STATEMENT OF QUALIFICATIONS

Town of Acton

Final Design Services for Phases 2A and 2C of the Bruce Freeman Rail Trail

Submitted to:

Town of Acton
Town Hall
472 Main Street
Acton, MA 01720

Attention: Steven Ledoux
Town Manager

November 8, 2010

GPI

Submitted by:

Greenman-Pedersen, Inc.
105 Central Street, Suite 4100
Stoneham, MA 02180
781.279.5500
www.gpinet.com

GPI Greenman - Pedersen, Inc.

Engineering and Construction Services

November 8, 2010

Mr. Steven Ledoux, Town Manager
Acton Town Hall
472 Main Street
Acton, MA 01720

SUBJECT: Statement of Qualifications for Bruce Freeman Rail Trail, Phases 2A and 2C, Final Design

Dear Mr. Ledoux:

Greenman-Pedersen, Inc. (GPI) is excited about the opportunity to continue working with the Towns of Acton, Carlisle, Westford and Concord on the **Final Design for the Bruce Freeman Rail Trail (BFRT) Phases 2A and 2C. GPI** has selected the firms of **Nover-Armstrong Associates, Inc. (Nover-Armstrong), Green International Affiliates, Inc. (Green)** and **Nobis Engineering, Inc. (Nobis)** to join our Team in finalizing the design of almost eight miles of trail through the four communities including seven bridges in Acton and and two bridges and a tunnel in Concord. **GPI** is prepared to advance the design of Phases 2A and 2C as one project.

Why choose GPI?

- Familiarity with Bruce Freeman Rail Trail and its challenges
- Extensive overall rail trail design experience
- Experience working on large MassDOT projects
- Experienced and qualified staff available and committed to the project

GPI offers a full range of engineering services including civil and traffic engineering, shared use path and roadway design, bridge design, stormwater management and drainage design, environmental permitting, utility design, transportation planning, traffic studies, traffic signal design, land surveying, right-of-way and layout, and the preparation of construction bid documents. This expertise comes with extensive experience and knowledge of not only the design portion of a project, but also a practical understanding of the constructability and future maintenance requirements that these projects present. **GPI** is prequalified with Massachusetts Department of Transportation – Highway Division (MassDOT) in Basic, Intermediate and Complex Roadway Design; Basic, Intermediate and Complex Bridge Design and Rating; Traffic Operations Studies & Design; Construction Contracts Assistance; Hydraulics and Hydrology; Transportation Planning; Photogrammetry; and Intelligent Transportation Systems.

GPI has been working with the Towns of Acton, Carlisle and Westford on the preliminary design of Phase 2A of the BFRT since we were selected for the project in 2006 through the present. Even after completion of the public hearing, MassDOT approval of the 25% design submission and submission of our final invoice in November of 2008, **GPI** remained active and involved in the project continuing to coordinate the project with the MassDOT Project Manager and Contracts section; coordinate the Right of Way process and Title Search with the MassDOT Right of Way Bureau and Mr. Tim Doherty and Ms. Chalita Belfield of the Office of Transportation Planning; attend project meetings; participate in project conference calls; respond to requests for information; and answer questions from the Towns and MassDOT as they arose. **GPI's** previous experience with the Towns also includes preparation of a Transportation Enhancement Application for Phases 2A and 2C of the BFRT. After

review of this application by the Transportation Enhancement Steering Committee, the projects were approved as eligible for nearly $1.4 million in statewide transportation enhancement funds.

GPI has been working with the Town of Concord on Phase 2C of the BFRT since mid 2008 when **GPI** was approached by the Town of Concord to assist them with the Transportation Enhancement Application process. GPI's work continued with the Town on Phase 2C of the BFRT when **GPI** was selected to perform an alternatives analysis for Phase 2C of the BFRT to cross the active MBTA Commuter Rail Line in West Concord. **GPI** Engineers evaluated seven alternatives and variations of each for this crossing, prepared a report and presented the alternatives to MassDOT, MBTA, the Town and the public. **GPI** also conducted a Townwide traffic signal inventory for the Town and as a result of this study designed improvements for the Sudbury Street at Thoreau Street intersection. This inventory included the signal at Main Street and Commonwealth Avenue where the BFRT will cross the roadway.

In addition to our work with Acton, Carlisle, Westford and Concord, **GPI** has established a long and successful relationship with many Massachusetts communities and MassDOT, having worked on numerous projects of a similar nature. We are very enthusiastic about the opportunity to expand upon our successes by continuing to work with the Towns of Acton, Carlisle, Westford and Concord on this assignment. Our extensive experience in rail trail design and highway, traffic and structural engineering, our demonstrated knowledge and working relationship with MassDOT, and our years of experience and history on the BFRT, make **GPI** an ideal candidate for this project.

The **GPI** Team will be further enhanced with the addition of the sub-consultant firms of **Nover-Armstrong** to provide Environmental Permitting and Stormwater Management assistance, **Green** to provide survey and engineering support and **Nobis** to conduct the geotechnical engineering. In addition to their technical qualifications, **Nover-Armstrong** is a certified DBE/WBE and **Nobis** and **Green** are both certified DBE/MBE's by the Massachusetts Commonwealth Supplier Diversity Office (SDO, formerly SOMWBA). With their inclusion GPI will be able to satisfy the goals for the project. **GPI** has a working relationship with all three firms and is currently working with them on several projects throughout Massachusetts.

NOVER-ARMSTRONG ASSOCIATES, INC.

Nover-Armstrong joins the **GPI** Team to assist with the environmental permitting and stormwater management. They are also prequalified in hazardous waste if the services become necessary. The firm was established in May 2003 by Marta Nover and Marylou Armstrong, LSP. Ms. Nover and Ms. Armstrong have worked together for over twenty years and are highly regarded professionals within their field. They are complimented by a team of highly qualified professionals who enjoy working on challenging and rewarding projects in an environment that fosters sharing knowledge and experience to achieve the best results. **Nover-Armstrong** possesses the equivalent technical capabilities and breadth of experience as a large, established consulting firm yet can still provide personal attention to all their clients as evidenced by many unsolicited written testimonials they have received. Expert

knowledge, long-term professional relationships and client trust is the foundation on which **Nover-Armstrong** was built. **Nover-Armstrong** is prequalified with MassDOT in hazardous waste, wetlands and water quality. **Nover-Armstrong** is currently serving as a sub-consultant to **GPI** on our MassDOT Statewide Engineering and Design Review Service Contract and the Route 109 Reconstruction project in Medway, MA.

Green, established in 1954, is a multidiscipline civil engineering firm joining the **GPI** Team to provide supplemental survey and engineering services as required. With a staff of approximately 60 professionals, **Green** provides a full spectrum of civil, structural, transportation and environmental engineering services. The firm also retains its own landscape architect, survey crews and construction inspectors. **Green** previously completed the survey of Phase 2C (Concord) of the BFRT while working with another consultant. **Green** has been serving MassDOT since the company's inception. **Green** has served on continuous open-ended bridge contracts for MassDOT since 1992. Through these contracts, **Green** has completed over a dozen bridge projects throughout Massachusetts. Assignments and renewal of contracts were based on **Green's** performance. **Green's** Survey Department is run by a licensed Professional Land Surveyor who presently is supervising three survey crews. **Green** is prequalified with MassDOT in roadway and bridge design, traffic operations and landscape architecture. **Green** is currently serving as a sub-consultant to **GPI** on many of our MassDOT open end highway and structural projects and the Canal Street Bridge over the Spicket River in Lawrence, MA. **Green** was also part of **GPI's** 128 Add-a-Lane team in the towns of Dedham, Westwood and Needham, MA.

Nobis joins the **GPI** Team to complete the geotechnical engineering. ***Nobis*** is a civil, environmental, and geotechnical engineering and construction management firm founded in 1988 to meet the needs of New England's major private development and public sector clients. Their steady growth over 19 years to a firm of over 70 professionals is the direct result of their strong performance as design professionals for a growing list of satisfied clients. ***Nobis*** provides professional services to private and commercial developers, corporate and institutional owners, federal and public agencies, architects, and other design professionals. To date, ***Nobis*** has completed more than 8,500 assignments in 46 states, while maintaining an impeccable health and safety record and an 89% repeat client rating. ***Nobis*** develops geotechnical engineering solutions for complex structures and construction projects that have a range of subsurface conditions and structures. They have extensive knowledge of soil management, ground improvement, shallow and deep foundation, and geosynthetics engineering. It is anticipated that ***Nobis*** will provide expert oversight during subsurface investigations, develop retaining wall solutions, temporary supports of excavation, evaluation of existing foundations, retaining structures and roadway sub-bases. Nobis is prequalified with MassDOT in Geotechnical Engineering. **Nobis** is also currently serving as a sub-consultant to **GPI** on many of our MassDOT open end highway and structural contracts and recently completed the geotechnical investigation on two of our Accelerated Bridge Contracts in Fitchburg, MA.

As demonstrated in our submittal, we feel that the **GPI** Team is well qualified to perform the final design services necessary for Phases 2A and 2C of the BFRT. **Mr. Christer Ericsson, P.E.** shall serve as the **Project Manager**. **Mr. Ericsson** is a Civil Highway and Transportation Engineer with 24 years of experience in rail trail design, roadway reconstruction, traffic and sidewalk design projects involving roadways ranging from local facilities to major highway and freeway. As Project Manager, he will not only be responsible for the overall management of the project, but also be available to meet with the Towns and make any necessary presentations as may be required during the project. **Mr. Ericsson** will take a hands-on approach with substantial involvement in the final design of Phases 2A and 2C of the BFRT as he did with the Preliminary Design Contract for Phase 2A. He will provide top-level guidance and oversight of the Project Team's activities to see that the project's progress, budget and quality objectives are met in a satisfactory manner. **Mr. Ericsson** is a Registered Professional Engineer in Massachusetts. As Branch Manager of the New England Branch located at 105 Central Street, Suite 4100 in Stoneham, MA 02180 and a Senior Vice President with **GPI, Mr. Ericsson** also has the authority to negotiate and contractually commit to all services. **Mr. Ericsson** is easily accessible by phone (781-279-5500 x 3003), cell phone (603-770-5637) or by email (cericsson@gpinet.com).

Ms. Rebecca Williamson, P.E. shall serve as the **Recreational Trail Design Project Lead** and will responsible for the day to day management of the engineering efforts. **Ms. Williamson** has over twenty years of an extensive and varied background as a designer and project manager on multi-disciplined projects, including urban streets, highways, bike trails and site developments. She has directed and supervised all phases of design, including studies, design review, plan development, specifications and estimates. A specialist in project control and schedule and budget adherence, she also has extensive experience in public speaking and community participation, having moderated and presented at public hearings, community meetings and workshops. Along with **Mr. Ericsson**, **Ms. Williamson** will also be available to meet with the town and make any necessary presentations that may be required. She is also easily accessible by phone (781-279-5500 x 3007), cell phone (508-982-4969) or by email (rwilliamson@gpinet.com). She too will have substantial and direct involvement in the project as she did with the previous contracts with the communities.

One of the vital aspects of any project is communication and participation. At the earliest possible opportunity, **GPI** will meet with Town staff to discuss the project goals and objectives. Furthermore, it is critical that the local residents and business owners be involved early in the project to ensure that the proposed design improvements are consistent with the area's goals and characteristics. At **GPI**, we are not only concerned about providing a safe and feasible design, but more importantly, providing a safe and feasible design *that works for the communities, its residents and businesses.* By selecting **GPI**, the Towns of Acton, Carlisle, Westford and Concord will have a consultant that truly listens and pays attention to specific needs and requests of all interested parties.

The Town is encouraged to contact any of our references regarding **GPI**'s achievements in addressing the concerns of the community and advancing their projects to the construction phase. In addition, please feel

free to contact the MassDOT Boston and/or District 3 and 4 Offices regarding **GPI**'s experience and ability to meet schedules. Our attention to details and follow-through is reflected in the repeat business we enjoy from our clients.

As one of the top recreational trail designers in the eastern United States, **GPI** is fully prepared to begin design immediately upon Notice to Proceed and welcomes the opportunity to utilize our experience to continue to prove to the towns that the selection of **GPI** was the appropriate choice. We wish to thank you for considering **GPI** for this project and look forward to continuing our work with the Towns of Acton, Carlisle, Westford and Concord on the Final Design of the BFRT. If you have any questions, or require additional information, please do not hesitate to call me at (781) 279-5500 ext. 3003.

Best regards,

GREENMAN-PEDERSEN, INC.

Christer Ericsson, P.E.
Senior Vice President/Branch Manager

Town of Acton
Final Design Services for Phases 2A and 2C of the
Bruce Freeman Rail Trail

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A. PROJECT UNDERSTANDING AND APPROACH

Greenman-Pedersen, Inc. (GPI) spent over a year developing, discussing and negotiating the scope and fee for the final design of Phases 2A and 2C of the BFRT with MassDOT for the project. As such, GPI is intimately aware of the goals and milestones that must be addressed and achieved. GPI is thoroughly familiar with the MassDOT design process and our work is held in high regard by MassDOT as highlighted by GPI recently being ranked number one out of forty one firms on the Statewide Design and Review Contract advertised by them this year. Therefore, GPI will utilize this section to concentrate on some of the outstanding design aspects and technical issues, in no particular order, which must be addressed in order to advance the design in addition to the typical design elements required by the 2006 MassDOT Project Development and Design Guide.

During the initial Title Search research conducted by the communities of Acton, Westford and Concord, it was determined that ownership on some parcels was in question and further research was necessary. It is also unclear exactly what documents must be produced for the MassDOT Office of Planning. The Title Search must be complete in order for the MassDOT Office of Planning (EOT) to grant a land transfer or lease. During the last conference call that GPI had with MassDOT, they had indicated that they were still unsure of how the land will be conveyed for trail use. Upon receipt of Notice to Proceed on Final Design, a meeting will be coordinated to resume this process, determine what each of the communities must do to finalize the title search so that the MassDOT Office of Planning can transfer/allow use of the land.

Further coordination with the Natural Heritage and Endangered Species Program (NHESP) will be required for both Phases 2A and 2C during the Notice of Intent process. Their initial review of the plans determined that the project site is located partially within Priority Estimated Habitat. Two state-listed rare species have been found in the vicinity of Phase 2A and four state-listed rare species have been found in the vicinity of Phase 2C. In addition, fisheries resources, Nashoba and Butter Brooks, are located in the vicinity of Phase 2A. Fisheries surveys of these resources identified thirteen species. As a result, all in stream work must be conducted during low flow periods and best management practices (BMPs) must be incorporated into the design. NHESP review of the Phase 2C plans also determined that the project site intersects with three certified vernal pools.

As part of the site plan approval for Powers Gallery (located at 144 Great Road, Acton), an easement was provided with the intent to provide trail access through the site to Great Road. Based on a review of the site plan, it appears that stormwater management BMP's encroach on this easement. Therefore additional coordination with the property owner and Town will be necessary to design the trail access through the site to Great Road.

As part of the Town's development of the East Acton Village Green (located at the corner of Route 2A/119 and Concord Road) continued coordination is required to ensure proper alignment of the trail and amenities associated with the Village Green. Drainage concerns have also been identified in this area which will be evaluated during final design.

In order to better ensure ADA compliance, the approaches to the bridge over 2A/119 will be reduced to 4%. Also, continued coordination with utilities will be required to make sure overhead utilities do not conflict with the bridge as well as a water main owned by Concord Water. The proposed bridge falls within habitat so it is likely that culverts/crossings will be required in the MSE walls (as shown on the 25% design plans) due to the length to allow movement from one side to the other. It will also be critical to coordinate this bridge design as well as all others within the project limits with the community to ensure satisfaction with the aesthetics. If desirable, renderings could be placed on the Town website for polling purposes.

Phase 2A of the BFRT runs behind the Dunk and Bubble business located at 781 Main Street, Acton. This business currently utilizes the trail ROW for access behind their building. Coordination with this property owner is required to ensure that they understand the impacts of the project. A timber rail fence is proposed to ensure separation between trail users and vehicles. A formal easement between the Town of Acton and the owner should be considered and incorporated into the Preliminary Right-of-Way Plans.

The Phase 2A trail alignment at the North Acton Recreation Area (NARA) and around Rex Lumber has been coordinated with the Town and Rex Lumber. However, this alignment will be revisited with the appropriate parties to make sure all are satisfied. Consideration will be given toward the implementation of structural

supports in the vicinity of the Rex Lumber "drying racks" to ensure the safety of trail users in the event of a failure of the racks/building.

The Phase 2A trail crossing of Route 27 is on a horizontal curve where sight distance is limited and 85th percentile vehicle travel speeds are approaching 50 miles per hour. Additional survey will be obtained to specify the amount of clearing and grading that is required to ensure proper sight distance and safety at the crossing.

In order to finalize the design of the parking lot at 1019 Main Street (Route 27), additional field survey will be obtained to ensure its safe operation. Input from the Town will be gathered to determine the desired number of parking spaces at this lot. GPI will also assist the Town of Westford in exploring opportunities for parking in the Town.

The Phase 2A 25% design plans showed improvements at the intersection of Carlisle Road (Route 225) at Acton Road (Route 27) including the construction of exclusive left turn lanes along each approach. After submission of the plans, the Town of Westford decided that it would be impossible to implement the improvements due to abutter's unwillingness to cooperate. At that point it was decided that the 75% design plans for the BFRT project would only include new pedestrian signal equipment at this intersection as well as the retiming/phasing of the controller to incorporate a pedestrian phase for the trail crossing. Recent conversations with Mr. Paul Starratt, P.E., Westford Town Engineer, however indicate that work is being proposed on the Veteran's Housing parcel and the owner is amenable to working with the Town. Further coordination will be required with the Town to finalize the design of the intersection.

Although an MBTA crossing alternative was selected for Phase 2C after meeting with MassDOT, the MBTA, DTE (Department of Telecommunications and Energy), the Town and the community, it will be critical to work with the businesses along Commonwealth Avenue and keep them informed during the finalization of the design through this area. Business owners lined up one after another the night the Alternatives were presented to the community voicing concerns regarding the impact of the trail on their businesses. Prior to finalization of a cross section and completion of the Design Exception Report, GPI would recommend meeting with the Town and the affected business owners.

Further analysis will be required to determine the most economical and least disruptive solution for replacing the Powder Mill Road culvert. This analysis will consider staged construction to allow Powder Mill Road to operate as a one lane road and closing Powder Mill Road. Traffic maintenance and duration of construction will be determining factors associated with the chosen solution. GPI will investigate structure options including jacked concrete tunnels, cut and cover prefabricated tunnels and a new bridge structure.

Coordination with MassDOT will be required to finalize the southern project limits for Phase 2C with regard to design and construction. The limits will hinge on the status of Phase 2D and the ability to provide an adequate and logical termination. GPI's recommendation is to complete the design in its entirety and work with MassDOT regarding how much of 2C is constructed. Coordination with MassDOT will also be required regarding Phase 2B and its status and providing adequate and logical terminations at that location.

Similar to what was implemented along BFRT Phase 1, the Phase 2A 25% plans called for "textured pavement" at the approach to each roadway crossing. Based on input from some of the "Friends of the BFRT", this pavement treatment may not be desirable. Additional input will be collected from the Friends to obtain input about "lessons learned" from Phase 1. Town officials from Lowell, Chelmsford and Westford (as well as the Phase 2A and 2C communities) will also be contacted to solicit input and feedback regarding the Phase 1 construction. The Friends of the BFRT have been working on the Phase 1 trail amenities and are looking for consistency along the proposed trail.

GPI has also received emails from a representative of the Board of Selectmen in Acton regarding the proposed design and allowing Design Review Board to be involved in the proposed design. Many of them have concerns that Phase 1 of the trail looks very urban and "city-like" and that "it looks like Disney World" where the trail meets Routes 225 and 27. They feel that it fails to increase the charm and value of the community and detracts from the rural character of the area. GPI had previously agreed to follow up and discuss these concerns and the best way to advance the design.

B. PUBLIC PARTICIPATION

One of the three guiding principles of MassDOT's Project Development and Design Guide (Guide) is Context Sensitive Design - allowing all constituents to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources. The Guide acknowledges that every project is unique. GPI follows MassDOT's Policy as detailed in the Guide which stresses upfront and continued community involvement on projects to ensure that investments in transportation infrastructure not only meet the needs of the communities by providing safe accommodations for all users of the public rights-of-way, but also that they consider incorporating the character of the project area, the values of the community and the needs of all roadway users. GPI understands that the community is better able to identify local and regional problems as well as solutions that may better meet and balance the needs of all stakeholders. After coordination with the MassDOT Project Manager, hours have been included in the BFRT Scope and Fee for an additional public hearing for Phase 2A and for Phase 2C. This demonstrates MassDOT's commitment to public outreach.

