.0 |
| Mill River Bicycle & Pedestrian Trail | Stamford, CT | 1 |
| Mystic River Trail | Somerville, MA | 1 |
| Mystic River Reservation Trail | Medford, MA | 0.6 |
| Nashua Heritage Trail | Nashua, NH | 1.3 |
| Nashua River Rail Trail | Ayer, Groton, Pepperell, Dunstable, MA | 11 |
| Peabody Bikeway | Peabody, MA | 6.6 |
| Powwow Riverwalk | Amesbury, MA | 0.1 |
| Quequechan River Rail Trail (Phases 2 & 3) | Fall River, MA | 1.5 |
| Quequechan River Rail Trail (Phase 4) | Fall River, MA | 0.7 |
| Quinebaug Five Mile River Trail | Danielson, CT | 3.6 |
| Quinebaug River Trail Phase III | Killingly, CT | 4 |
| Quinnipiac River Gorge Trail | Meriden, CT | 1.5 |
| Salisbury Rail Trail (Old Eastern Marsh Trail) | Salisbury, MA | 1.4 |
| Shining Sea Bikeway | Falmouth, MA | 1.4 |
| South County Bike Path | Narragansett – South Kingstown, RI | 8 |
| | | 5 |
| South Fork Bikeway South Orleans to Orleans Trail Study | Southampton – East Hampton, NY | + |
| | Orleans, MA | 2.6 |
| Squannacook River Rail Trail Study | Townsend & Groton, MA | 3.3 |
| Tri-Community Bikeway | Winchester, Woburn, Stoneham, MA | 6.5 |
| Twin Cities Rail Trail | Leominster & Fitchburg, MA | 4.7 |
| Wakefield-Lynnfield Rail Trail Study | Wakefield & Lynnfield, MA | 4.4 |
| Ware River Valley Rail Trail | Ware, MA | 3.5 |
| Washington Secondary Bike Trail | Warwick, RI | 1.5 |
| Woonasquatucket River Greenway / Northwest Bike Trail | Providence, Smithfield, Johnston, RI | 32 |
| I-295 Trail | Portland, ME | İ |
| | Total | 536 |

Our Team





Bill Reed PE Senior Principal

A Senior Principal of the firm, Bill manages our region's Transportation Group. Bill serves as principal-in-charge for our trail projects, overseeing contractual and administrative matters. Bill has served in this role for the great majority of the firm's bike trail development projects in the Northeast.



John Hendrickson PE

Senior Associate

John is our leading trail development specialist, having led some of the largest trail programs in the region in the last 10 years. He managed the majority of Stantec bikeway projects, both planning and design, and has received numerous awards and commendations for his work. As leader of our Bike Team, John has served as Project Manager for all of projects detailed in this Qualifications package, and for many others. Outside of the office, John is an avid biker and enthusiastic advocate for trail programs, and an active volunteer for trail development throughout Massachusetts.



Aleece D'Onofrio PE Senior Transportation Engineer

Aleece has over 10 years of experience in trail planning and design. Her work at Stantec has focused on trail design on projects ranging in scope from conducting initial feasibility studies to full design of major regional trail corridors connecting a number of communities. An overview of her recent work includes serving as Project Engineer for design of the new 1.6-mile Quequechan River Rail Trail in Fall River, and the 19-mile northern section of the Border to Boston Trail for MassDOT. She has a strong and varied civil engineering background, and extensive experience dealing with the full scope of design and permitting issues that are key to successful trail design.



Joe Rubino EIT Engineer In Training

Joe is another key member our Bike Team, and has worked closely with John and Aleece on trail designs throughout the State. An overview of his work includes the 19-mile Border to Boston Trail, Quequechan River Rail Trail in Fall River, development of the Groveland Community Trail in Groveland, and design of the Tri-Community Bikeway through Winchester, Woburn and Stoneham.

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise; to appreciate nuances and envision what's never been considered; to bring together diverse perspectives so we can collaborate toward a shared success.

We're designers, engineers, scientists, and project managers innovating together at the intersection of community, creativity, and collaboration. Balancing these priorities results in projects that advance the quality of life in communities across the globe. Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at stantec.com or find us on social media.