"Local residents are most familiar with the unique qualities that make their communities special."

As part of the Community Participation effort for all our projects, GPI identifies and contacts project constituents at the start of the project to help determine any initial concerns/issues and to solicit input. Any issues and requests voiced to GPI are then discussed with the client to determine what should be considered as the project moves forward. GPI has been instrumental in assisting clients with the essential task of continuing active communication throughout the project for maintaining consensus and keeping constituents informed of progress and issues. Having been involved in the preliminary design and/or studies for the BFRT in all four communities, GPI is aware of many of the concerns. GPI has also received numerous emails and phone calls to date from town representatives, community members and Friends of the Bruce Freeman Rail Trail voicing concerns and requesting opportunities to be involved in the design of the BFRT with regard to amenities and aesthetics. GPI encourages community member input with regard to amenities and aesthetics since they are the end users.

GPI's years of trail experience have proven that public perception of trail development projects varies from complete acceptance and support to major opposition. The acceptance usually comes from the potential users of the facility and forward thinking local officials who see the facility as an enhancement of their community. Opposition typically comes from the adjacent landowners who see the trail as an intrusion into their property or an invitation for crime and from a lack of information and unanswered questions. GPI is aware that there is a tremendous amount of opposition in Westford from direct trail abutters with regard to parking and there is an active group in Concord that is opposed to some of the design as currently proposed. We will work with these groups to answer questions, provide information, listen to their requests and help alleviate concerns.

History dictates that most rail trails are the result of a cooperative effort between an active citizen group, a responsive public agency and a supportive community all of whom share a vision for the trail. To ensure that these groups are in agreement, there must be early and extensive outreach and it must be continued through every stage of development. GPI's past experiences have proven time and time again that abutter input and inclusion in the process will encourage acceptance, support and cooperation. By keeping the public informed and listening to them, GPI can ensure that the design will minimize any adverse impacts directly to their properties or to their businesses.

RTC studies have shown that 85% of all trails open with no opposition if citizen concerns are addressed through outreach to the community.

(RTC – Rails to Trails Conservancy)

GPI has been successful with advancing design and removing trail opposition in the past by responding quickly to suggestions, concerns and comments. We have created opportunities as necessary for one on one communication and involved landowners in the project to the extent possible. During the development of the Preliminary Design Plans for Phase 2A, GPI met with several key project abutters to solicit input and address individuals concerns. Individual appointments were made with Jeff Bursaw of Bursaw Oil, John and Stacie Durkin of Wetherbee Street, Craig Forrester of Rex Lumber, Brewster Conant regarding the Isaac

Davis Trail, Larry Powers of the Powers Gallery and Tom McLaughlin of Acton Indoor Sports. During those appointments, the abutters were able to express their opinions and ask questions to GPI and the Town. This process also worked well on other rail trail projects such as the Milford Upper Charles Trail. This process also worked well in the Town of Milford relative to the Milford Upper Charles Trail. The Chairman would share plans and information with the Trail Committee on a monthly basis and provide GPI with input and feedback as the design progressed.

In addition to one on one communication, GPI will also host public meetings, open houses and/or workshops to present alternatives, answer questions and address concerns before advancing to the next design stage. GPI can also provide design options regarding amenities and aesthetics such as bridge type for posting on Town and/or Friends of the BFRT websites for comment and polling purposes. We will maintain an open line of communication with Town officials, citizens and neighbors. GPI will meet with Town officials as necessary to discuss project issues, potential design alternatives and answer questions. GPI's goal will be to develop a design that works for and will be supported by Town Officials and the community and will be approved by MassDOT.

Another major concern of many trail abutters is feeling secure and private. Abutters along the proposed path may request screening utilizing landscaping, fencing or a combination of both to maintain privacy or to screen objectionable views such as the screening requested by Jeff Bursaw, Bursaw Oil at the back of his property that matches the existing fencing on his property. It will certainly be GPI's goal to control and block unwanted informal access to abutting resource areas and properties, however, it is through the community outreach and participation that we become aware of individual abutter concerns and requests. GPI does understand that abutters often make unrealistic requests that the Town may not support and MassDOT may not approve and this is always taken into consideration. The design and materials of necessary screening will vary according to the nature of the adjacent properties and the potential views into and out of the bike paths. Privacy for abutters will need to be evaluated on a case-by-case basis and established through specific mitigation measures acceptable to both parties. GPI previously met with Brewster Conant regarding the Isaac Davis Trail. As a result, GPI will be proposing Private Property signing at the trail crossing while a plaque describing the trail and its historical significance will be located at a different location of the BFRT. It will be important to discuss these measures with the property owners during the design phase.

GPI also understands that it is helpful to present a limited number of options and alternatives to the public that have been previously discussed with Town Officials and MassDOT. This worked well during the preliminary design of Phase 2A and the development of the Route 2A/119 crossing alternatives. GPI developed nine different alternatives for the crossing. These nine alternatives were presented to MassDOT and the Town. The nine alternatives were narrowed to three for presentation to the public.

For any public meeting, GPI will develop visuals for display. GPI develops photo renderings, AutoCAD alternatives and simulation models of proposed design alternatives and features to help attendees visualize the proposed design. During the preliminary design, GPI created photoshop renderings of a proposed pedestrian bridge over Route 2A/119 and a signalized/gated railroad type crossing for public presentation.

During the Preliminary Design of Phase 2A, GPI had regular conversations with members of The Friends of the Bruce Freeman Rail Trail regarding concerns, issues, questions and requests. In addition, with prior approval from the Town, GPI provided them with documents for posting on their website and even made a presentation at one of their meetings. The Friends of the Bruce Freeman Rail Trail is a very active and involved group and it is assumed that they will continue to assist with any public outreach and information gathering required.

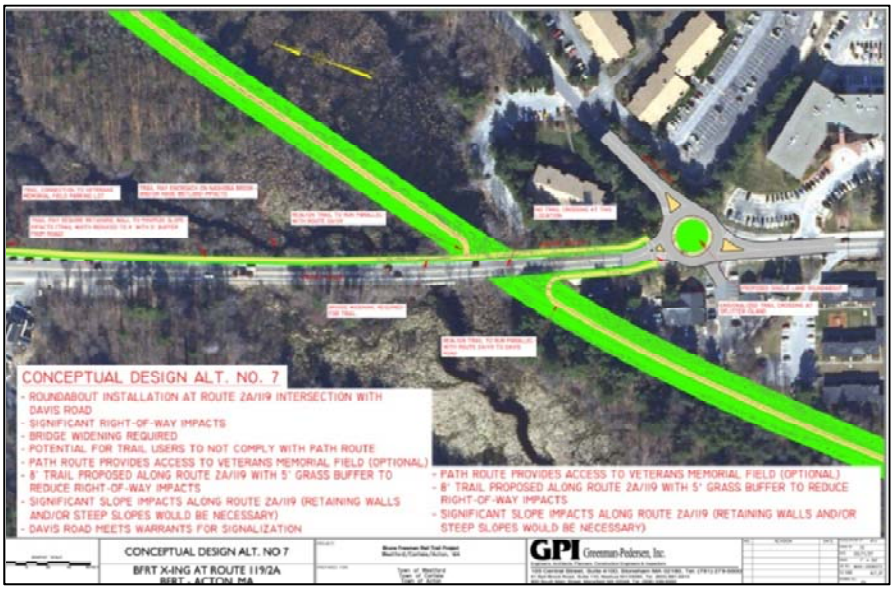
C. SAMPLE MATERIALS

Community involvement is an essential element of every project. Past experience has shown that citizens and landowners are often concerned when a rail trail project is being proposed close to home. They have many concerns including noise, privacy, littering, property damage, trespassing and impact on business. By the same token, with early community involvement history has shown that 85% of all trail projects are able to advance with little or no public opposition. People often fear the unknown. Therefore, outreach to the community serves to provide information to prevent and/or ease opposition to trails. Public hearings and meetings with concerned citizens to inform and ask for input is critical.

The general public often struggles with reading and interpreting engineering plans. To help the community better understand our projects, when presenting to the public GPI transitions the black and white lined engineering plan into a colorfully, labeled plan easily read and understood by the general public. In addition to colored plans, GPI uses modeling software and renderings to present to the public and help them better understand and visualize the proposed design. Often times with more complex project features, GPI develops numerous alternatives to present to the public for acceptance prior to finalizing the project design. Below is a sampling of our community participation efforts on several projects.

BFRT Phase 2A – Route 2A/119 in Acton, MA

A critical design element of the project was the trail crossing of Route 2A/119. The roadway is heavily traveled and concerns were voiced regarding the safety of trail users in this location. In order to address these concerns, GPI developed nine different alternatives for the crossing utilizing aerial mapping and AutoCAD. Each alternative was evaluated for safety, cost, right of way and environmental impacts, public support and constructability. These alternatives were presented to MassDOT and Town representatives. The nine alternatives were narrowed to three alternatives which were presented to the public at a 10% design meeting prior to advancing the design to the 25% level. In addition to the aerial mapping and AutoCAD display boards, GPI developed photoshop renderings of the proposed crossing mechanism (samples follow).



Alternative Sketch

BFRT Phase 2A (Continued)

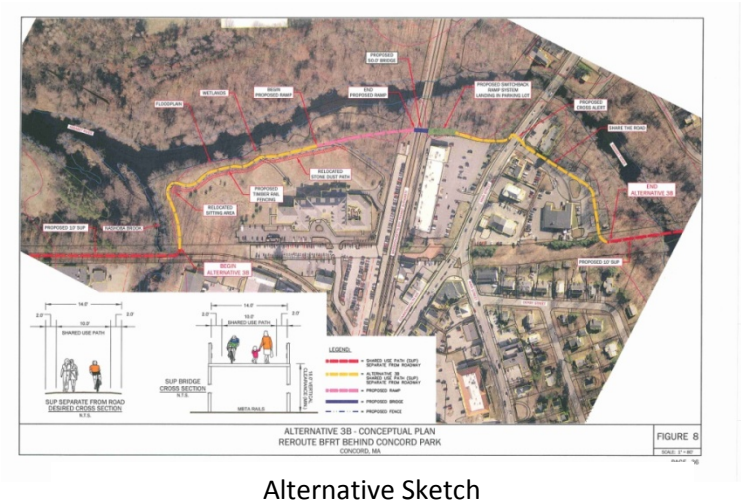
Route 2A/119 – Existing Conditions

Route 2A/119 – Bridge Crossing Alternative

Route 2A/119 – Gated Crossing Alternative

BFRT Phase 2C – West Concord Center, MA

A critical design element of the project was the BFRT crossing of the active MBTA Commuter Rail Line at West Concord Station. In order to address this crossing, GPI developed seven different alternatives with variations utilizing aerial mapping and AutoCAD. GPI met with the MBTA, MassDOT, DTE, Concord BFRT Advisory Committee and the Town. GPI presented the alternatives to the Concord BFRT Advisory Committee. Three were selected for presentation to the public at a televised meeting. After public input was received, we presented the selected options to MassDOT for their input. Sample materials are included below.



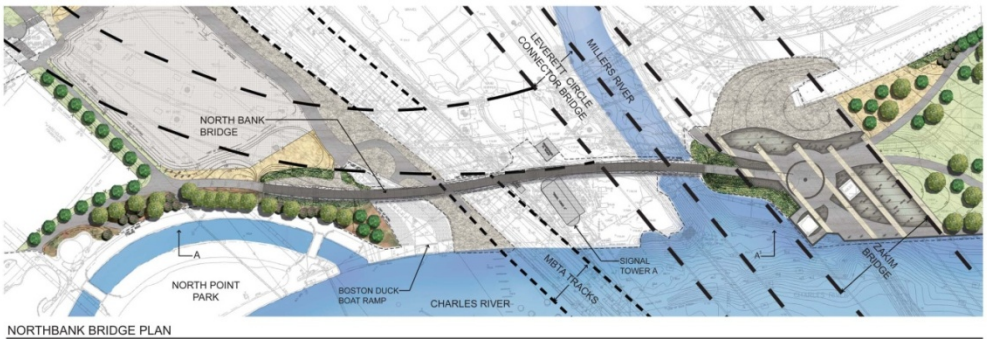
Alternative Sketch

Existing Conditions

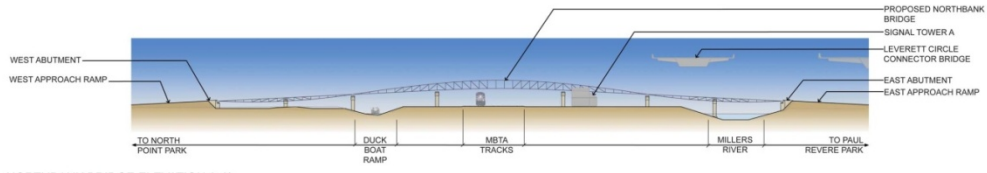
Elevator Alternative

Post Mainline Parks/North Bank Bridge – Boston, MA

The Post Mainline Parks project, the final phase of the Central Artery/Tunnel Project, will restore 19 acres of Boston's historic Charles River Basin, transforming a former industrial area into a striking and vibrant riverfront park. The project design combines a new pedestrian bridge across the Millers River and commuter rail tracks, and restoration of planned parkland disturbed by construction of the Central Artery/Tunnel (CA/T) Project. Construction of this park will have historic consequences by connecting the parks and providing public access along the Charles River to Boston Harbor. Since this project falls within the historic Charles River Basin, extensive coordination and community outreach and participation was involved to reach a design that would fit well into the surroundings and be accepted by all interested parties. Several renderings and CAD drawings were prepared for numerous public meetings.

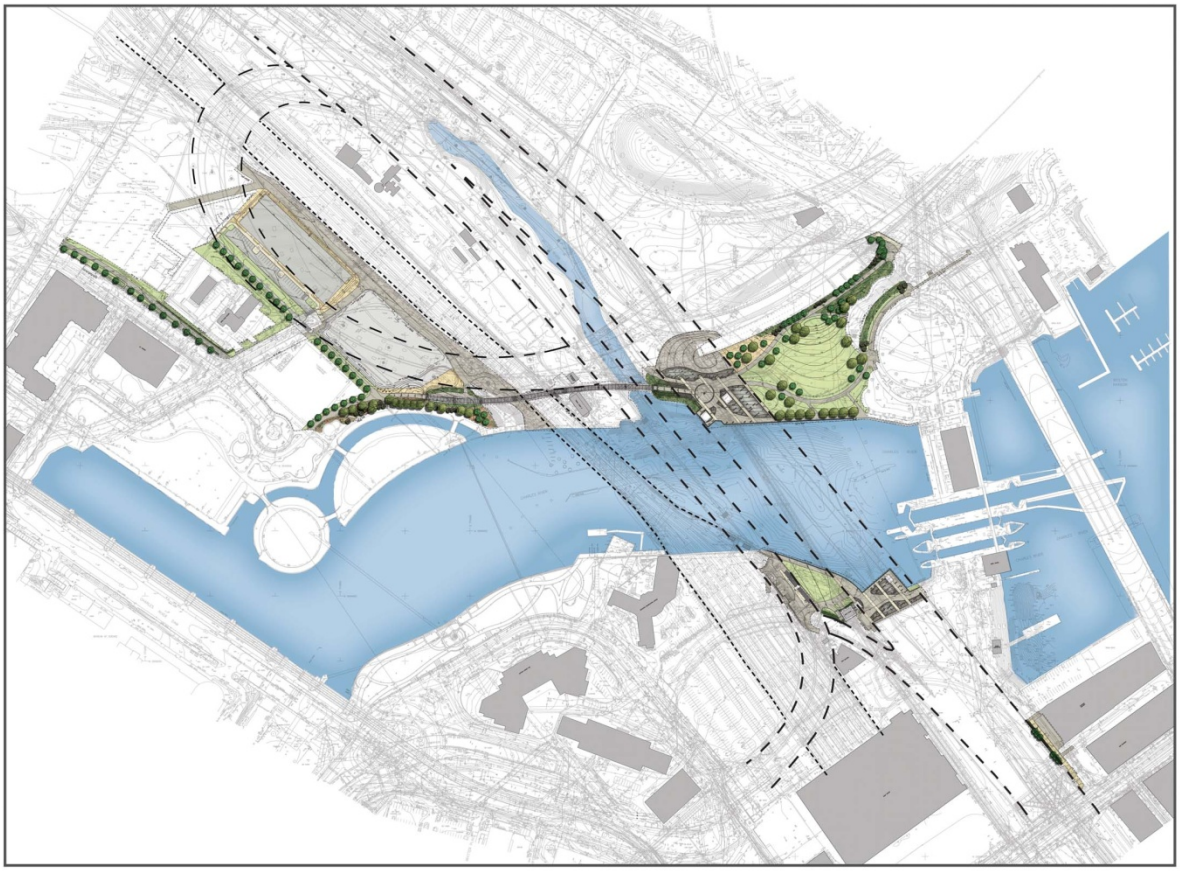


NORTHBANK BRIDGE PLAN



NORTHBANK BRIDGE ELEVATION A-A'

North Bank Bridge (Continued)



Canal Street Bridge – Lawrence, MA

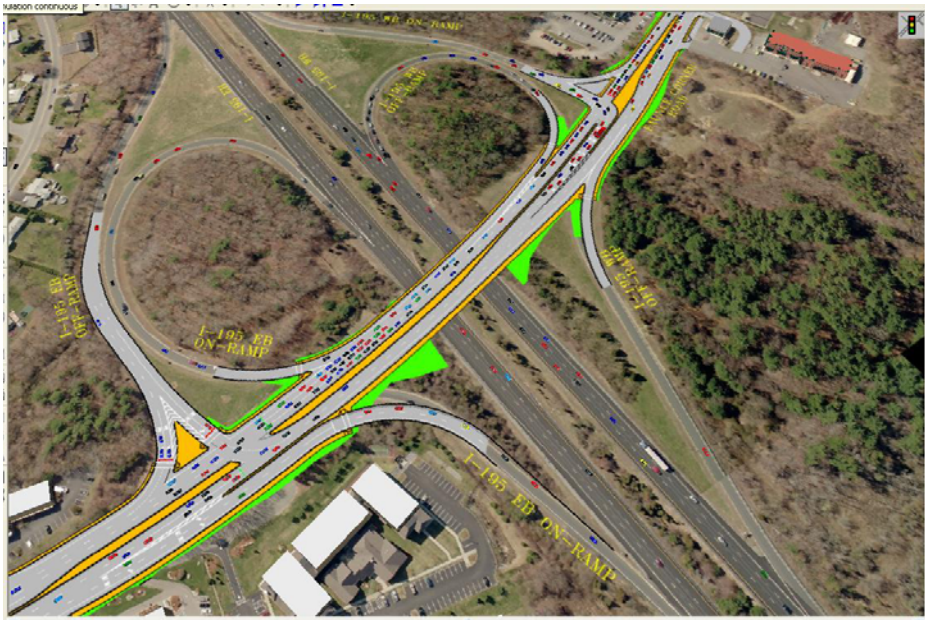
The existing Spicket River Bridge is listed in the National Register of Historic Places as a contributing element in Lawrence's North Canal Historic District. Most of Canal Street lies within the historic district. As such GPI prepared renderings and presented bridge options at several public meetings with City officials, the public and state agencies. Originally the project was to include a steel arch, however, based on presentations and illustrations of what a curved steel girder bridge would look like, the City approved the design change which reduced the construction and future maintenance costs substantially.

Comprehensive Traffic Control System Evaluation and Improvement Study - Concord, MA

GPI was selected by the Town of Concord to prepare a study related to all traffic, pedestrian signals and controllers owned by the Town. As part of the project, GPI had to conduct an analysis of the existing conditions, then conduct a structural, energy conservation, regulatory, functional and aesthetic review, provide recommendations related to improvements and then develop plans for implementing the improvements. Below are some photo renderings that GPI prepared for the Sudbury at Thoreau intersection showing before and after views.

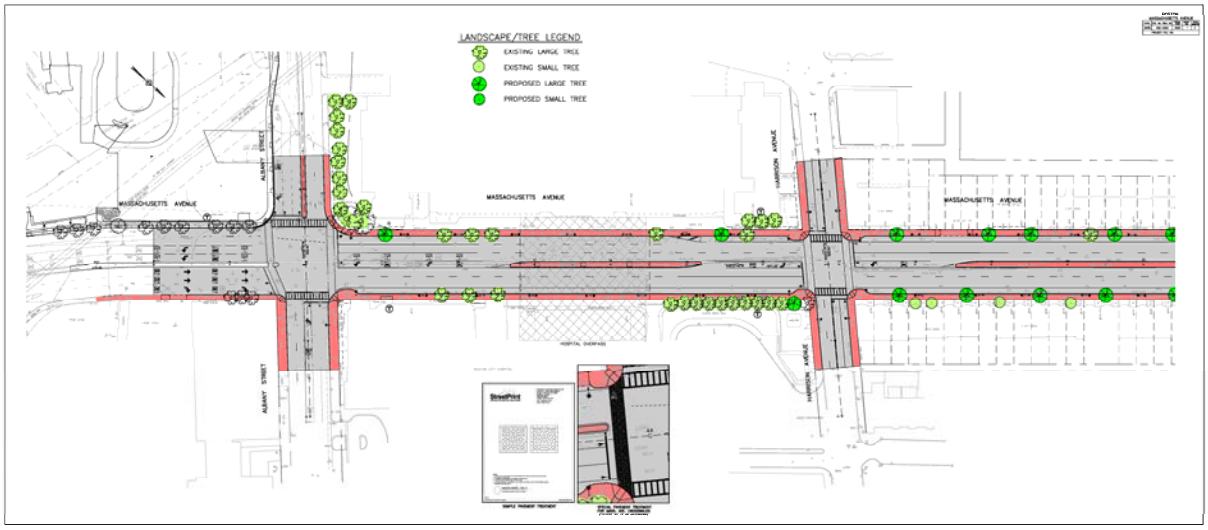
Faunce Corner Road over I-195 –Dartmouth, MA

Faunce Corner Road is a major commercial arterial in the Town of Dartmouth that has experienced tremendous traffic growth over the past 15 years. GPI was selected by MassDOT for the project. The project involves the reconstruction of Faunce Corner Road over I-195 including bridge replacements, roadway reconstruction, traffic signalization, realignment, drainage design, construction staging, traffic management and public outreach. GPI developed four alternatives for the reconstruction of Faunce Corner Road and the replacement of the bridge over I-195 and then presented them to MassDOT and the public. In addition to developing plans depicting each of the alternatives, GPI also developed VISSIM models. VISSIM is the leading microscopic simulation program for multi-modal traffic flow modeling. It is accurately able to simulate traffic including pedestrians, cyclists and motorized vehicles. Below are screen shots of some of the VISSIM models created and presented for the project.



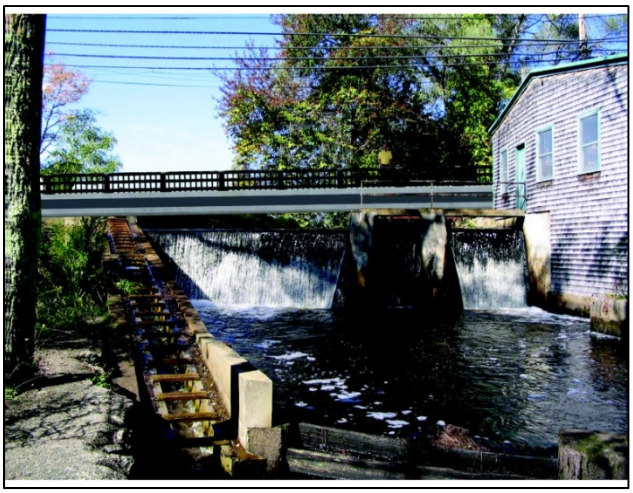
Additional Miscellaneous Samples

Massachusetts Avenue – Boston, MA

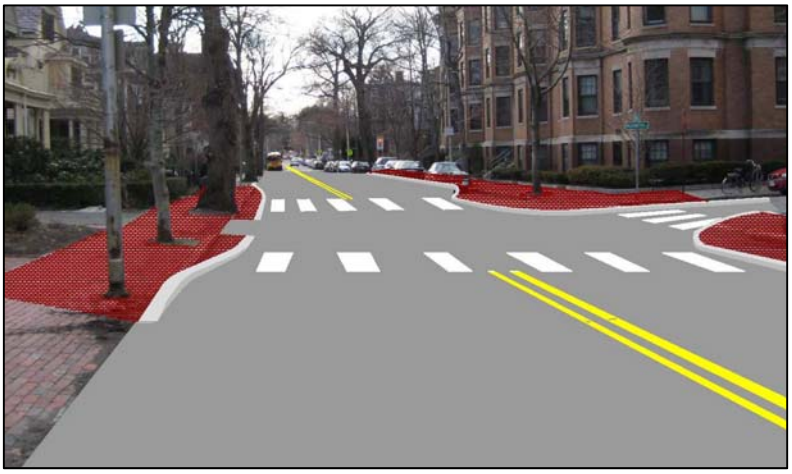


Commwealth Avenue – Newton, MA

Elm Street Bridge – Kingston, MA



On-Call Traffic Assistance – Cambridge, MA



D. WESTFORD PARKING

The BFRT Phase 1 design included plans detailing 38 parking spaces for the trail at Griffin Road. The parking was proposed on a parcel of land that was to be gifted to the Town of Westford. The Town never accepted the gift because title questions surfaced which have not yet been resolved. The parking was never constructed and today there is still no parking for the BFRT in the Town of Westford. Currently, half of the original parcel dedicated for parking is being purchased by another individual as part of a much larger sale.

Emily Teller and Chris Barrett, Westford Board Members of the Friends of the Bruce Freeman Rail Trail, have spent many, many hours over the past several months investigating potential parking locations in the Town. They have been working with Ms. Jodi Ross, Town Manager, Mr. Angus Jennings, Westford Director of Land Use Management, Mr. Kelly Ross, Westford Board of Selectmen and Liaison to the Friends of the BFRT, Ross Altabelli, Town Planner, Mike Green, Chairman of the Planning Board and many others regarding parking in Westford for the BFRT. The Town has dedicated many staff hours to brainstorming the parking issue and has not come up with concrete resolution.

Several potential locations have been identified, however, many of them pose safety issues forcing users to access the trail on busy streets without sidewalks, and some are too far away forcing users to walk their bikes long distances through woods to access the trail. There are two parcels which abut the trail and do not pose the previously mentioned safety issues. One is the Vose parcel near the Phase 1 terminus which is currently under the purview of the Westford Tax Possession and Sale Committee. There may be a vernal pool on this site which would preclude the construction of a parking lot. The presence of a vernal pool will be confirmed in the Spring of 2011. If there is no vernal pool, in order to construct parking on this parcel, the Town would need to be given oversight/custody of this parcel. The second parcel is the remaining portion of the parcel at Griffin Road assuming the title questions are resolved.

Since the design of the BFRT through Westford began, abutters have been very vocal about their opposition to any parking near their homes. This opposition has been voiced at public meetings and documented in newspaper articles. An article published in the Lowell Sun on September 20, 2010 noted that residents of one neighborhood near the Chelmsford line along Routes 27 and 225 along the trail were worried that the BFRT would be "*more of an intrusion in their lives than an added bonus"*. This group verbally voiced their concerns at a recent planning board meeting. Community members have also developed a two page flier to circulate noting negative impacts of a parking facility including an increase in crime, litter, congestion and noise. It even goes as far as saying that "*creation of more parking options would decrease the value of homes in its vicinity and become a danger to children living in the area due to traffic entering and exiting*".

Another issue with regard to proposed parking along the BFRT is the current zoning. The BFRT travels through residentially zoned land in Westford. In order to construct a municipal parking lot with more than five spaces for the BFRT, a change in zoning would be required. In order to avoid this issue, it would necessary to propose lots with five spaces or less.

At the start of this project, GPI would review the existing Phase 1 plans and right of way trying to locate potential parking locations. Ideally, parking would be provided along the trail in the vicinity of roadway crossings. After our internal review, GPI would meet with Town officials and Emily Teller and Chris Barrett to discuss our findings and each of the potential locations they have been investigating and the concerns with those locations. With that information, GPI would further investigate those options to see if the concerns could be mitigated.

Once a viable location was selected, GPI would develop graphics including renderings. GPI would work with the Town and the Friends of the BFRT talking with abutters and trying to alleve their concerns. GPI could make a presentation at Town Meeting to show voters the benefits prior to the vote. Many studies have been completed with regards to the lack of trail crime and liability and the benefits of having a trail "in your back yard".

E. PROJECT TEAM

The key personnel selected for the GPI Team have extensive experience in all disciplines required to successfully complete the project: rail trail design, civil and traffic engineering, environmental engineering, structural engineering, landscape architecture, community participation, drainage and utilities, stormwater management, topographical and boundary surveys, CADD, quality assurance and superior management. The GPI approach is to assemble a fully-integrated Project Team with design, technical, and management skills to successfully fulfill the goals of the Towns of Acton, Carlisle, Westford and Concord.

The educational background, qualifications, and expertise of the individual members of the GPI Team have been highlighted in the table located on the following pages. Additional background and project experience information for the team members can be found in Section F – Relevant Experience of Project Team.

PROJECT TEAM QUALIFICATIONS

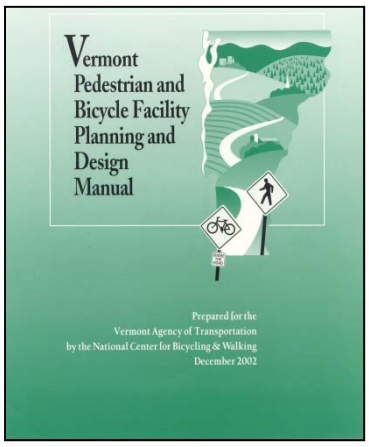
KEY PERSONNEL	FIRM	EXPERTISE	EDUCATION	REGISTRATIONS/CERTIFICATIONS	PROFESSIONAL AFFILIATIONS
PROJECT MANAGEMENT					
Christer Ericsson, PE **Project Manager**	GPI	Highway/Trail Design Traffic Engineering	BS/Civil Engineering/1986/University of Vermont	Professional Engineer	Institute of Transportation Engineers (ITE) – Member The Society for Protective Coatings (SSPC) – Member
RECREATIONAL TRAIL DESIGN					
Rebecca Williamson, PE **Lead Project Engineer**	GPI	Highway/Trail Design Environmental Permitting	BS/Civil & Environmental Engineering/1990/ Clarkson University	Professional Engineer	Women Transportation Seminar – Committee Co-chair and Member Boston Society of Civil Engineers (BSCE) – Member American Society Civil Engineers (ASCE) – Member National Trust for Historic Preservation – Member Rails-to-Trail Conservancy - Member
Joseph Johnson, PE, PTOE	GPI	Highway/Trail Design Traffic Engineering	BS/Civil Engineering/1998/Clarkson University BA/Liberal Arts/1998/St. Michael's College	Professional Engineer Professional Traffic Operations Engineer IMSA Traffic Signal Technician I IMSA Traffic Signal Electrician II IMSA Work Zone Safety Specialist	Institute of Transportation Engineers (ITE) – Member
Mark Elder, PE	GPI	Highway/Trail Design	BS/Civil Engineering/1991/Northeastern University	Professional Engineer Certified Soil Evaluator/Mass DEP Certified Soil Inspector/Mass DEP	Boston Society of Civil Engineers (BSCE) – Member American Society Civil Engineers (ASCE) – Member
Chad Brazee, EIT	GPI	Highway/Trail Design	BS/Civil Engineering/1998/Northeastern University	Engineer-in-Training	
Thanh Nguy, EIT	GPI	Traffic Engineering	BS/Civil Engineering/1992/University of Massachusetts	Engineer-in-Training IMSA Traffic Signal Technician I IMSA Traffic Signal Electrician II IMSA Work Zone Safety Specialist IMSA Traffic Signal Inspector	Institute of Transportation Engineers (ITE) – Member
Matthew Kearney, EIT, LEED AP	GPI	Highway/Trail Design	BS/Civil Engineering/2007/Roger Williams University	Engineer-in-Training LEED Accredited Professional/2008 IMSA Work Zone Safety Specialist ACI Grade I Field Technician NETTCP HMA Paving Inspector	
Barnaby Bury	GPI	Highway/Trail Design	BS/Civil Engineering/2004/London South Bank University		
Juli Riemenschneider, RLA	Green	Landscape Architecture	BS/Landscape Architecture/1985/Rutgers University	Registered Landscape Architect	American Society of Landscape Architects – Member Winchester Design Review Committee Boston Architectural College – Instructor
STRUCTURES DESIGN					
John Watters, PE **Lead Structural Engineer**	GPI	Bridge Design	MS/Structural Engineering/1998/Northeastern University BS/Civil Engineering/1993/Northeastern University	Professional Engineer	Boston Society of Civil Engineers (BSCE) – Member American Society Civil Engineers (ASCE) – Member
Carl Myers, PE	GPI	Bridge Design	BS/Civil Engineering/1996/University of Liverpool	Professional Engineer	
Stephen McNally, PE	GPI	Bridge Design	BS/Civil Engineering/1986/Northeastern University	Professional Engineer	American Society of Civil Engineers – Member, Past President of the NH Chapter, past Chairman of the Technical Committee Toastmasters International – Member, past President of the Portsmouth NH Club, Past Vice President of the Education Committee, Advanced Public Speaker - silver level.

KEY PERSONNEL	FIRM	EXPERTISE	EDUCATION	REGISTRATIONS/CERTIFICATIONS	PROFESSIONAL AFFILIATIONS
Kelly Brancaleone, PE	GPI	Bridge Design	MS/Structural Engineering/2004/Columbia University BS/Civil Engineering/2003/Columbia University	Professional Engineer	Boston Society of Civil Engineers (BSCE) – Member Women Transportation Seminar (WTS) –Member
Michelle Jose, EIT	GPI	Bridge Design	BS/Civil Engineering Technology/2007/Wentworth Institute of Technology	Engineer-in-Training	Boston Society of Civil Engineers (BSCE) – Member and Chairman of the Infrastructure Group American Society Civil Engineers (ASCE) – Member Women Transportation Seminar (WTS) – Member
Paul Berthiaume, EIT	GPI	Bridge Design, Blasting	BS/Civil Engineering/2006/University of Massachusetts	Engineer-in-Training	
Shahvir Vimadalal, PE	Green	Bridge Design	MS/Structures/1982/University of Cincinnati BE/Civil Engineering/1980/University of Baroda	Professional Engineer Certification - FHA/National Highway Institute Training for Safety Inspection of In-Service Bridges	American Society of Civil Engineers (ASCE) – Member Boston Society of Civil Engineers Section (BSCES) - various capacities, including past president.
Michael Cruz, PE	Green	Bridge Design	BS/Civil Engineering/1993/University of Massachusetts	Professional Engineer Certification - FHA/National Highway Institute Training for Safety Inspection of In-Service Bridges	American Society of Civil Engineers (ASCE) – Member Boston Society of Civil Engineers Section (BSCES) – Member
SURVEY & RIGHT-OF-WAY					
Jeffrey Bradford, PE, PLS Lead Surveyor/ROW	GPI	Survey/ROW	BS/Civil Engineering/1986/University of Lowell	Professional Engineer Professional Land Surveyor	Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE)– Member
Dilan Molina	GPI	CADD/ROW	Diploma/Cadd Operator Training Certificate/Graphic Design		
Kevin Arsenalut, PLS	Green	Survey/ROW	Civil Engineering/University of Lowell/1986-1992	Professional Land Surveyor	Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE)– Member New Hampshire Land Surveyors Association (NHLSA) – Member
Spartak Vaka	Green	Survey/CADD	Land Surveyor Diploma/Tiriana Military Academy 1985 Certification/AutoCAD 2005 /Wentworth Institute of Technology Certificates of Trainings/GPS Methods & Total Stations, Ordnance Survey and in Nautical Cartography		Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE)– Member
ENVIRONMENTAL/HAZMAT					
Marta Nover	Nover-Armstrong	Wetland Scientist Environmental Permitting	BS/Forestry/1984/University of Massachusetts		Taunton River Watershed Alliance – Vice President of Advocacy Women Transportation Seminar (WTS) - Member
Henry Nover, PE	Nover-Armstrong	Stormwater Management Environmental Permitting	BS/Civil Engineering/1975/Northeastern University	Professional Engineer	
Marylou Armstrong, LSP	Nover-Armstrong	Hazardous Materials/ Environmental	BS/Biology/1985/Stonehill College	Licensed Site Professional Certified Asbestos Inspector	Southeastern Regional Vocational Technical High School – Member, Board of Directors Women Transportation Seminar (WTS) - Member
GEOTECHNICAL ENGINEERING					
Kurt Jelinek, PE	Nobis	Geotechnical	Post-Graduate Fellowship/Civil-Geotechnical Engineering/MIT MS/Civil & Environmental Engineering/Utah State University BS/Geography/Utah State University	Professional Engineer	Boston Society of Civil Engineers Section (BSCES) – Member, Transportation Committee American Society of Civil Engineering (ASCE) - Member Society of American Military Engineer (SAME) - Member Rails-to-Trails Conservancy - Member The Trustees of Reservations – Member

F. RELEVANT EXPERIENCE OF PROJECT TEAM

GPI is one of the top bikeway/recreational pathway designers in the Eastern United States. GPI has been responsible for the master planning and design for hundreds of miles of recreational trails and on-road bikeways in the last twenty years, including new pedestrian/bikeway bridges and/or railroad bridge conversions and at-grade intersections. We are committed to providing expert engineering services to design trails and pathways that serve an important recreational and transportation purpose. Many of these projects have been award winners. GPI has also been involved with the design of dozens of projects involving the conversion of old railways into recreational trails. Our staff has experience in projects ranging from designing small pedestrian/bicycle paths and neighborhood parks to preparing the master plan for developing a 500-acre parcel into a recreational park incorporating a 3.5-mile long rail to trail conversion. Several of GPI's Massachusetts rail trail and multi-use path design projects in Massachusetts requiring approval by MassDOT are detailed at the end of this section.

In addition to the projects at the end of this section, GPI has completed a number of evaluations and feasibility studies in Massachusetts including the Nantucket In-Town Bike Path Study, Nantucket Bike Path Pavement Evaluation, Essex County Six Community Bicycle Feasibility Study, Fairhaven Bicycle Path Safety Study and Safety Improvements Design and the Martha's Vineyard Bike Path Study. In addition to master planning, feasibility studies and design of individual projects, GPI has also prepared maps and plans for entire networks of roads and trails available for bicyclists as well as pedestrians. We have used our GIS capabilities to complete projects such as the Roadway Inventory Bicycle Map for Somerset County, New Jersey, the Bicycle Suitability Mapping Project for Middlesex County, New Jersey, the Bicycle Accommodation Master Plan in Newton, Massachusetts and the Watertown Bicycle Transportation Study in Watertown, Massachusetts. The maps produced by each project will be used to let bicyclists know where suitable roadways and trails exist for their uses and serve an important transportation, recreational and tourism purpose.



GPI, working with the Bicycle Federation of America, also provided assistance with the preparation of the Vermont Pedestrian and Bicycle Facility Planning and Design Manual. Our work included technical input and also new design sheets for VTrans for bicycle and pedestrian facilities. This project was an outgrowth of the Agency of Transportation's adopted statewide Bicycle and Pedestrian Plan of 1998, which called for a manual that provided clear, consistent guidelines for facility design to ensure that safe, cost-effective and well-constructed facilities are built.

In addition to Massachusetts, GPI has also been involved in the design and mapping of trails in several communities in Maryland, New York, Virginia and New Jersey. In Maryland, GPI designed several trails through communities, parks, medical centers and residential developments, varying from 0.5 miles to 3.5 miles, as well as developing a Trails Master Plan for the City of Greenbelt. In New York, GPI developed the Master Plan for the 17.5-acre Mount Sinai "Wedge" Community Park, incorporating an extensive bike pathway system, as well as designing a 1.6-mile extension trail to the Warren County Bikepath to bring a "bit of nature" to an otherwise urban area. In

Virginia, GPI developed the Master Plan for Louden County, which incorporated a two-mile rail to trail conversion along the Washington and Old Dominion right-of-way.

GPI is a member of the Rails-To-Trails Conservancy, an organization committed to enhancing American communities by converting thousands of miles of abandoned rail corridors and connecting open space into a nationwide network of public trails. We also utilize the publications of AASHTO and Federal Highway Administration to benefit from the guidelines and research results that exist for the design of bicycle-friendly roadways and trails. Our team members are familiar with the AASHTO 1999 Guide for the Development of Bicycle Facilities, MassDOT's Building Better Bicycling Manual, the 2003 Manual on Uniform Traffic Control Devices, the 2006 MassDOT Project Development and Design Guidebook (Chapter 11, Shared Use Paths and Greenways), the MassDOT Bridge Manual, the 1995 MassDOT Standard Specifications for Highways and Bridges and its addenda, the Massachusetts Department of Environmental Protection's Best Management Practices (BMPs) for Controlling Exposure to Soil during the Development of Rail Trails, the Massachusetts State Building Code (780 CMR), 521 CMR - Architectural Access Board Rules and Regulations and the MassDOT Weighted Average Bid Prices.

As a commitment to maintain and develop the high level of expertise and professionalism at GPI, as well as to encourage the continual professional growth of all employees, GPI has recently conducted several in-house ASCE Web Seminars regarding bike paths: "*Designing Bicycle Facilities*", "*Innovative Bicycle Treatments*" and "*Alternative Treatments for At-grade Pedestrian Crossings*".

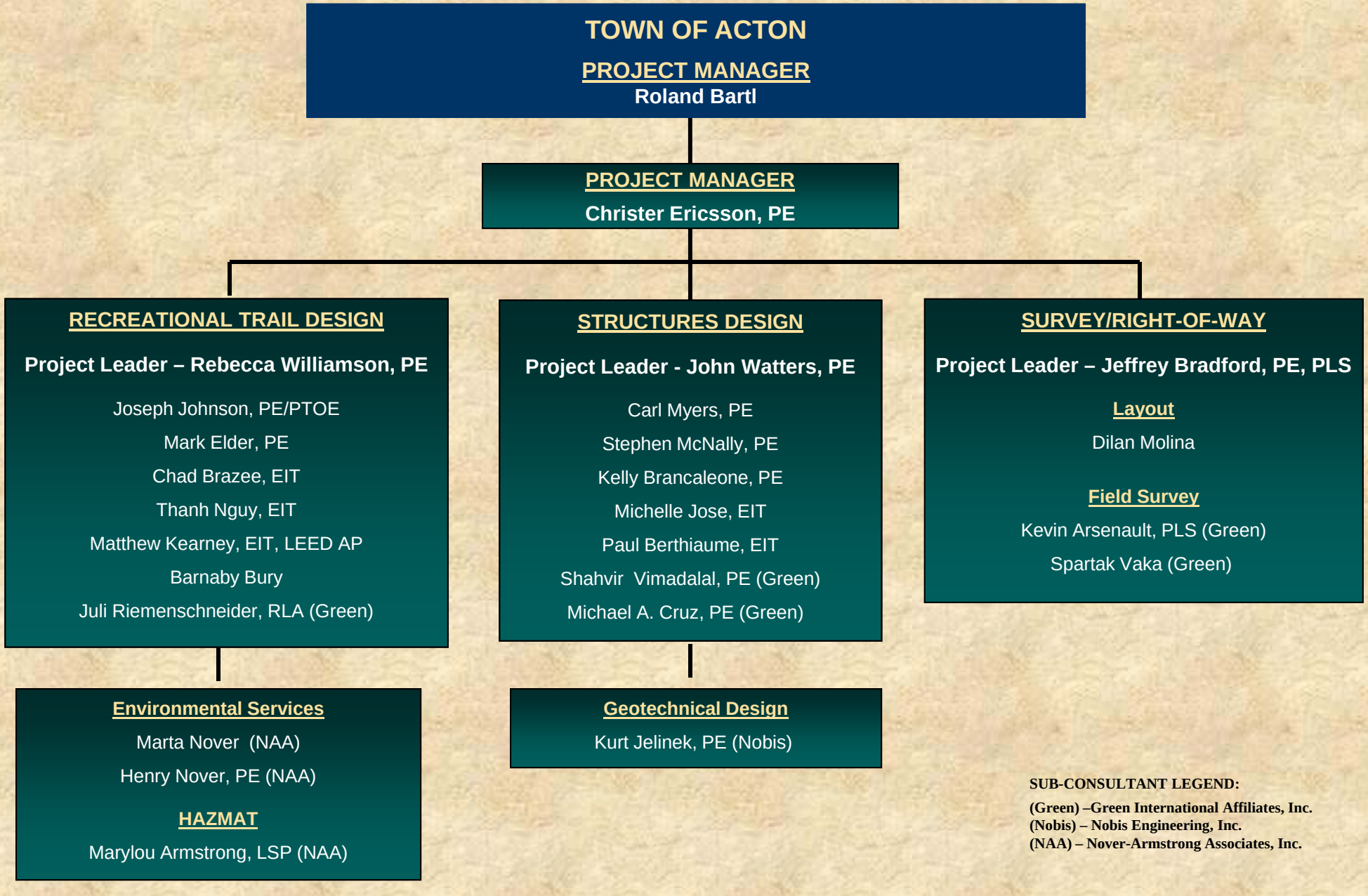
GPI staff have diverse experience in both traffic and highway design providing a well rounded fit for multiuse path design. Multiuse path projects are essentially "mini highways" that accommodate various types of users of differing age and experience. Horizontal and vertical profiles along multiuse paths are just as important as they are along roadways since these are elements that determine the level of comfort that a user will experience when negotiating the associated geometry. Equally important is the ability to safely cross trail users at roadway crossings. Designing the crossings of paths and roadways to accommodate a wide range of ability is essential. Elements that can confuse users and motorists need to be avoided while elements that help convey right-of-way need to be emphasized. This experience helped GPI reach its status of being one of the top bikeway/recreational pathway designers in the Eastern United States. This staff will be working on the Final Design Services for Phases 2A and 2C of the Bruce Freeman Rail Trail. Additional information on the Project Team is included below and detailed on the Organization Chart on the following page.

Project Management

Mr. Christer Ericsson, P.E. (GPI) is a Civil Highway and Transportation Engineer with twenty four years of experience in bike path and recreational trail design, traffic engineering, transportation planning and roadway design. Mr. Ericsson has been with GPI for over sixteen years. He is a Senior Vice President with GPI and the Regional Branch Manager responsible for the operations of the GPI New England Offices. He oversees staffing and project deliverables for all GPI New England projects.

Mr. Ericsson served as Principal in Charge or Project Manager for several GPI bikepath projects including: BFRT Phase 2A, Acton, Carlisle and Westford, MA; Southwick Rails-to-Trails Phase II, Southwick, MA; Milford Upper Charles Trail, Phases 1 and 2, Milford, MA; Franklin County Bikeway, Deerfield, Greenfield, Montague and Northfield, MA; Chicopee Riverwalk and Bikeway, Chicopee, MA; Holliston Upper Charles Trail, Holliston, MA; Methuen Riverwalk, Methuen, MA and Cliff Road and In-Town Bike Paths, Nantucket, MA.

PROJECT ORGANIZATIONAL CHART



SUB-CONSULTANT LEGEND:

(Green) –Green International Affiliates, Inc.
(Nobis) – Nobis Engineering, Inc.
(NAA) – Nover-Armstrong Associates, Inc.

Mr. Ericsson is a hands-on Project Manager with direct every day involvement in the projects he manages. Mr. Ericsson recently served as Project Manager on the preliminary design of the BFRT Phase 2A. He assisted with the development of alternatives, attended project meetings, presented at the Design Public Hearing and maintained an open line of communication with the MassDOT Boston and District Offices. Mr. Ericsson also recently served as Project Manager on the Chicopee Canal Path where he oversaw the design of a 1,000 foot section of the path along a section of abandoned railroad adjacent to the Chicopee River Canal. Mr. Ericsson presented at all public meetings for the project.

Mr. Ericsson is serving as the Project Manager on the Massachusetts Avenue Reconstruction Project, a $14,000,000 roadway and sidewalk project in the City of Boston including coordination and participation by multiple area resident associations, business groups, bicycle/pedestrian advocates, Boston City Hospital, the MBTA, various departments in the City, the contractor and MassDOT. The project included right-of-way impacts at over 100 properties. The project was advertised by MassDOT in 2009 for construction and is expected to be completed six months ahead of schedule. GPI's contract, which includes engineering during construction, is slightly more than $1,624,000.

Mr. Ericsson is also currently managing four GPI Statewide Contracts for MassDOT, including the recently awarded $2,000,000 Statewide Engineering Design and Review Contract. Assignments on the contracts include VFW Highway at Bridge Street in Lowell, MA, Route 38 in Tewksbury/Lowell, MA, Route 290 in Marlborough, MA and Braga Bridge in Fall River, MA and miscellaneous Peer Reviews statewide. He has also been directly involved with scoping, project development and the design of the Canal Street Bridge over the Spicket River project in Lawrence, MA.

Recreational Trail Design

Ms. Rebecca Williamson, P.E. (GPI) has over twenty years of an extensive and varied background as a designer and project manager on multi-disciplined projects, including urban streets, highways, bike trails and site developments. Ms. Williamson has been with GPI for over 13 years. She has directed and supervised all phases of design, including studies, design review, plan development, specifications and estimates. She also has extensive experience in public speaking and community participation, having moderated and presented at public hearings, community meetings and workshops. Ms. Williamson is intimately familiar with the AASHTO 1999 Guide for the Development of Bicycle Facilities, MassHighway's Building Better Bicycling Manual, as well as the 2003 Manual on Uniform Traffic Control Devices and the 2006 Massachusetts Highway Department Project Development and Design Guide.

Ms. Williamson served as Project Manager or Lead Civil Engineer for several GPI bikepath projects including: the preliminary design of the BFRT Phase 2A, Acton, Carlisle and Westford, MA; Southwick Rails-to-Trails Phase II, Southwick, MA; Milford Upper Charles Trail, Phases 1 and 2, Milford, MA; Franklin County Bikeway, Deerfield, Greenfield, Montague and Northfield, MA; Chicopee Riverwalk and Bikeway, Chicopee, MA; Holliston Upper Charles Trail, Holliston, MA and Nantucket Cliff Road and In-Town Bike Paths. She has been responsible for all aspects of these projects including AutoCAD drafting, cost estimating, horizontal and vertical geometry design, stormwater management, environmental permitting and public presentations.

Ms. Williamson has been involved with the Phase 2A Preliminary Design of the BFRT since GPI was awarded the Contract in 2006. She prepared the Transportation Enhancement Application for the project coordinating all the necessary information with the Towns of Acton, Carlisle and Westford, the Friends of the BFRT and MassDOT. She has been instrumental in keeping the project moving and coordinating with the MassDOT Project Manager, Structural Section, Right of Way Bureau and Office of Transportation Planning. Even after GPI's contract obligations were fulfilled, Ms. Williamson continued

to attend project meetings, respond to emails and phone calls, provide project updates, information and documents to the towns and MassDOT. She made regular phone calls to both the Boston and District MassDOT offices and has had kept the project a priority to ensure that it did not lose momentum and that nothing fell through the cracks.

Ms. Williamson began working with the Town of Concord on Phase 2C of the BFRT during the Transportation Enhancement Application process. Even after the process was complete, she maintained contact with the Town keeping them informed as to the status of the project, answering their questions and helping them prepare necessary documents that were requested by MassDOT and the Boston Metropolitan Planning Organization (MPO). She has been commended by the Town for her thoroughness and responsiveness.

Ms. Williamson also recently served as Project Manager for the MBTA Crossing Alternatives Analysis for Phase 2C of the BFRT in Concord, MA. With her contacts at MassDOT, the MBTA and the Department of Telecommunications and Energy (DTE), she was able to set up meetings, solicit information and get responses quickly. Ms. Williamson prepared a report evaluating seven different alternatives with variations for effectiveness, short and long term reliability, short and long term maintenance, difficulty in implementation, cost to design and implement, risk to public safety, vehicular impacts, benefits to the community, timeliness to implement and context sensitive aesthetics. She attended meetings with the Concord BFRT Advisory Committee, MassDOT, the MBTA, DTE and presented her findings to the public via a televised meeting.

Ms. Williamson is serving as Project Manager on all PS&E Peer Reviews sent to GPI under our Statewide Open End Highway and Accelerated Bridge Peer Review Contracts. Prior to advertising projects, MassDOT sends the plans, special provisions, quantity detail sheets, construction estimate and quantity calculations to Consultants for review. GPI has received three assignments and reviewed in excess of 30 projects on behalf of MassDOT.

Ms. Williamson served as GPI's Project Manager on the $100,000,000 Route 128 Add-a-Lane Project through Westwood, Dedham and Needham. GPI was responsible for the design of Route 109 over 128, the project wide signing and staging, design of a noise wall barrier and environmental permitting. Ms. Williamson was responsible for coordination with all partners on the project, MassDOT, presenting at public meetings and Conservation Commission hearings. The project was recently bid by MassDOT and is currently under construction. Ms. Williamson is managing GPI's efforts during construction services.

Ms. Williamson is also managing both the Kimball Street and River Street bridges over the North Nashua River in Fitchburg. These projects are part of MassDOT's Accelerated Bridge Program. As such they are on a very tight schedule as their advertisement date is dictated by legislation. The projects include bridge rehabilitation, approach roadway work, intersection reconstruction, drainage, sewer, water and utility work, and substantial community involvement and interaction with local businesses, City officials and State Representatives. With detour routes and partial roadway closings, abutters have been very vocal with their concerns about the project impacts on their businesses.

Ms. Williamson served as Project Manager on the In-Town and Cliff Road Bikepaths on Nantucket. The In-Town Bikepath consisted of the development of alternatives to expand the existing bikepath network through the downtown. With very limited right-of-way and very narrow streets, extensive public outreach and participation was required to develop feasible alternatives that would be accepted by the community. The Cliff Road bikepath consisted of the design of approximately half a mile of bikepath adjacent to Cliff Road in an effort to bring path users closer to the downtown area more safely. With very limited right of way, extensive community outreach and public participation was required for this

project also as the proposed path actually traverses the front yard of all the residential abutters. The project began by developing several alternatives which were presented to the public. Once an alternative was selected, GPI finalized the design and completed the necessary permitting. Throughout the design process, constant coordination with abutters was required to answer questions, resolve issues and obtain the necessary easements for the project. The project was bid for construction by MassDOT and the contract should be awarded on November 3, 2010.

Mr. Joseph Johnson, P.E., P.T.O.E. (GPI) is an experienced traffic engineer, with over twelve years experience and expertise in recreational trails, pedestrian accommodations and traffic safety. Mr. Johnson has been with GPI for eleven years. Mr. Johnson has diverse experience in both traffic and roadway design. This unique combination provides an advantage in developing geometric alternatives since flow and capacity are major components to providing a successful and functioning facility. Mr. Johnson is also responsible for the preparation of contract documents including plans, technical specification and construction cost estimates for both private and public projects. Mr. Johnson has also gained experience presenting existing and future traffic modeling at public hearings, has been involved in the design of several intersection and corridor improvement projects from both a traffic and highway design perspective, has designed signalized pedestrian/bicycle crossings and has been involved in every aspect of a traffic impact study from data collection to authoring text. As a project engineer for GPI, Mr. Johnson has been responsible for future traffic operations, estimating proposed site trip-generation and distribution, evaluating pedestrian/bicycle facilities, and developing design alternatives while preparing the associated documents to summarize the advantages/disadvantages of each.

Mr. Johnson has had the opportunity to be involved in various multiuse paths in all aspects of design. He has served many roles as either a Project Manager, Project Engineer or Traffic Engineer on the preliminary design of the Bruce Freeman Rail Trail Phase 2A, Acton, Carlisle and Westford, MA; Southwick Rails-to-Trails Phase II, Southwick, MA; Milford Upper Charles Trail, Phases 1 and 2, Milford, MA and the Cliff Road and In-Town Bike Path, Nantucket, MA. He has been responsible for all aspects of these projects including AutoCAD drafting, cost estimating, alternatives analysis, horizontal and vertical geometry design, traffic signal design, developing contract documents, construction services and public presentations.

Mr. Johnson was involved with the preliminary design of the BFRT Phase 2A and developed the horizontal trail alignment, the configuration of the trail/roadway crossings and prepared the functional design report that evaluated each of the trail/roadway crossings. Mr. Johnson was also involved in the development of the alternatives for the Route 2A/119 trail crossing including roundabout design, traffic signal design as well as traffic calming. He was also involved in incorporating trail amenities such as landscaping, bollards, benches, fencing and granite piers. Mr. Johnson is very familiar with the trail alignment and the challenges of the project and has the experience to work with abutters to resolve concerns.

Mr. Johnson served as Project Engineer for the Milford Upper Charles Trail Phase 2 in Milford, MA. He was responsible for all aspects of the trail design and is currently providing construction services to the Town. The project (2.8 miles of rail trail) is nearly complete with the Contractor anticipated to complete work approximately six months before schedule. This project has had a wide range of challenges concerning trail alignment, drainage, utilities, access, abutters, bridge structures, right-of-way and traffic safety. The knowledge gained through this project provides Mr. Johnson with the ability to foresee potential issues and address the solutions during design.

Mr. Johnson served as Traffic Engineer on the Faunce Corner Road project in Dartmouth, MA. This project involves the replacement of the existing bridge carrying Faunce Corner Road over I-195, the

widening of Faunce Corner Road and the construction of safety improvements along the corridor, including the intersections of Cross Road and Comfort Lane, the I-195 eastbound ramps, and at the I-195 westbound ramps. Mr. Johnson performed alternatives analysis for this project in terms of traffic operations and helped present the alternatives to both MassDOT and Town representatives. A public forum was also held to solicit comments on the project. The public process on this project has proved to be very beneficial since the input received ultimately influenced the design that was chosen for advancement. Mr. Johnson performed traffic analyses, developed conceptual horizontal alignments, prepared traffic simulations and presented the results.

Mr. Johnson served as Traffic Engineer on the Southwick Rails-to-Trails Phase II project in Southwick, MA. Mr. Johnson was specifically involved in the traffic signal design for a trail/roadway crossing at Feeding Hills Road. The crossing consists of a pedestrian actuated traffic signal that will provide trail users an exclusive crossing of the high-speed roadway.

Mr. Johnson served as Traffic Engineer on the Route 128 Add-A-Lane Project in Dedham, Westwood and Needham, MA. GPI was responsible for the design improvements to Route 109 including the interchange bridge replacements and interchange ramps, project wide signing and staging and noise wall design. Mr. Johnson was specifically involved in the design of the guide signs for the project and ensuring that the replacement signs and associated structures met standard guidelines.

Mr. Johnson serves as Project Engineer on the Massachusetts Avenue Reconstruction Project in Boston, MA. This is a roadway reconstruction project that is roughly 0.9 mi long and involves eight blocks of Massachusetts Avenue in the heart of the historic South End Landmark District. The project is currently in construction and Mr. Johnson has been the primary contact with MassDOT and the City to address any concerns that arise. The project involves minor widening of the roadway, milling and overlay of the roadway surface, new brick sidewalks, street lighting, landscaping, new traffic signals, street furniture, drainage and bridge work. Given the location and complexities of the project, a great deal of coordination has been required throughout the project. It was required that Mr. Johnson coordinate directly with the Boston Public Works Department, Boston Department of Transportation, MassDOT, Boston's Office of the Mayor, Mayor's Office of Neighborhood Services, Boston Parks and Recreation Department, Boston Street Lighting Division, Massachusetts Bay Transportation Authority (MBTA), MWRA, Boston University Medical Center (BUMC), Wall USA (Bus Shelters), Chester Square Area Neighborhood Association, LivableStreets Alliance, South End Landmark District Commission and the Massachusetts Avenue Reconstruction Task Force. Public input was a critical aspect to this project. Given the number of abutters along the project, a Task Force was established consisting of representatives of each neighborhood so that these representatives could express the concerns and desires of their respective group. The Task Force members would report back to their group and communicate project issues. This was one way to keep the community involved while also making it a manageable process. The construction of this project has moved very swiftly and is expected to end ahead of schedule.

Mr. Mark Elder, P.E. (GPI) is a civil engineer with over twenty one years of diversified experience in the fields of civil and highway engineering, transportation engineering, recreational trail design and construction inspection. With his varied experience, he is familiar with all aspects of bike path design. His project experience varies from small site developments and bike paths to major interstate reconstruction projects. Mr. Elder specializes in all facets of highway geometry and the production of Final Design Packages meeting the requirements of the MassDOT.

Mr. Elder served as a Project Engineer on many of GPI's recreational trail projects from concept development to construction management including: Southwick Rail Trail, Southwick, MA; Milford

Upper Charles Trail, Phases 1 and 2, Milford, MA; Franklin County Bikeway, Deerfield, Greenfield, Northfield and Montague, MA; and the Methuen Riverwalk, Methuen, MA. On the Milford Upper Charles Trail Phase 1 Project, Mr. Elder designed the horizontal and vertical geometry for this 2.8-mile bicycle and recreational trail, which included several unsignalized roadway crossings and wheelchair ramps. Mr. Elder was responsible for the design of horizontal and vertical geometry and pedestrian access portions of many of the bike path projects. Mr. Elder also served as Project Engineer on the Methuen Riverwalk and was responsible for construction oversight. The Methuen Riverwalk incorporated pedestrian walkway and a bridge over the Spicket River Falls Dam. Mr. Elder also assisted with the completion of the Nantucket Bike Path Pavement Evaluation. More recently, Mr. Elder oversaw the design of the horizontal and vertical geometry for the Preliminary Design of the Bruce Freeman Rail Trail.

Among his relevant project experience is MassDOT's Saratoga Street Bridge Replacement Project in Boston and Winthrop MA. Mr. Elder was responsible for the roadway portion of the design including horizontal and vertical alignment, utilities relocations, and construction staging as well as preparing the Contract Documents for the project. This project is located within a commercial area of both municipalities with abutting businesses in close proximity to the construction area. Mr. Elder coordinated with business owners to incorporate their concerns into the final design.

Mr. Chad Brazee, E.I.T. (GPI) has over 12 years of experience in the preparation of plans, specifications, and estimates for various state, municipal and private development highway and traffic signal improvement projects. Mr. Brazee's responsibilities have included developing preliminary and final geometry, developing existing surfaces and preparing existing and proposed cross sections, developing construction documents, and preparing estimates.

Mr. Brazee is responsible for the preparation of plans, specifications and estimates for various state, municipal and private development bike trail, highway and traffic signal improvement projects. He has designed horizontal and vertical alignments, intersection improvements and automated cross sections through the use of the AutoCAD Land Development Desktop and Civil Design Software. Mr. Brazee assisted with the design of many of GPI's bikepath projects including the Cliff Road and In-Town Bicycle Path projects, Nantucket, MA; Southwick Phase 2 Rail Trail Project, Southwick, MA; Milford Phase 2 Upper Charles Trail, Milford, MA; Franklin County Bikepath, Deerfield, Greenfield, Northfield and Montgue, MA; and the Bruce Freeman Rail Trail Phase 2A project. In addition to civil design, Mr. Brazee prepares construction estimates for the projects.

Currently Mr. Brazee is serving as Project Engineer on the Faunce Corner Road over I-195 project in Dartmouth, MA. He laid out design concepts for the proposal and multiple iterations through the 25% design. Once a concept was selected, he generated all horizontal baselines, curb alignments and striping for the project. He created the dual independent profiles and cross sections design for Faunce Corner Road and all of the profiles and sections for the ramps. He generated the construction plans, set the bridge profile and served as liaison with the project surveyor.

Mr. Brazee recently finished the design of all the temporary roadways for the 128 Add-a-Lane Project through the towns of Needham, Dedham and Westwood, MA. This design required a tremendous amount of coordination with our team member, The Louis Berger Group, as they were laying out the permanent alignment for Route 128. Mr. Brazee handled this coordination.

Mr. Thanh Nguy, E.I.T. (GPI) has over 19 years of experience in traffic engineering and signal design. Mr. Nguy is also responsible for review of shop drawings and traffic signal equipment submittals. He has also prepared functional design reports and project justification reports for projects at 25% design level

submissions. Mr. Nguy has extensive experience in the design of complex signal systems, coordinated signal systems and railroad and fire pre-emption of traffic signals. Mr. Nguy also has extensive experience in computer modeling using a variety of traffic software including Highway Capacity Software (HCS), Australian Signalized Intersection Design Research Aid (SIDRA), PASSER, TRAF-NETSIM highway simulation packages, SYNCHRO, and TEAPAC.

Mr. Nguy served as the Traffic Engineer for the Milford Upper Charles Trail Phase 2, Milford, MA. He developed the traffic signal plans for the bike path at roadway crossings including Cross Alert Systems and prepared the pavement marking and signing plans. Other recent experience includes preparation of temporary traffic control plans including a temporary signal for GPI's Accelerated Bridge Project River Street over the North Nashua River in Fitchburg, MA.

Mr. Nguy was also responsible for the preparation of 25% construction documents including the development of horizontal alignments, pavement marking and signing plans and traffic signal plans for Route 9 at Lyman Street in Westborough, MA. Mr. Nguy worked closely with MassDOT, the City of Beverly and DTE on the modifications of the at-grade rail pre-emption of the Dodge Street/Enon Street signals in Beverly. Mr. Nguy has prepared traffic signal plans for numerous communities throughout the state including Samoset Street in Plymouth, Canal Street in Lawrence, Central Avenue in Seekonk and Elm Street in Amesbury.

Mr. Nguy is currently serving as the Traffic Engineer for GPI's On-Call Traffic Calming contract with the City of Cambridge. He has designed intersection improvements for various locations throughout the City. He also conducts the traffic peer review for all MassDOT PS&E Reviews sent to GPI under our Statewide Highway and Accelerated Bridge Open End Contracts.

Mr. Matthew Kearney, E.I.T., LEED AP (GPI) has over four years of experience in highway design. As a project engineer, he is responsible for the preparation of contract documents including plans, technical specifications, construction cost estimates and permit applications for roadway and traffic signal improvement projects. His experience includes horizontal and vertical alignment design, intersection and interchange design, storm drain design, and signing and pavement marking design. He is also experienced in construction inspection.

Mr. Kearney served as an Engineer on several of GPI's recreational trails including Cliff Road Bikepath, Nantucket, MA; Milford Upper Charles Trail, Phase 2, Milford, MA as well as Alternatives Analysis for BFRT crossing of active MBTA Commuter line for Phase 2C. Mr. Kearney has been responsible for assisting in many aspects of the design process during these projects, including AutoCAD drafting, creating office estimates, coordinating and responding to comments made by the Towns and MassDOT and updating plans based on field conditions. In the Alternatives Analysis for BFRT crossing of active MBTA Commuter line for Phase 2C, Mr. Kearney was responsible for evaluating several alternatives proposed by the Town, public, and MBTA and creating visual aids to assist the Town in making a final decision.

Other relevant project experience includes assistance with the Faunce Corner Road over I-195 Project in Dartmouth, MA. For that project, Mr. Kearney assisted in the design process with grading, ADA accessibility, drainage, and the office estimate.

Mr. Barnaby Bury (GPI) has over 5 years of experience in transportation engineering, structural engineering, surveying and right-of-way. Mr. Bury serves as Project Engineer on many of GPI's projects assembling plans and project estimates.

Mr. Bury has worked on the preliminary design of Phase 2A of the Bruce Freeman Rail Trail, Acton, Carlisle and Westford, MA; Milford Upper Charles Trail Phase 2, Milford, MA; Southwick Rail Trail Phase 2, Southwick MA and Cliff Road Bikepath, Nantucket, MA. For these projects, Mr. Bury assisted in the design, addressed MassDOT comments and finalized plans, construction cost estimates and quantity detail sheets.

Other recent projects include Route 128 Add-a-Lane in Dedham, Westwood and Needham. Mr. Bury assisted with addressing MassDOT comments, had substantial involvement in the noise wall design and construction cost estimating for this $100,000,000 project which was recently advertised by MassDOT. Mr. Bury also assisted with the cost estimating for the Canal Street Bridge over the Spicket River in Lawrence.

Mr. Bury is serving as Project Engineer on the Fitchburg Kimball Street Bridge over the North Nashua River. Mr. Bury developed the 75 % and 100% design plans, completed the construction cost estimate and quantity detail sheets. He coordinated the highway design with the GPI's structural group and will combine the structural package with the highway package with the River Street Bridge over the North Nashua River structural and highway packages for advertisement by MassDOT in February of 2011.

Ms. Juli Riemenschneider, R.L.A., A.S.L.A (Green) is a registered landscape architect with twenty-two years of experience. The primary focus of her professional work is public sector parks, recreational facilities and transportation projects. She has worked to design and implement streetscape designs both as a design consultant and as a staff member of the City of Salem Planning Department. She is in charge of Green's landscape architecture services.

Ms. Riemenschneider recently served as the Landscape Architect for the Peabody Bikeway Project in Peabody, Massachusetts. She provided various landscape design elements including trees, shrubs and amenities such as benches, bike racks and informational kiosks. Other recent projects include the streetscape design for the Reconstruction of Lowell Street/Route 129 in Wilmington, Massachusetts and the Merrimack Corridor Enhancement Project in Lawrence, Massachusetts where she was responsible for planting design

Ms. Riemenschneider has extensive experience working on parks. Some of her more recent projects include the Lawrence Little League Ball Field in Lawrence, Massachusetts. She was responsible for the design, preparation of construction documents and construction services. Ms. Riemenschneider also provided design and prepared construction documents for the Massa Playground project in Winthrop, Massachusetts. In addition, she headed the community outreach efforts for the project. She worked directly with the town and neighbors to ensure that the improvements met as many of the open space needs of the neighborhood as possible. She began the outreach efforts with a neighborhood questionnaire and chaired several public meetings.

Structures Design

Mr. John Watters, P.E. (GPI) is a Vice President and Project Director at GPI, responsible for the management of GPI New England's Structural Departments. He has been involved in Massachusetts bridge projects for 18 years and has managed multiple design and construction projects, with a particular focus on bridge projects. These active projects range in construction value from $50,000 to $175 million. Mr. Watters' experience in bridge design ranges from simple steel and concrete beam bridges, to horizontally curved structures, moveable structures, truss rehabilitation, integral abutments, and major river crossing structures. With each project, Mr. Watters stays actively involved from design conception, through environmental study, public participation and meetings, design document

development and construction phase. Mr. Watters is an adept public speaker and has presented at over a half dozen public hearings in the past 2 years specifically for MassDOT bridge projects. In addition to public hearings, Mr. Watters frequently presents to conservation commissions, historic commissions, public officials, and also presented to State Senators and State Representatives at the Massachusetts State House. Quite often these presentations require visual renderings to communicate project vision to the intended audience.

Mr. Watters is well known with the MassDOT Bridge Section and has strong relationships with project managers and project reviewers that help advance designs quickly. The strength of the GPI relationship with the MassDOT Bridge Section is evident through GPI being one of very few consultants to currently hold an Accelerated Bridge Design, Bridge Rating, and Bridge Preservation contract.

Mr. Watters serves as Project Director or Project Manager for all GPI's Structural projects. He has served as Lead Structural Engineer for several GPI bikepath projects including: BFRT Phase 2A, Acton, Carlisle and Westford, MA; Milford Upper Charles Trail, Phase 2, Milford, MA; Chicopee Riverwalk and Bikeway, Chicopee, MA; and Cliff Road and In-Town Bike Paths, Nantucket, MA.

Mr. Watters has been heavily involved in the BFRT Phase 2A project including the evaluation of existing bridges along the project route, and the development of a bridge crossing over Route 2A. He recently developed a Bridge Summary for the three structures along Phase 2C of the BFRT for submission to and review by MassDOT. This summary was used in the development of the scope and fee for the project. Mr. Watters developed design documents for two bridge crossings over the Charles River that reused existing stone masonry abutments for the Milford Upper Charles Trail project.

For the Canal Street Bridge over the Spicket River in Lawrence, MA, Mr. Watters acted as the Project Manager and Lead Structural Engineer. Mr. Watters was responsible for all client and agency coordination, which included presentation at public meetings, conservation commission meetings, utility company coordination meetings, and multiple meetings with adjacent design contract consultants and owners. Mr. Watters was involved in the actual structural design and detailing of many elements of the project, as well as responsibility for overall project delivery and quality control.

On Faunce Corner Road over I-195 in Dartmouth, MA, Mr. Watters is serving as the Lead Structural Engineer responsible for overall review and quality control associated with the bridge design and type selection. Mr. Watters helped review the design calculations and selection of bridge types for comparative study. He also assisted in authoring, and was the final reviewer for the Preliminary Structure Report and Bridge Type Selection Worksheet.

On the North Bank Bridge Project, in Boston, Massachusetts, Mr. Watters is acting as the Project Manager responsible for overall project performance of this $25 million park construction project along the banks of the Charles River. The center piece of this project is a tubular sinusoidal shaped pedestrian bridge over the MBTA tracks and Millers River. Mr. Watters was responsible for managing the four member consultant joint venture, as well as 5 additional subconsultants. During the project, Mr. Watters met members of the Mass Turnpike, MWRA, MBTA, DCR, MassDOT, Army Corps of Engineers, and DEP, as well as coordination with the City of Boston and City of Cambridge. During design development, Mr. Watters directed the resolution of conflicts to advertise this project under the ARRA federal stimulus project. Mr. Watters was required to present this project to the MassDOT Board for approval. During construction, Mr. Watters has been involved in resolving technical issues associated with welding of tubular members, installation of drain lines, force main sewers, electrical transformer relocations, drilled shaft installations, pile driving obstructions, and permit compliance.

Mr. Carl Myers, P.E. (GPI) is a Senior Structural Engineer with over fourteen years experience in the design, rating, inspection, evaluation and construction of numerous bridge projects. He has been with GPI for almost five years. Mr. Myers background includes both structural design and on-site practical knowledge. He has detailed knowledge of construction contact administrative practices through his work with a major regional contractor. This experience provides a hands-on construction knowledge that is useful in the inspection and design of various bridge structures.

Mr. Myers recently completed the Preliminary Structures Evaluation of the six existing railroad trestle bridges in Acton for the Bruce Freeman Rail Trail Phase 2A through the communities of Acton, Carlisle and Westford. As part of this evaluation, he inspected the condition of the existing bridges, noted dimensions and condition, observed the substructure and checked it for scour and made recommendations for modifications such that the bridges could be utilized for pedestrian use as part of the rail trail. Mr. Myers has designed numerous MSE walls on various projects throughout Massachusetts to retain earth adjacent to roadways, parking lots and buildings. He designed a soldier pile and an architecturally finished concrete lagging wall to retain a portion of trail along the Blackstone River Bikeway Segment #4 in Rhode Island. For the same project, Mr. Myers also performed analysis for a prefabricated bridge truss in Lincoln Rhode Island. Recent and current projects include Route 53 over Route 3 in Hanover; Saratoga Street Bridge over Belle Isle Inlet in Boston; Chapoquoit Road over West Falmouth Harbor in Falmouth; and the Route 20 Bridge over Sudbury River in Wayland, MA.

Mr. Myers served as Structural Project Engineer on the Canal Street Bridge Project participating in the bridge design, bridge calculations, estimating and special provisions. Mr. Myers also recently completed the design of the Route 109 bridges over Route 128 for the $100,000,000 Route 128 Add-a-Lane Contract in Dedham, Westwood and Needham, MA and is currently reviewing shop drawings and coordinating with the Contractor. He is also finalizing the design of the Kimball and River Street Bridges over the North Nashua River in Fitchburg, MA as part of MassDOT's Accelerated Bridge Program. As part of the Accelerated Bridge Program, the project advertisement is dictated by legislation requiring complete attention, quick response and turnaround.

Mr. Stephen Mcnally, P.E. (GPI) is a senior engineering manager with 28 years experience and a proven track record of assembling effective project teams to undertake complex infrastructure projects. His innovative and forward thinking approach to infrastructure design has led to award winning results. Mr. McNally is highly accomplished at establishing project milestones and motivating project leaders leading to consensus and assuming ownership of project goals and objectives. He is proficient at completing projects on-schedule and within budget. His unique blend of hands-on technical experience and executive management skills is instrumental in transforming strategic business goals into engineering production action plans. His experience includes Bridge Design, Roadway Design, Light Rail, and Waterfront Structures.

Mr. Mcnally served as bridge / rail trail engineer for the engineering study of a 96 mile long rails to trails conversion along the Lamoille Valley Railroad corridor extending from St. Johnsbury to Swanton, VT. The project involved the study of three alternatives, restoration of Class I rail service, conversion to a multi-use recreational trail and a parallel multi-use trail with Class I rail service. The corridor was flown and filmed with low altitude aircraft and traversed with all terrain vehicles to gather general reconnaissance information and then walked with two teams of engineers to obtain detailed condition data on track, crossings and bridges. Estimates of probable cost for this project exceed $80 million.

Mr. McNally has been in responsible for inspecting, rating, rehabilitating and replacing over 500 highway, railroad and pedestrian bridges over his 30 year professional career. He has provided structural and

civil engineering services on award winning, multi-disciplined infrastructure projects to various state and municipal clients throughout New England.

Ms. Kelly Brancaleone, P.E. (GPI) has 7 years structural experience in the design of bridges and buildings. Her bridge experience includes integral abutments, prestressed concrete, and deck rehabilitations. Ms. Brancaleone also has diversified work experience on a number of major building and infrastructure projects in the New York region's transportation network and has bridge design and rehabilitation experience on four taxiway bridges at JFK airport.

Ms. Brancaleone is serving as Project Engineer on the bridge replacement of Faunce Corner Road over I-195 in Dartmouth, MA. The project involves widening of the existing road through phased construction of a new deck, steel beams and substructure elements. She was responsible for preparing the Preliminary Structure Report and Bridge Type Selection Worksheet for the client, MassDOT. Other duties included performing structural analysis of the existing bridge and evaluating the feasibility of design alternatives. Ms. Brancaleone is also serving as Project Manager for the bridge rehabilitation project of the I-90 Ramp Connector over Route I-495 in Hopkinton, MA. The project involves staged construction to replace the deteriorated concrete deck and selective structural steel members. Her responsibilities include developing the project scope, performing structural design of new steel beams, preparing contract drawings, specifications and estimates, and managing the schedule and budget.

Ms. Brancaleone also serves as Project Manager for the MassDOT Statewide On-Call Bridge Ratings contract. The range of bridge types included continuous steel plate girders, prestressed concrete bridges, reinforced concrete slabs, curved bridge alignments, and simple span structures. She is responsible for performing bridge inspections and load ratings, making recommendations for repairs, and managing schedules and budgets.

Ms. Michelle Jose, E.I.T. (GPI) is a Structural Engineer with experience in both the design and inspection of bridge structures. She has additional experience as a construction inspector performing field testing of concrete and construction materials. Her past experience includes inspection of the Central Artery NBIS structures. Ms. Jose is proficient in all necessary structural software including Virtis Bridge Rating software.

Ms. Jose serves as engineer on many of GPI's structural projects. Her career in engineering began while she was in still in college working on the Central Artery C17AA Finished Team. Relevant project experience with GPI includes assisting with the structural inspection of the Faunce Corner Road Bridge over I-195 in Dartmouth, MA and the preparation of the Bridge Type Selection worksheet. She also checked the preliminary design calculations. She has checked design calculations for many of GPI's Massachusetts projects including Chappaquoit Road over West Falmouth Harbor, Falmouth, MA; Canal Street over Spicket River, Lawrence, MA; and Highland Avenue, Fall River, MA.

Recent projects also include structural shop drawing review for the Route 109 bridges over 128 as part of the Route 128 Add-a-Lane project in Dedham, Westwood and Needham and the Boston Post Road Bridge over the Sudbury River in Wayland.

Currently Ms. Jose is preparing the contract drawings, compiling the cost estimate and checking design calculations for the River Street and Kimball Street bridges over the North Nashua River in Fitchburg which are part of MassDOT's Accelerated Bridge Program.

Mr. Paul Berthiaume, E.I.T. (GPI) is a Structural Engineer responsible for bridge design, construction shop design review and construction administration. He also has experience as a Project/Field Engineer

responsible for developing estimates, bids, and scopes of work for a site-work subcontractor, with a focus on drilling, blasting, and excavation.

Mr. Berthiaume serves as engineer on many of GPI's structural projects. Among his relevant project experience is MassDOT's Canal Street Reconstruction in Lawrence. Mr. Berthiaume was responsible for assisting in design of a new 120 foot single span superstructure along with two abutments and adjoining MSE retaining walls. Mr. Berthiaume was also responsible for designing the abutting, existing 120 year old stone arch rehabilitation which included transforming the bridge from carrying vehicular loads to pedestrian loads and scour repairs.

Mr. Berthiaume is also currently working on a MassDOT bridge rehabilitation project in Hopkinton. This project includes a deck replacement and substructure modifications for a bridge carrying the I-90 ramp over Route 495. This project also includes staged construction to replace the deteriorated concrete deck and selective deficient structural steel members.

Mr. Berthiaume is also concurrently working on MassDOT's North Bank Bridge in Boston and Cambridge performing construction administration. This project involves constructing a 700 foot pedestrian bridge connecting Paul Revere Park and North Point Park underneath the Zakim Bridge and over the MBTA Railroad. This project also includes building bikepaths, a new maintenance facility, re-building shoreline along the Charles River and coordination with many state agencies.

With his experience as a Project/Field engineer Mr. Berthiaume leads many of GPI's field and inspection efforts. Recently he completed the structural inspection of the Faunce Corner Road Bridge over I-195 in Dartmouth, MA and the River Street Bridge over the North Nashua River in Fitchburg, MA.

Mr. Shahvir Vimadalal, P.E. (Green) is Green's Structural Department Manager and brings more than 26 years of structural engineering experience with emphasis in various aspects of structural engineering applications. He is presently overseeing Green's structural engineering services for major bridge projects in Massachusetts, Vermont and Rhode Island. A strong focus of his career has concentrated on public sector clients throughout the Northeast, specializing in bridge design, analysis, inspection and ratings covering a wide variety of bridge structures. Prior to joining Green, he served as an independent consultant and as Chief Structural Engineer/Department Manager of a large Connecticut design firm. He was responsible for the design of rehabilitation/repair of 24 bridges on I-84 in West Hartford and Hartford, CT. Mr. Vimadalal's vast, in-depth experience on bridges is a major resource for Green to ensure all structural design issues are properly addressed.

Mr. Vimadalal serves as Structural Project Manager on all of Green's structural projects. He is currently managing Green's Statewide Open End Footprint Bridge contract which includes Route 32 over Ware Canal in Barre, Route 18 over the Taunton River in Bridgewater/Middleborough and Whitney Street over CSX Railroad in Sherborn. He also is managing Green's Statewide Accelerated Bridge Program contract. Mr. Vimadalal also served as Project Manager on Taylor Street over Interstate 495 NB/SB in Littleton, MA. This project proposed to replace the existing five span structure with a two span continuous structure.

Mr. Vimadalal also has completed numerous bridge ratings for steel and prestressed concrete multi-beam, congregate rigid frames, thru-truss and concrete slab structures and concrete and metal culverts as Project Manager for Green's Statewide Bridge Load Ratings contract.

Mr. Michael Cruz, P.E. (Green) a Senior Engineer in the structural division of Green, has 17 years experience in the study, planning, analysis, design and structural inspection of bridges and structures of

various types and sizes. Mr. Cruz has played a major part in the completion of bridge assignments in Green's Structural Division. He has completed numerous bridge assignments for Massachusetts Department of Transportation, Vermont Agency of Transportation, the Rhode Island Department of Transportation and the Maine Department of Transportation. Mr. Cruz has been the Project Engineer for seven continuous open ended bridge contracts with MassDOT where over a dozen bridges have been designed and constructed. Since 1999, Mr. Cruz has been continually providing structural engineering services on Green's VTrans Open-Ended Retainer contracts and in the past 10 years he has completed assignments under RIDOT's Comprehensive Bridge Rehabilitation Program.

Mr. Cruz has served as Structural Project Engineer for seven consecutive Open End Bridge Contracts with MassDOT and designed more than a dozen bridges ranging from simple to complex structures. He also serves as Structural Project Engineer for a Statewide Accelerated Bridge Contract with MassDOT. Under this contract he is completing design services for Route 19 over Mill Brook in Brimfield, Massachusetts. This project is the first MassDOT to incorporate the new prestressed concrete Northeast Extreme Tee (NEXT) Beam where flanges are used as forms for the cast-in-place concrete deck. Other projects he serves as Structural Project Engineer on include a MassDOT Statewide Bridge Load Rating contract, and Interstate 495/Route 2 Interchange Improvements, Taylor Street over Interstate 495 NB/SB in Littleton, Massachusetts.

Survey and Right-of-Way

Mr. Jeffrey Bradford, P.E., P.L.S. (GPI) has over twenty-five years of experience in both survey and highway design. He has been with GPI since he graduated from college. Mr. Bradford has prepared numerous Right-of-Way Plans, Alteration Plans and Street Acceptance Plans for municipalities and state agencies. Mr. Bradford has developed an excellent relationship with and is highly regarded by MassDOT in developing and delivering right-of-way and state highway layout documents on schedule and under budget. He is currently managing GPI's Open-End Right-of-way Contract with MassDOT, which is an on-call assignment-based contract to provide Right-of-way Plans, Alteration and Layout Plans and written instruments.

Mr. Bradford has participated in the survey and right of way for every rail trail and multi-use path that has been designed by GPI. GPI has completed survey for in excess of fifty miles of rail trails, developed right of way plans detailing takings and easements, developed layout alteration plans and written instruments. Often times, Mr. Bradford is requested by MassDOT to prepare right of way plans, alteration and layout plans and written instruments for other Consultant projects.

Recent and current projects include preparation of a Street Acceptance plan for Martone Place in Springfield, Alteration and Discontinuance plans for Washington Street in Dedham, Division Plan of Commonwealth of Massachusetts land and Alteration plan in Saugus through the Division of Capital Asset Management, Alteration plan for break-in-access on limited access State highway in Marlborough, ANR plan for Railroad property in Worcester, Easement plans for bike paths in Milford, Southwick, Holliston, Acton, Carlisle, and Westford, right of way and alteration plans for the Kimball and River Street bridges over the North Nashua River in Fitchburg, MA and Advance Taking plans of lands in Tyngsborough and Fitchburg.

Ms. Dilan Molina has over 11 years of experience working with surveyors, researching information at the Registries of Deeds, civil design, and preparing most of GPI's baseplans and property plans using AutoCAD and various other programs. She has prepared numerous Property Plans, Right-of-Way Plans, and Alteration Plans for private owners, municipalities and state agencies. Ms. Molina shall be responsible for overseeing the review of all existing data and resource information on record for the

parcel and the supplementation of this information with new boundary, topographic and hydrographic survey as required. Ms. Molina has been the primary CADD technician on all Right-of-Way assignments for the past 8 years, having prepared the majority of plans requested by MassDOT and other clients, including Preliminary and Final ROW Plans, Alteration Plans, Easement Plans, Taking Plans, and Discontinuance Plans.

Ms. Molina completes the CADD drafting for all right-of-way, alteration and layout plans produced by GPI. She works with Mr. Bradford on every assignment given to GPI on the Open-End Right-of-Way Contract with MassDOT. Ms. Molina drafted the right-of-way plans for the BFRT Phase 2A project. Other recent projects include the Kimball and River Street bridges over the North Nashua River in Fitchburg, MA, the Oak Bluffs Roundabout in Martha's Vineyard and Route 85 reconstruction in Hudson, MA.

Ms. Molina also is an expert at preparing display boards for public presentations and public hearings. For each project, she prepares a board(s) with plan and elevation views and typical and critical cross sections with each element detailed in a different color making it much easier for the general public to read and understand the plans. Ms. Molina also develops renderings for projects enabling the public to visualize project elements being proposed. She developed renderings of the Route 2A/119 bridge and gated rail crossing for Phase 2A of the BFRT and renderings of the elevator option proposed as part of the MBTA crossing alternatives analysis for Phase 2C of the BFRT. Ms. Molina also developed all of the figures included in the Final Report detailing each alterative evaluated for the MBTA crossing.

Mr. Kevin Arsenault, P.L.S. (Green) has more than 20 years of experience on various types of land surveying projects and is Green's Survey Project Manager. He is a professional land surveyor registered in New Hampshire and Massachusetts. Mr. Arsenault has directed or performed horizontal and vertical control surveys utilizing GPS, as well as robotic and non-robotic total stations; topographic and utility research and determination; and property and utility research and determination. He has directed preparation of existing conditions plans, as-built surveys, ALTA/ACSM land title survey plans, highway alteration plans, subdivision and condominium plans and proposed easement and right-of-way plans. He has also prepared legal descriptions for existing and proposed parcels. Mr. Arsenault currently directs technical aspects of survey crews and is responsible for all survey plan production requiring a land surveyor's certification. In addition to his survey experience, Mr. Arsenault is highly proficient in AutoCAD.

Mr. Arsenault has participated in countless survey projects over the last twenty years for varied projects including rail trails, highways, intersections and bridges. Recently he supervised the survey for the I-93/I-95 (Route 128) Transportation Improvements Project in Needham and Wellesley, Massachusetts. The mapping was incomplete and he was responsible for the update to include missing utility structures and layout lines in addition to additional survey for extended project limits. Recently he completed survey for the Safety and Traffic Improvements project – Route 9 at Oak Street and Overbrook Drive in Natick, Massachusetts. Other recent projects include the Route 128 Add-a-Lane project in Dedham, Westwood and Needham, Massachusetts, Morton and River Streets over Fairmount Commuter Rail (MBTA) Bridge Replacement in Boston, Massachusetts and Route 1A Reconstruction in Walpole, MA. He also served as survey manager for nine different MBTA bridges on two different contracts with the MBTA.

Mr. Spartak Vaka (Green) is an AutoCAD technician at Green and his primary responsibilities include AutoCAD production for Green's surveying department. He has more than 22 years of experience in surveying, mapping and photogrammetry. His educational background includes a strong emphasis of mathematics applied to all aspects of surveying. His experience includes survey work utilizing Total Station

and Global Positioning Survey, ALTA, construction stake out, roadway surveys, utility surveys and property line survey. His office skills include data processing, calculations, post processing of field survey, traverse analyses, plotting and drafting assistance on final products such a base map preparation, Right-of-Way Plans and permanent and temporary easements. He is proficient at AutoCAD Land Desktop/Civil 3D.

Mr. Vaka serves as Surveyor and technician on many of Green's projects. With the combination of field experience and office skills, he successfully develops basemapping in accordance with MassDOT Guidelines. Recent experience includes work on three Route 128 Add-a-Lane Contracts through the Dedham, Westwood, Needham and Wellesley. Basemapping for all three contracts was provided by MassDOT and found to be incomplete. Mr. Vaka assisted with the field reconnaissance and supplemental survey necessary to complete the project design. Additionally, he incorporated all the missing underground utilities onto the basemap, assisted with the AutoCAD production for the design layout of the field survey to stake out the boring locations to support both the highway and bridge designs.

Environmental and Hazardous Waste

Ms. Marta Nover's (Nover Armstrong) highly regarded and respected environmental work over the past 25 years arguably qualifies her as one of the most experienced Senior Wetland and Environmental Permit Analysts in the Commonwealth. The commitment, technical knowledge and reputation she brings to every project has earned her invaluable respect and the trust of local, state and federal regulators. Ms. Nover has made this the guiding principal of their firm and will bring this to the Team on this great project. Active in the environmental community and in non-profit organizations, Ms. Nover has taken on the role as Vice President of Advocacy, playing a critical advocacy role within the Taunton River Watershed Alliance. She volunteers her time and expertise locally and regionally to promote public awareness and education towards wetlands and environmental protection and open space planning.

Ms. Nover's breadth of expertise covers freshwater and coastal wetland local, state and federal permitting; wetland resource area identification and boundary delineation; resource area restoration and replication design and construction supervision; wildlife habitat evaluation; and open space management and planning. Ruled a technical wetland expert on a number of cases, her value to a project as a critical thinker and the innate ability to anticipate technical and personality challenges is immeasurable.

Ms. Nover has provided expert technical review services to a number of municipalities throughout her career, many of which use her exclusively. Most notable is that for the past 10+ years, the Brockton Conservation Commission has awarded her with the contract to provide full technical reviews on all projects submitted to them as well as handling permit completion, public representation, enforcement activities, advocacy, compliance and construction monitoring. She is currently providing the Technical Lead on several projects in various stages of environmental permitting. She is representing the Town of Rockland in their review of South Shore Tri-Town Development Corporation's East-West Parkway from the former Naval Air Station property through the properties currently in the public-taking process to Weymouth Street in Rockland. Working with the applicant's design engineers, Vanasse Hangen Brustlin, Inc. on their Design-Build project, additional wetland resource area alteration identified by Ms. Nover has been incorporated into the project's 25% design plans; wetland resource area boundary delineation has been reviewed; the 25% project design has been reviewed for compliance with the Massachusett's Stormwater Regulations; and is advising the Conservation Commission regarding on-going Massachusetts Endangered Species Act Construction Permit revisions that are addressing the project schedule and project design revisions.

Other recent project highlights that Ms. Nover was intimately involved in include the certification of five vernal pools on one property on behalf of the Kingston Conservation Commission and subsequent assistance in the determination of the isolated land subject to flooding boundary that does not co-exist with the vernal pool boundaries. Ms. Nover's technical and project experience along with her regional presence was instrumental in the firm's recent award by the Town of Kingston as one of their On-Call Professional Engineering and Environmental Consulting Services firms. Ms. Nover also recently assisted the Pembroke Conservation Commission with the permitting review of a residential subdivision that lies adjacent to one of their most valuable and popular town-owned open space parcels, Tubbs Meadow. Her review identified both on-site and off-site certifiable vernal pools as well as site design improvements that would achieve Massachusetts Stormwater Regulation compliance. As always, Ms. Nover's project approach is to assist the developer or regulator with achieving regulatory compliance while achieving the project's overall purpose and goals.

Mr. Henry Nover, P.E. (Nover-Armstrong) gained practical experience in site and stormwater management design while working on projects ranging from world-wide large-scale utility and transportation projects while employed by the Chas. T. Main Co. to providing both large and small Massachusetts municipalities with expert site design and construction monitoring advocacy for the past decade. He has over 35 years of site and stormwater management design experience. As a Massachusetts Professional Engineer and Stormwater Professional, he has successfully worked with and represented public and private clients in the greater Boston area providing planning, design, permitting, public presentation, expert peer review and construction supervision/monitoring of municipal, state, utility and private development projects. A decade of design experience with Chas. T. Main, Inc., a large Boston-based firm and permitting experience with various civil engineering firms in Southeastern Massachusetts has provided Mr. Nover with valuable practical experience on projects ranging from power plants, transportation projects, landfills, as well as industrial, commercial and residential developments.

Mr. Nover is currently providing construction and compliance monitoring of a large-scale commercial re-development project in the City of Brockton on behalf of the Conservation Commission and Planning Board. This project is critical to the City's economic recovery as it is situated in a show-case location from Route 24. His expertise in erosion and sedimentation control is essential as the work directly abuts two stream systems and vegetated wetland and on-going site activities are taking place over 100% of the development area. To confirm that the activities meet the MassDEP's Stormwater Regulations, Mr. Nover witnessed soil evaluations pre-building demolitions. Results of these soil evaluations required that the stormwater management design needed revisions on the fly as re-development activities were in full swing. As part of the re-development Team, he facilitated these revisions and made sure the activities complied with the Stormwater Regulations, protecting downstream properties and improving water quality entering wetland resource areas.

Mr. Nover is also providing the Conservation Commission with on-going Construction / Compliance Monitoring services on a multi-unit over-55 residential development in downtown Rockland. The Order of Conditions required that the wetland replication area be constructed and planted in accordance with its design plans prior to any other site work. Once this was completed to Mr. Nover's and the Town's satisfaction, site work commenced that included the construction of an earthen berm across vegetated wetlands as part of their stormwater management design to protect down-gradient property owners. Erosion and sedimentation control is critical on this site as the project lies adjacent to vernal pool habitat, vegetated wetland and an on-site pond. Mr. Nover's inspections have ensured the adequate protection of the town's wetland resources.

Ms. Marylou Armstrong, L.S.P. (Nover-Armstrong) is the LSP-of-Record for many Disposal Sites across the Commonwealth. She provides expert environmental site assessment, site and risk characterization, remediation and hazardous building and structure surveys to state transportation agencies, municipalities, financial institutions, developers, non-profit organizations and private entities throughout Massachusetts and greater New England. Ms. Armstrong's 25 years of professional consulting services throughout southeastern Massachusetts has earned her the same high regard from local, state, and federal regulators as her partner Marta.

Ms. Armstrong has conducted numerous environmental site assessments throughout New England and the United States. She has recently been asked by the City of Brockton's Building Department to assist with an enforcement case involving documented contamination on a city-owned property. Ms. Armstrong is acting as the liaison between the City and the MassDEP while moving forward with the response actions required by the Massachusetts Contingency Plan, 310 CMR 40.0000. Her reputation with the MassDEP immediately stayed the enforcement proceedings, allowing the City to remedy the situation.

Ms. Armstrong is currently providing the Massachusetts Bay Transit Authority with asbestos-containing and hazardous material survey and remedial consulting services as part of their Design and Engineering Services for Construction and Quality Engineering, Consultation and Assistance on a Task Order Basis contract recently awarded to the Engineering Team that Nover-Armstrong is on.

Ms. Armstrong is also managing and taking the technical Lead as Senior Scientist or representing Licensed Site Professional for several non-profit organizations including The Community Builders, headquartered in Boston and the Mattapoisett Land Trust with expert but economical assistance with site assessment; oil and hazardous materials investigation and building surveys; and remedial services.

Geotechnical Engineering

Mr. Kurt Jelenik, P.E. (Nobis) has over 20 years experience in geotechnical, civil and environmental engineering throughout New England and Europe. He has been employed at Nobis Engineering for over 8 years. Mr. Jelinek has managed numerous engineering projects in the area of geotechnical subsurface explorations and foundation analyses for bridges and buildings, roadway and pavement designs, slope stabilities, retaining structures, ground improvements, soil liquefaction susceptibility, and designs of landfill closures, dams and recreation trails. He also has extensive experience in providing geotechnical consultant services on Design-Build projects. He is uniquely qualified at managing large projects from the feasibility study through final construction. Mr. Jelinek is intimately familiar with the AASHTO 2002 Standard Specifications for Highway and Bridges, AASHTO 2010 LRFD Bridge Design Specifications, and the MassDOT LRFD Bridge Manual. He works currently on several MassDOT projects and is intimately familiar with the current design process.

Mr. Jelenik manages many of Nobis' geotechnical projects from the feasibility study through final construction including preparation of reports, plans, technical calculations, specifications, estimates and bid documents. Recently he served as Project Manager for the geotechnical services for the widening of the west bridge abutment and associated new ramps of the Tyngsborough Bridge over the Merrimack River. He supervised the geotechnical subsurface exploration program, provided analysis and evaluation of spread footing foundations for the ground improvements via jet grouting and made recommendations for excavation adjacent to the railroad line. He also provided design recommendations for the MSE retaining walls required for the project.

Mr. Jelenik also served as Project Manager for the DCR Magazine Street Pedestrian Bridge replacement

in Cambridge, Massachusetts. He supervised the subsurface exploration program, executed a soil laboratory program and prepared foundation recommendations for the bridge abutments and ramp piers.

RELEVANT PROJECT EXPERIENCE

GPI has completed many Federal and State funded rail trail and multi-use path design projects in Massachusetts requiring approval by MassDOT of the 25%, 75%. The following is a listing of some of those projects.

Cliff Road Bike Path
Nantucket, MA

Client:
Town of Nantucket

Project Contact:
Mike Burns, (508) 228-7237
Transportation Planner
Town of Nantucket
16 Broad Street
Nantucket, MA 02554

Greenman-Pedersen, Inc. (GPI) was responsible for the survey, design and right-of-way for approximately 2,500 linear feet of bike path along the north side of Cliff Road from the existing bike path near the Crooked Lane intersection to the Sherburne Turnpike intersection.

GPI prepared the project basemapping including all right-of-way and property lines and features of the project area. Following completion of the survey and mapping, GPI developed three conceptual layouts detailing the pros and cons of each and to present at a public hearing for consideration by the town and the residents. Once an alternative was selected, GPI prepared 25%, 75% and final design and right-of-way plans including typical sections, alignment, profile, drainage, screening and/or barriers, signing and pavement markings, drainage and utilities and incidentals for submission to and approval by the Town and MassDOT.

Cliff Road is residential. The proposed bikepath crossed several driveways and roadways of varying material including shells and cobbles requiring coordination with property owners and work on their driveways. Right of way efforts for the project were extensive as there is limited right of way available so in order to construct the bikepath, it must be constructed across the front lawns of the abutting residences. GPI also completed all the necessary environmental permitting and applications.

GPI was responsible for preparation of all construction plans, specifications estimates as well as bid documents in accordance with MassDOT standards. This project was recently put out for bid by MassDOT and GPI will be providing construction services.

CLIFF ROAD BIKE PATH (EXISTING CONDITIONS)

Franklin County Bikeway
Franklin County, MA

Client:
Franklin Regional Council of Governments

Project Contact:
Elizabeth Giannini, (413) 774-1194
Senior Transportation Planner
Franklin Regional Council of Governments
425 Main Street
Greenfield, MA 01301

Greenman-Pedersen, Inc. (GPI) performed preliminary and final design services for this 15-mile bikeway project in the Towns of Deerfield, Greenfield, Montague and Northfield, Massachusetts. The project required the Massachusetts Department of Transportation (MassDOT) design approval at the 25%, 75% 100% and PS&E design stages. The $1.7 million project included four miles of off-road bike path along an abandoned railbed and adjacent to the power canal owned by Western Massachusetts Electric Company. The remaining eleven miles of the bikeway is located on shared road-ways, providing a link to the Northfield Mountain Recreation and Environmental Center, downtown Northfield and the two campuses of the Northfield Mount Herman Secondary School.

Two railroad bridge conversions were required that included a four-span structure at the confluence of the Connecticut and Deerfield Rivers. A new 150-foot pedestrian/bicycle bridge was constructed over the Green River which required a hydraulic analysis of the existing Green River as well as analysis of three proposed alternatives and their effect on the hydraulic efficiency, and two rehabilitated railroad bridges.

Several roadway crossings were designed with safety features such as advance signing, pavement markings and curved bikeway approaches to slow riders approaching crossings. The project also included site furnishings, fencing and stormwater management.

In addition to community participation and liaison services, extensive environmental permitting was required including the filing of the three Notices of Intents and a Chapter 91 waterways license as sections of the trail impacted wetlands and the 100-year flood plain.

The project was broken into three phases. GPI was responsible for preparation of all construction plans, specifications estimates as well as bid documents for all three phases in accordance with MassDOT standards. GPI also provided construction services for the entire 15 miles of trail which were constructed by MassDOT.

FRANKLIN COUNTY BIKEWAY

Southwick Rails-to-Trail
Southwick, MA

Client:
Town of Southwick

Project Contact:
Jeffrey McCollough, (413) 781-6045
Senior Transportation Planner
Pioneer Valley Planning Commission
26 Central Street, Suite 34
West Springfield, MA 01089

Greenman-Pedersen, Inc. (GPI) prepared preliminary and final design services in accordance with Massachusetts Department of Transportation (MassDOT) standards for this 3.5-mile rail trail project. This project entails the design of a 3.5 mile bike trail along abandoned railbed from the Westfield Town Line to the Phase I of the trail currently under design. The design includes survey and basemapping, three at-grade crossings involving traffic analysis, pedestrian signalization, traffic signs and pavement markings, bank stabilization, fencing, barriers, drainage, connections from local streets, neighborhoods, schools and businesses and enhancements such as parking and picnic areas along the trail as well as scenic overlooks and rest areas. Environmental permitting is required as sections of the trail impact wetlands buffer zones and the 100-year floodplain. GPI was also asked to prepare the Environmental Notification Form (ENF) for submission to Massachusetts Environmental Policy Act office for all three phases of the Southwick Rail Trail. Phases 2 and 3 were being designed by other consultants.

GPI helped the Town of Southwick and Pioneer Valley Planning Commission secure CMAQ funding for the construction of the trail. This trail will connect with Phase I of the Southwick Trail and when complete, with the Farmington Valley Greenway for a total of 32 miles of continuous trail. Close coordination with the Town of Southwick, MassDOT and abutters was required and community participation was a major element.

GPI was responsible for preparation of all construction plans, specifications estimates as well as bid documents in accordance with MassDOT standards. The project required MassDOT design approval at the 25%, 75%, 100% and PS&E design stages. The project is currently being constructed by MassDOT.

Methuen Riverwalk
Methuen, MA

Client:
City of Methuen

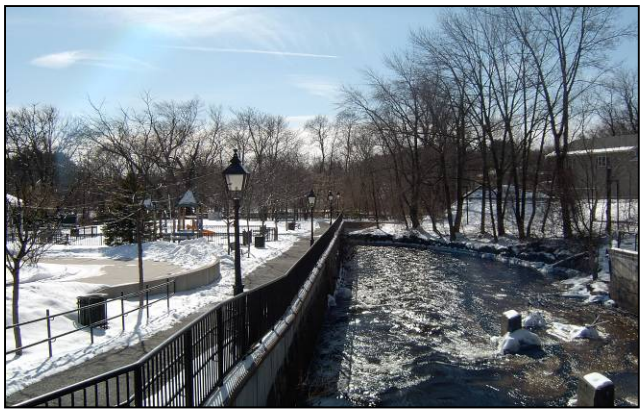
Project Contact:
Karen Sawyer Faust, (978) 794-3231
Community Development Director
City of Methuen
41 Pleasant Street
Methuen, MA 01844

Greenman-Pedersen, Inc. (GPI) provided the City of Methuen with preliminary and final design services for the construction of a Riverwalk as part of a Master Plan to implement improvements to the downtown community. The project required Massachusetts Department of Transportation (MassDOT) approval at the 25%, 75%, 100% and PS&E design stages.

The main element of the project involved the design and construction of a new 150-foot pedestrian bridge over the Spicket River Falls Dam. The project also included the design and construction of a new pedestrian walkway along the Spicket River which shall extend to a point beyond the existing River Walk Park and terminate at the historic landmark turrets. This new walkway shall consist of a second single span pedestrian bridge over the Spicket River, a boardwalk, and several signature gateway entrances. The north and south landing areas for the main pedestrian bridge consisted of concrete unit pavers with benches, plantings and protective steel rail. The signature gateway entrances along the boardwalk involved grading, plantings and the installation of benches and bollards.

The project site also required the installation of drainage improvements and the filing of a Notice of Intent. GPI also filed the CE checklist for the project.

GPI was responsible for preparation of all construction plans, specifications estimates as well as bid documents in accordance with MassDOT standards and assisted the City during construction. The project was constructed by MassDOT.



Holliston Upper Charles Trail Phase H-1, Holliston, MA

Client:
Town of Holliston

Project Contact:
Robert Weidknecht, (508) 366-0560
Holliston Trail Committee Chair
Beals and Thomas, Inc.
144 Turnpike Road
Southborough, MA 01772

Greenman-Pedersen, Inc. (GPI) is providing design services for the Town of Holliston for this two-mile rail trail. The project requires Massachusetts Department of Transportation (MassDOT) approval at the 25%, 75% and 100% and PS&E design stages. The project begins at Hopping Brook Road and travels northeasterly approximately 2 miles along abandoned railroad right-of-way where it terminates at Cross Street. The trail parallels Route 16, passing behind Village Plaza, across Chestnut Street and southwestward towards the Milford town line. The project is located entirely on railroad right-of-way that is anticipated to be leased from the railroad company to the town. This trail is one of several phases of the twenty-mile Upper Charles Trail system to provide a recreational pedestrian and bicycle facility that will connect several towns including Milford and Sherborne.

The work included the construction of a bituminous concrete paved surface, design of scenic overlook areas, roadway crossings and gateways at Hopping Brook Road, Chestnut Street, Summer Street and Cross Street intersections, grading, cultural/historical elements, a pedestrian signal at Summer Street, landscaping, site furnishings, modifications to bridges and culverts, public participation and other miscellaneous work. GPI filed a CE checklist for this project, including the filing of a Notice of Intent. Due to safety concerns at the Route 126 roadway crossing, a queuing area and pedestrian actuated traffic signal was designed by GPI.

The proposed bikeway crosses nine structures of varying sizes. The structures are concrete or stone culverts with openings varying from 30 inches in diameter to 16 x 10 foot boxes. One structure is a stone arch. Fifteen historic resources have been noted along the trail including the structures and rail markers. The work also included preparation of a type study, sketch plans and final bridge plans for the existing stone arch cattle pass bridge. The 75% design has been completed for this project and approved by MassDOT. Final design for the project will be completed once the Town of Holliston and CSX have completed negotiations. With GPI's help, Holliston secured and recently received state transportation bond money for acquisition of the CSX railbed. GPI is currently in the process of finalizing the rail trail design This project will be constructed by MassDOT.

HOLLISTON UPPER CHARLES TRAIL PHASE H-1 (EXISTING CONDITIONS)

Upper Charles Trail Phase 1 and Phase 2 Milford, MA

Client:
Town of Milford

Project Contact:
Reno DeLuzio, Chairman Milford Upper Charles Trail Committee, (508) 473-7790
Milford Town Hall
Office of planning and Engineering
52 Main Street
Milford, MA 01757

Greenman-Pedersen Inc. (GPI) prepared preliminary and final design services for the Town of Milford in accordance with Massachusetts Department of Transportation (MassDOT, formerly MassHighway) standards for Phases 1 and 2 of a bikepath project as part of the Upper Charles Trail. The totlal length of both phases of the Milford portion of the trail is seven miles. Both phases require MassDOT approval at the 25%, 75%, 100% and PS&E design stages. This project is part of a state-funded twenty-mile trail through six communities. GPI helped the Town of Milford secure enhancement funds for the design of both phases and CMAQ funding for the construction of Phase 2.

Phase 1 begins at the Commuter Parking Lot on Main Street and proceeds northerly to Deer Street. Phase 2 extends to the Holliston and Hopkinton town lines.

The trail is a paved path with grassed shoulders and incorporates footbridges, scenic overlooks, entrance treatments, vegetative screening, interpretive signing, stormwater management, site furnishings and elevated boardwalks and will provide access to residential, commercial, recreation and conservation areas. The project includes two pedestrian bridges over the Charles River. Roadway crossings were provided at Dilla Street, Route 85, Main Street (traffic signal modification), Route 109 (new traffic signal), Beaver Street (new traffic signal) and the I-495 southbound ramps at Route 85.

GPI was responsible for preparation of all Construction Plans, Specifications Estimates as well as Bid Documents in accordance with MassDOT standards. Phase 1 has been constructed and the construction of Phase 2 is almost complete. GPI also provided Construction Services for the both phases. The trail was constructed by MassDOT. .

MILFORD UPPER CHARLES TRAIL PHASE 1 AND 2

Bruce Freeman Rail Trail Phase 2A Westford, Carlisle and Acton, MA

The Towns of Acton, Carlisle and Westford selected Greenman-Pedersen, Inc. (GPI) to provide 25% design and engineering services for the Bruce Freeman Rail Trail (BFRT) Phase 2A from Acton Indoor Sports in Acton to Route 225 in Westford, a total of approximately 5 miles. The trail follows the former Penn Central/Old Colony Railroad right-of-way north and meets Phase 1 of the BFRT (Westford, Lowell).

The proposed cross section includes a new variable width paved asphalt multi-use rail trail with 2-foot stabilized shoulders, an adjacent 6 foot stone dust trail, trail pavement markings and signing, passively actuated flashing beacons at trail/roadway crossings, new roadway pavement markings and signing at trail crossings, construction of a pre-fabricated pedestrian bridge structure over Route 2A/119, rehabilitating six existing railroad bridges along the trail, constructing culverts, earthwork, landscaping, environmental permitting and other items incidental to the construction of the rail trail. GPI Structural Engineers conducted a field evaluation of the six existing railroad bridge trestles and compiled a Preliminary Structures Evaluation Report documenting the condition of the structures, recommended improvements and provided construction cost estimates.

As part of the project, GPI prepared a Transportation Enhancement Application for submission to the Executive Office of Transportation (EOT). While preparing the application, GPI was approached by the Town of Concord regarding Phase 2C of the BFRT, approximately 3 miles, which runs through their community. The application was completed for the communities of Acton, Carlisle, Westford and Concord and was approved as eligible for nearly $1.4 million dollars in final design funds.

Chicopee Riverwalk
Chicopee, MA

Client:
Pioneer Valley Planning Commission

Project Contact:
Chris Curtis, (413) 781-6045
Pioneer Valley Planning Commission
26 Central Street, Suite 34
West Springfield, MA 01089

Greenman-Pedersen, Inc. (GPI) is providing preliminary and final design services for this 2.13-mile bikeway project for the City of Chicopee. The project required 25%, 75%, 100% and PS&E design stages with submission to MassDOT. The trail traverses a combination of residential and commercial areas in the City of Chicopee and includes five at-grade crossings with city streets. Large portions of the trail are adjacent to an abandoned rail right-of-way and along the flood control dike adjacent to the Chicopee River. Close coordination with Corps of Engineers, Massachusetts Department of Transportation, railroads and abutters is required and community participation is a major element. Extensive environmental permitting, including the filing of a Notice of Intent, was required as sections of the trail impact wetlands buffer zones and the 100-year floodplain.

This project has received 25% design approval and pending the resolution of right-of-way issues, will progress to final design. This project was reviewed by and will be constructed by MassDOT.

Springfield Highland Rail Trail Phase I
Springfield, MA

Client:
City of Springfield

Project Contact:
Kerisa Perazela, (413) 787-6020
Planning Department
City of Springfield
233 Allen Street
Springfield, MA 01108

Greenman-Pedersen, Inc. (GPI) provided preliminary design services for this two-mile, rail trail bikeway project on an abandoned railroad right-of-way in accordance with Massachusetts Department of Transportation (MassDOT) Standards. Project scope included survey, photogrammetry, design of scenic overlooks, right-of-way, intersection modifications, cultural/historical elements, environmental permitting, pedestrian signals, pavement markings and public participation. This project was administered by MassDOT. Final design has not be completed at this time due to right-of-way and abutter issues.

G. REPRESENTATIVE PROJECTS

Over the last five (5) years, GPI has been selected by MassDOT for a total of nine (9) Statewide Engineering Services Contracts, all of which have a contract amount of at least $1,000,000, including a $5,000,000 Design and Review Contract with the Accelerated Bridge Program. MassDOT only awarded three of these Accelerated Bridge contracts in the State. In June of 2010, GPI ranked first out of forty-one (41) consultant submissions in the latest solicitation for one of these Contracts. Nover-Armstrong, Nobis and Green have been team members with GPI on many of these MassDOT Statewide Contracts. Green has also won some of their own MassDOT Statewide Engineering Service Contracts.

In addition to the Statewide Engineering Services Contracts with MassDOT, the following six (6) recent/on-going individual GPI transportation design contracts all had contract amounts greater than $750,000. The contracts included both design and construction and all of the projects required MassDOT – Highway Division final design approval and have had or will have MassDOT construction sign-off. Included are brief project descriptions, GPI's responsibilities on the projects, the level of compensation, the MassDOT Highway Division contact person and a project reference(s) as requested in the RFQ. The reference person(s) can best describe GPI's professional work, including the role of the Project Manager. The specific relationship of the reference with the consultant team is also shown, whether that person was involved in review of the Design, administering Construction and/or Client interaction with the team.

1. ROUTE 146 (HURLEY SQUARE) – WORCESTER, MA

Project Status: Construction Completed summer 2007

Project Description: A $45 million Interchange of Route 146 at McKeon Road (Hurley Square) in the City of Worcester was constructed as part of the Route 146 Corridor Improvement Project being administered by MassDOT (formerly MassHighway). The Hurley Square Project involved the upgrade of approximately 3,600 linear feet of the existing two lane highway to a four lane, limited access facility. The design team, which consisted of GPI as the prime consultant and four sub-consultants, was responsible for the design documents and construction services for the project. The work involved the design of Route 146, Millbury Street, Ballard Street, McKeon Road Extension and the access and egress ramps to and from Route 146. Included as part of the project was the design of over 1,300 linear feet of ductile iron water pipe, 1,800 linear feet of sanitary sewer pipe and 11,000 linear feet of drainage pipe. The work also included the design of one single-span structure, two multi-span structures and an architecturally detailed, 180-foot span through truss pedestrian bridge spanning Route 146 and connecting Millbury Street to the future DEM Visitor's Center and other planned amenities.

Critical project elements also included the capping and extension of the Millbrook Conduit, a mortared 13' x 18' stone culvert build in the mid 1800's and listed on the Massachusetts Register of Historic Places and two at-grade railroad crossings, one of which required signalization. Other elements included four coordinated traffic signals, highway lighting, a new closed drainage system, water quality enhancement areas, environmental permitting, building demolition and complex construction staging. Since the project is within one of the oldest industrial corridors in the country, careful consideration of cultural and historical assets within the project area was required. As with most old industrial sections, mitigation and disposal of hazardous material was of considerable importance.

GPI Project Manager:	Rebecca Williamson
Client:	MassDOT
Contract Value:	$3,545,364
MassDOT Contact:	Gautam Sen - Project Manager (617) 973-7879

Project Subconsultants: Louis Berger Group / Green International, Inc. / Transytems, Inc. / Brown Richardson & Rowe

Project References: Arthur Frost, District 3 Project Development Engineer.
(508) 929-3837 - Responsible for Project Design Review
Michael Hartnett, District 3 Construction Engineer.
(508) 929-3813 - Responsible for Construction Administration

2. MASSACHUSETTS AVENUE RECONSTRUCTION – BOSTON, MA

Project Status: Under Construction (expected completion 2011)

Project Description: GPI provided the engineering and design services for the $14 million reconstruction of approximately one mile of Massachusetts Avenue. Massachusetts Avenue is a major north-south urban arterial that passes through the Back Bay and South End districts and carries an average of 41,000 vehicles per day. There are a total of eight signalized locations within the project limits including a new signalized pedestrian mid-block crossing at the Orange Line MBTA Station. The existing seven traffic signal locations in the project will be upgraded with new equipment and will be interconnected so that operations can be monitored and adjusted directly from the Boston Transportation Department. Development of the project included coordination with multiple neighborhood associations, the Historic Landmarks District, BU Medical Center, pedestrian and bicycle advocate groups such as Walk Boston and Livable Streets, the Architectural Access Board, various City Departments and MassDOT. GPI also coordinated with the Boston Parks Department and their Chester Square Project that was recently constructed in the center of the Massachusetts Avenue Project. Over 100 individual residences needed notification and survey of existing coal chutes/vaults located directly beneath the sidewalk. GPI was responsible for this work and the right-of-way process associated.

In the end, the existing sidewalks will be replaced with ADA compliant brick sidewalks along both sides of the roadway. 'Bump outs' have been incorporated along the project intersections in an effort to calm traffic and reduce the roadway crossing distance for pedestrians. Extensive landscape architecture and urban design, including period lighting, is also part of this highly visible project.

The project is currently under construction. GPI has been working closely with the Contractor and MassDOT Resident Engineer to advance the construction and address any issue in a timely and expeditious manner. The construction is expected to be completed six months ahead of the original schedule.

GPI Project Manager:	Christer Ericsson
Client:	City of Boston
Contract Value:	$1,624,000
MassDOT Contact:	Kimberly Sloan - Project Manager (617) 973-7495
Project Subs:	Weston & Sampson
Project Reference:	Para Jayasinghe, City of Boston Engineer (617) 635-4968 - Responsible for Client interaction with team and design development Frank Suszynski, District 4 Project Development Engineer (781) 641-8474 - Responsible for Project Design Review Michael Cameron, District 4 Resident Engineer (781) 641-8300 - Responsible for Construction Administration

3. ROUTE 128 ADD-A-LANE – DEDHAM, WESTWOOD AND NEEDHAM, MA

Project Status: Under Construction (expected completion 2015)

Project Description: The project consists of adding a 12 foot travel lane and ten foot shoulder toward the median in both directions for approximately 4 miles of Route 128. As part of the $100 million Route 128 Add-A-Lane Project Bridge IV Contract in Dedham, Westwood and Needham, GPI was responsible for the design improvements to Route 109 including the interchange bridge replacements and ramps. GPI was also responsible for project wide signing, staging and landscaping, lighting design and the design of a noise wall along Route 128 for properties along Roberts Road.

GPI developed temporary roadway plans, profiles and cross sections in addition to staging plans for the reconstruction of Route 128. In order to meet future traffic demands in the area, GPI developed plans for reconstructing Route 109 within the projects limits to accommodate four full travel lanes and a median. Due to the construction staging, the alignment of Route 109 shifted southerly requiring a complete new drainage system design.

GPI designed the Route 109 drainage system including new outfalls. In order to satisfy current environmental regulations relative to suspended solid removal and reduction in Total Mass Daily Loading (TMDL) of Phosphorous, innovative design techniques have been proposed. The infield areas of the interchange ramps will be designed to incorporate infiltration areas of adequate size to treat as a minimum the "first flush" of run-off. This infiltration is being designed to remove up to 55% of the TMDL of Phosphorus. In addition, soil evaluations are being performed to evaluate the effectiveness of installing leaching catch basins along Route 109 to treat run-off that cannot be directed to the infield infiltration areas. On the eastern project limits, the existing run-off has created excessive erosion problems along the roadway. The design has been prepared to try and reduce the rate of run-off in the existing system.

GPI Project Manager:	Rebecca Williamson
Client:	Louis Berger Group
Contract Value:	$750,900 (sub-consultant contract)
MassDOT Contact:	Lawrence Cash - Project Manager (617) 973-7384
Other Project Subconsultants:	Green International, Inc.
Project Reference:	James Capaldi, Louis Berger Group Principal (781) 707-7442 - Direct interface with project team and project submissions Frank Suszynski, District 4 Project Development Engineer (781) 641-8474 - Responsible for Project Design Review

4. CANAL STREET RECONSTRUCTION – LAWRENCE, MA

Project Status: Advertised for Construction 9/18/10 (expected completion 2014)

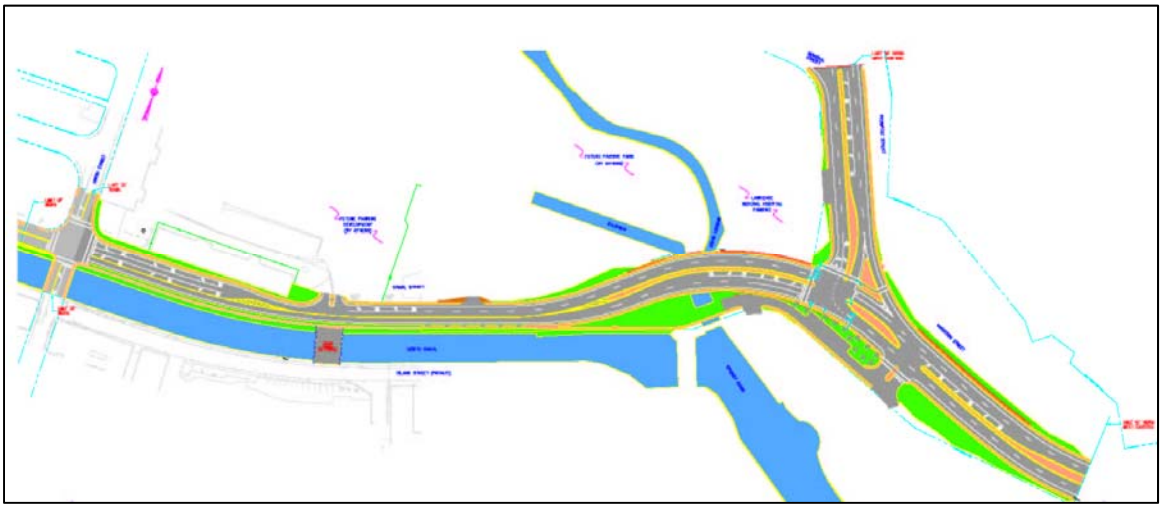
Project Description: This project contributes to the completion of the link between I-495 and the Central Business District via Marston and Canal Streets. Planned improvements include the reconstruction of a potion of Canal, Marston, Prospect and Union Streets, the realignment of the Canal, Marston and Prospect Street intersection and the replacement of the Canal Street Bridge over the Spicket River. In order to construct the replacement bridge, demolition of the remains of the Russell-Champion-Oxford Paper Company Buildings was required. The replacement bridge is being constructed approximately 95 feet northwest of the existing bridge and the existing bridge will remain and be utilized as a pedestrian and bicycle bridge. The existing Spicket River Bridge is listed in the National Register of Historic Places as a contributing element in Lawrence's North Canal Historic District. Most of Canal Street between Broadway and Prospect Streets lies within the 60-acre, mile long district. The roadway realignment includes the mitigation of substandard horizontal and vertical alignment, installation of traffic signals and a rerouting of the mainline traffic flow to downtown Lawrence from Prospect Street to Canal Street. The purpose is to provide an efficient and attractive "gateway" to the downtown area and the historic North Canal District, highlighted with urban design elements and ornamental lighting. The project focuses on traffic and pedestrian issues at the Marston/Prospect Street intersection and the Union Street intersection with Canal Street.

The new bridge is proposed to be a 130-foot simple span horizontally curved steel plate girder. The proposed abutments will be concrete stub type abutments supported on a single line of steel H-piles located behind mechanically stabilized earth walls. The abutment system and geometry was chosen to avoid imparting surcharge loads into the existing canal walls. Wall treatments consisting of a concrete form liner which mimics the appearance of the adjacent granite block walls will be incorporated into the bridge design. The proposed bridge has been designed so that it provides an open and unobstructed view of the original historic arch. Additional project elements consist of gravity, cantilever, and mechanically stabilized earth retaining walls that approach 25 feet in height.

The project involved land taking for the demolition of the existing building including asbestos and PCB removal and substantial environmental permitting including filing of an Environmental Notification Form (ENF) with MEPA, the granting of a waiver from filing an Environmental Impact Report and then filing of a Notice of Project Change with MEPA. In addition, the project required an Order of Conditions, 401 Water Quality Certificate, Chapter 91 License, Section 106 of the National Historic Preservation Act and State 254 approval and a Memorandum of Agreement with the Federal Highway Administration, the Advisory Council on Historic Preservation and the Massachusetts State Historic Preservation.

The project also required intense coordination with other City of Lawrence infrastructure Projects as well as Lawrence General Hospital and their access needs. As part of the Gateway Project, the City of Lawrence, through the Merrimack Valley Regional Transit Authority (MVRTA) is proposing the construction of an approximate 960 space parking facility located between Canal Street, Union Street, General Street and the Spicket River. The addition of this parking facility and the resulting traffic generation was factored into the design and actually played a large part in the addition of a second lane headed westbound over the proposed bridge.

GPI PM:	John Watters
Client:	MassDOT
Contract Value:	$761,546
MassDOT Contact:	Manhar Patel - Project Manager (617) 973-7217
Project Subs:	Nobis / Green International, Inc.
Project Reference:	Frank Suszynski (Design) MassDOT District 4 (781) 641-8474 – Responsible for Project Design Review



5. POST MAINLINE PARKS PROJECT / NORTH BANK BRIDGE OVER MBTA – BOSTON, MA

Project Status: Under Construction (expected completion 2012)

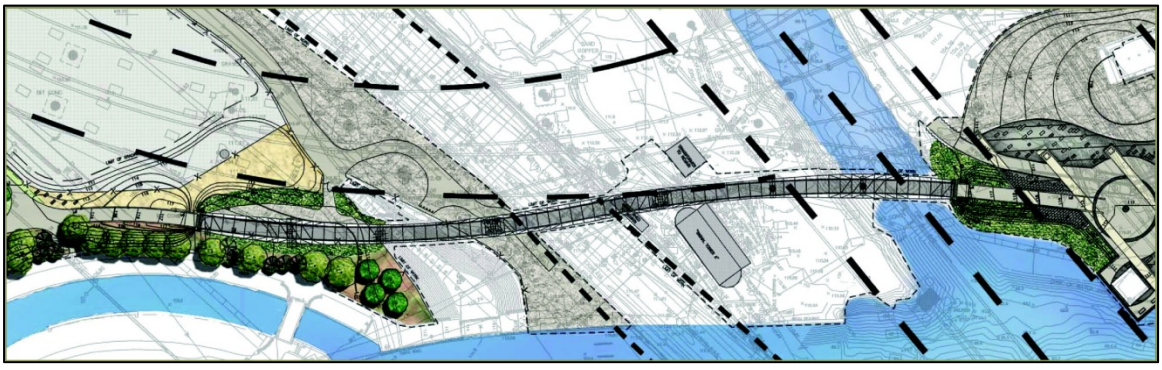
Project Description: As the Lead Consultant of a four (4) member Joint Venture (JV), GPI provided design engineering services as well as Project Manager and Project Administration Responsibilities. The Post Mainline Parks project, the final phase of the Central Artery/Tunnel Project, will restore 19 acres of Boston's historic Charles River Basin, transforming a former industrial area into a striking and vibrant riverfront park. The project design combines a new pedestrian bridge across the Millers River and commuter rail tracks, and restoration of planned parkland disturbed by construction of the Central Artery/Tunnel (CA/T) Project. Construction of this park will have historic consequences by connecting the parks and providing public access along the Charles River to Boston Harbor. Design elements include three pedestrian bridges including an architecturally significant structure over the MBTA commuter rail which forms the center piece of the project. Also included are bikepaths and walkways, a new park maintenance facility, landscape elements and surface restoration. Walkway connections will be constructed from the Bridge linking North Point Park, the future Charles River Conservancy Skatepark, and Paul Revere Park. A Multi-Use Path connection will be provided to the recently constructed Cambridge Multi-Use Trail.

The project required a coordination with a number of agencies including Mass Turnpike, MWRA, MBTA, DCR, MassDOT, Army Corps of Engineers, and DEP, as well as coordination with the City of Boston and City of Cambridge. During design development, GPI quickly directed the resolution of conflicts to advertise this project under the ARRA federal stimulus project. GPI was also required to present this project to the MassDOT Board for approval.

During construction, GPI has been involved in resolving technical issues associated with welding of tubular members, installation of drain lines, force main sewers, electrical transformer relocations, drilled shaft installations, pile driving obstructions, and permit compliance.

This project was originally part of the CA/T project as D029F, this project was planned to connect East Cambridge to City Square Charlestown and the Boston Harbor Waterfront. MassDOT is now responsible for the construction.

JV Project Manager:	John Watters
Client:	MassDOT
Contract Value:	$5,465,874
MassDOT Contact:	Anne Gorczyca - Project Manager 617) 973-7500
JV Partners:	Carol R. Johnson / Amman & Whitney / Stantec
Project Reference:	Kimberly Sloan - MassDOT (617) 973-7495 – Worked with Anne Gorczyca



6. RECONSTRUCTION OF FAUNCE CORNER ROAD OVER I-195 – DARTMOUTH, MA

Project Status: In-Design (25%) Construction Expected to start 2014

Project Description: This project involves the replacement of the existing Faunce Corner Road (FCR) Bridge over I-195 (D-04-016) and the reconstruction and widening of the FCR approaches to the bridge, extending from a point south of the intersection of FCR with Cross Road and Comfort Lane to the existing railroad crossing north of the I-195 Interchange in the town of Dartmouth. The proposed roadway work along FCR shall require the reconstruction of two signalized intersections – FCR at Cross Road and Comfort Lane and FCR at the I-195 EB Ramps - and the new signalization at the intersection of FCR with the I-195 WB Ramps. The proposed roadway work along FCR also results in work on each of the I-195 Ramps to accommodate the widening and realignment of FCR. The project also includes the installation of new granite curbing and new cement concrete sidewalks along both sides of FCR with the appropriate wheelchair ramps, the installation of new closed and open drainage systems to accommodate the widening and realignment of FCR, the adjustment and relocation of the existing utilities along the corridor, and the installation of new signing and pavement markings along the entire project.

As part of the Project Development Phase for this project, GPI developed a number of Alternatives for the widening and/or replacement of the existing bridge as well as the reconstruction of FCR and the associated I-195 Ramps. As part of this phase of the project, GPI analyzed the different Alternatives and also identified the various environmental impacts, Right of Way impacts, and construction cost of each in order to determine a Preferred Alternative. Once the Preferred Alternative was selected, it was then coordinated with and presented to MassDOT, FHWA, the town and other stakeholders at a formal Public Hearing to gain final approval.

Also, at the request of MassDOT and FHWA, GPI considered and evaluated additional interchange improvements as part of this project. The various existing elements of the interchange were reviewed, substandard features were identified, and improvements were recommended as part of the Preliminary Design. These improvements included the lengthening of the existing I-195 EB and WB acceleration lanes and the realignment of the associated ramps to meet the latest MassDOT and AASHTO standards.

Another major element of this project involved the Construction Staging and Traffic Management for the anticipated work. This effort involved developing detailed Construction Staging Plans which highlighted the various work elements to be completed during each phase of construction and the Traffic Management Plans detailed the traffic flow around these phases. This was necessary to ensure that the existing three (3) lanes of traffic could be maintained throughout the construction phase of the project.

The 25% Design Package was submitted to MassDOT on November 17, 2009.

GPI PM:	Geoffrey Howie
Client:	MassDOT
Contract Value:	$1,473,500
MassDOT Contact:	Michael Papadopoulos - Project Manager (617) 973-7356
Project Subs:	Nobis / Amy Green Environmental
Project Reference:	Pamela Haznar (Design) MassDOT District 5 (508) 884-4239 – Responsible for Project Design Review

H. STAFFING AVAILABILITY

GPI can assure the Town of Acton adequate and timely attention and resources will be committed to complete the Final Design Services for Phases 2A and 2C of the BFRT. GPI is proud of the reputation we have earned for successfully completing projects on time and within budget. Clients continuously turn to GPI because they are satisfied with the results of previous projects and are confident of equal performance on new assignments. Strong working relationships have developed with clients to the extent that 85% of GPI's business is from repeat clients. This success results from the implementation plan followed by GPI and our staffing capacity. GPI takes pride in the many projects successfully completed and is excited about continuing work with the Towns of Acton, Carlisle, Westford and Concord on the project.

IMPLEMENTATION PLAN

MANAGEMENT APPROACH

A successful design project requires an experienced Project Manager, multi-disciplined technical expertise, maintaining the project schedule, responsiveness, adherence to standards and specifications, and QA/QC.

The Project Management structure is organized to provide a single point of contact with the Town of Acton through our Project Manager, Christer Ericsson, P.E. Functionally, the organization of the GPI Team is structured to allow the functions of the engineering design and quality control to flow directly to the Project Manager. We have assembled an integrated team that allows for both a clear division of responsibility and authority for each of the key people who shall be working under Mr. Ericsson. We believe it is vitally important to establish strong working groups with well-defined lines of authority and responsibility. Each Team member shall be responsible for managing their tasks to meet schedules, quality and cost-effective design goals and interfacing all the activities of his/her group with the balance of the organization. One of the primary functions of the Project Manager will be to verify that such interfacing and interaction is occurring in a timely and cost-effective fashion.

Project Team Organization

The successful completion of this assignment shall require the commitment of personnel who are experienced in project management and who have in-depth experience in each of the diverse technical specialties that are required by the Town of Acton. **All GPI Team key personnel assigned to this project have demonstrated capabilities on major state, municipal and private projects involving survey and right of way, bike path designs, highway and traffic engineering, drainage and stormwater design, structural engineering, landscaping, environmental permitting and community outreach.**

Our **Project Manager**, Christer Ericsson, P.E., with over twenty four years of transportation design experience, shall take a "hands on" approach to this project. His specific responsibilities shall include:

- Ensuring coordination of the various disciplines
- Ongoing reviews
- Conformance to all local, state and federal regulations
- Directing liaison with affected agencies, municipalities and community groups
- Monitoring and Assisting with all State and Federal Funding, if required
- Representing the Team at all workshops, meetings and presentations
- Preparing all status and progress reports, reviewing technical formulations and analysis methods and the quality control of all drawings, specifications and estimates
- Tracking and monitoring all responses to review comments
- Supervising the progress of the entire staff with regard to maintaining cost, schedule and quality control

As a Principal of GPI, he will be effective in authorizing the full and timely mobilization of staff, equipment and resources to satisfy the contract objectives. The Project Manager shall be supported by the following Lead Project Engineers in the major disciplines shown:

- Rebecca Williamson, P.E. – Recreational Trail Design
- John Watters, P.E. – Structures Design
- Jeffrey Bradford, P.E., P.L.S. – Survey and Right-of-way
- Marta Nover – Environmental
- Kurt Jelenik, P.E. – Geotechnical
- Marylou Armstong – Hazardous Waste and Contamination

Each is supported by a technical staff for their design specialty. The role of each Project Engineer will be to manage the technical staff in their respective discipline to meet schedule, quality and cost-effective design goals. Also included are other support functions such as contract administration and CADD Operations.

Simple procedures shall be utilized to establish and maintain effective communication internally with the GPI Team and externally with the Town of Acton and other involved parties. It is important that the Project Engineers be able to relate quickly, simply and effectively to each other in the performance of the work, while at the same time passing necessary information to the Project Manager.

Budget Tracking and Cost Control

GPI approaches all work with cost controls in mind and our integrated project cost management system allows for tracking costs by task and subtask. The management techniques and procedures that GPI is proposing to use are supported by a number of Management Information Systems that are a routine part of the GPI organization. These systems include:

• Progress Reporting • Cost Control Reports • Criteria Control

Bi-weekly reports are generated directly from time sheets that display staff hours expended by discipline for the entire project. Detailed analysis of the expenditures by sub-tasks is also obtained. Our Project Manager will be directly responsible for monitoring these reports and will institute corrective action if warranted. Invoices will be prepared and submitted monthly unless no work is performed during that period. Work efforts will be clearly identified on the invoice with the GPI project number, work description, amount invoiced to-date, percent of work complete to-date, invoice amount for the month and amount remaining.

Progress Status Meetings

Project progress/status meetings shall be scheduled on a minimum monthly basis. As Moderator, the Project Manager shall utilize these meetings as the primary tool in ensuring that the Project Engineers are communicating and interfacing in a timely and efficient manner. The meetings shall be held in GPI's Stoneham Office. Items on the agenda shall include Past and Anticipated Weekly Progress, Action Items and the appropriate Responsible Parties, Potential Problems, Unresolved Issues and Items required from the Client or other parties. Detailed minutes outlining the discussions at these meetings shall be prepared and distributed not only to attendees, but also to everyone on a distribution list developed at the start of the project. This is a routine procedure at GPI and has proven to be an extremely effective management tool on a number of projects in keeping the staff focused on the issues along with keeping clients aware of the project's status and direction.

Quality Assurance/Quality Control

Quality in the management and execution of our projects is the essence of our business. To prevent errors and omissions in our work, we enforce a rigorous Quality Assurance and Quality Control program (QA/QC). Procedures to ensure a completely satisfactory assignment require in-house controls established to monitor quality on the project. In accordance with GPI's corporate policy, we shall maintain Dedicated Quality Assurance throughout the duration of the project. In order to identify constructability issues and inconsistencies in documents, periodic reviews in accordance with our Quality Control Program shall be performed.

We shall follow the same quality control procedures we have utilized with success on previous projects. The various records of documents shall be logged, dated as they are generated and maintained in a separate

file in the GPI Stoneham Office. A summary spreadsheet of each of the deliverables, the responsible party, the specific due date and the personnel responsible for checking the information shall be kept by the Project Manager and distributed to GPI Team members periodically.

Responsiveness

GPI has a proven record of responsive services for the many clients we work for and are capable of performing numerous tasks concurrently. GPI has been commended by many of our clients for not only being responsive but also for providing constant project updates and information. The Town of Concord has praised GPI on several occasions. Government agencies, municipalities, institutions, industry and business organizations continuously turn to GPI because they are satisfied with the results of previous projects and are confident of equally superior performance on new assignments.

CAPACITY

Organization

GPI resources are immediately available and will remain on this project for its duration. GPI's present and future staffing commitments relative to ongoing and upcoming projects are perfectly suited for providing the key and support personnel required for the Bruce Freeman Rail Trail Project. Adequacy and quality of staffing shall not be an issue on this project. GPI understands that both Phases 2A and 2C are to be advanced as one project at the same time and has the staff and the ability to do this successfully

Although various members of the project team may be involved in other design projects, the entire Design Team has been selected based on their individual, as well as the firm's, current backlog of work and will be committed to completing the project in accordance with the project schedules. The Project Manager, Christer Ericsson, P.E., will provide senior level management and work with each discipline leader to delegate tasks appropriately and assure that the assigned Team members provide timely and quality work. Mr. Ericsson will serve as liaison with the Town, being readily available to discuss issues and determine the required actions. As is always the case, all of GPI's personnel and technical resources will be available for this project on an as-needed basis. Should future schedule conflicts arise where GPI must pull upon additional resources from one of the other 33 GPI offices, GPI can accommodate this through the use of FTP servers and VPN connections, allowing efficient and seamless transferring of information between offices. With Green on the project team, GPI's depth of resources increases. Green has many of the same capabilities so can assist where needed.

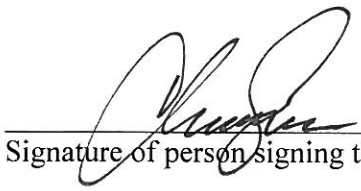
As requested, we are also providing a breakdown on the following pages of the current project commitments by Project Manager for the Stoneham office which may compete for time and attention of the proposed team members. As can be seen there are 17 project managers currently managing approximately $23 million of active design contracts. Of that, 70% is being reported as completed. Mr. Ericsson's major management assignment, Massachusetts Avenue, is expected to be complete by the fall of 2011, allowing full attention to the management of the BFRT project. Ms. Williamson's assignments will also allow full attention to the BFRT since the two accelerated bridge projects in Fitchburg she is managing will be advertised in February of 2011 and the bulk of the shop drawing review for the 128 Add-a-lane project will be complete early next year.

Staffing and Work Schedule

The success of a project is as dependent on meeting Acton's schedule and cost constraint as it is on quality design and feasibility of construction. GPI Team is committed to meeting all milestones of this project as detailed in the Scope of Work. The Phase 2A project is currently listed on MassDOT's project website with construction beginning winter 2014/1015. No construction date is currently listed for Phase 2C. The project, BFRT Phase 2A and 2C, is listed in the Boston Metropolitan Planning Organization's (MPO) Long Range Transportation Plan with construction anticipated in the 2021-2025 time frame. It will be critical to get the project programmed on the Transportation Improvement Plan (TIP). GPI is also committed to working with the communities, MassDOT and the Boston Metropolitan Planning Organization to get the project programmed and ready for construction.

CERTIFICATE OF NON-COLLUSION

The undersigned hereby certifies under the penalties of perjury that this bid, proposal, or submission has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certificate, the word person shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.



Signature of person signing the bid, proposal, or submission

Greenman-Pedersen, Inc.
Name of business

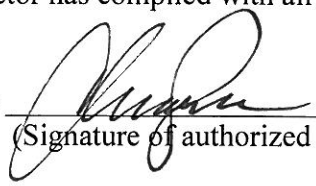
CERTIFICATE OF TAX COMPLIANCE

Pursuant to Ch.62C, S.49A (b) of the Massachusetts General Laws, I,

Christer Ericsson, authorized signatory for
(Name)

Greenman-Pedersen, Inc., do hereby certify under the pains and penalties of perjury
(Name of Consultant)

that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes.

Consultant, By: 
(Signature of authorized representative)

Senior Vice President
(Title)

November 8, 2010
(Date)

Greenman-Pedersen, Inc.

Engineering and Construction Services