NON-PRICE PROPOSAL

Belmont Community Path Feasibility Study

Town of Belmont, Massachusetts

April 22, 2016

Employee owned. Client driven.

Connecticut I Maryland I Massachusetts I New Jersey I New York I Ohio I Pennsylvania I Texas

BL Companies

Architecture
Engineering
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An Employee-Owned Company

April 22, 2016

Mr. Jeffrey A. Wheeler
Senior Planner, Office of Community Development
Homer Municipal Building
19 Moore Street
Belmont, MA 02478

Re: Request for Proposals – Belmont Community Path Feasibility Study

Dear Mr. Wheeler:

BL Companies New England, Inc. ("**BL Companies**") is pleased to submit this proposal to provide consulting services for the Town of Belmont, Massachusetts. BL Companies has the expertise, experience, capabilities and desire to provide all required professional services with a high level of quality and in a responsive and timely manner.

Ranked among the Top 500 Design Firms in the US by Engineering News-Record (#283) and ranked number 44 on The Zweig Group 2015 Hot Firm List as one of the 100 fastest-growing companies among architecture, engineering, planning, and environmental consulting firms, BL Companies is a multi-disciplinary firm that provides comprehensive planning, landscape architecture, engineering, environmental, land surveying, and architectural services for a broad range of public and private sector clients. As a firm, we have approximately 30 years of experience providing similar services to various municipalities, state agencies, universities and individual companies throughout the Northeast.

Our total firm resources include more than 200 professional and support staff in our Northeast and Mid-Atlantic offices, with approximately 160 of those based in our New England offices, which includes our location in Norwood, Massachusetts. Our staff includes licensed professionals in virtually every discipline including landscape architecture, architecture, civil engineering, transportation, traffic, structural (bridge/ building), MEP, environmental and land surveying. Over the last several years, we have continued to grow our presence in the Commonwealth of Massachusetts, building on existing relationships and work experience already established including with the Towns of Barnstable, Lowell, Marshfield and Wareham, the University of Massachusetts, Amherst, National Grid and private sector clients. Additionally, we are prequalified with MassDOT in all key areas and our team has significant prior working experience with them.

Given our significant experience in planning, trail projects, recreation enhancement, park related improvements, streetscapes and public sector development/redevelopment, we are uniquely qualified to complete this project for the Town of Belmont. Our firm has successfully completed numerous similar projects throughout New England including planning, design, and cost estimating and construction administration/oversight. This experience encompasses a number of projects involving funding from the state and federal level. Recently completed and ongoing projects include:

- Comprehensive Trails Plan in Marshfield, MA – 40-mile trail network on public and private land
- Quinnipiac River Trail Master Plan in Wallingford, CT – 3-mile river trail master plan
- Connecticut; Open Space and Playground Assessment and Plan in Wareham, MA – 24 recreational and open space sites

- Multi-Use Trail in Bloomfield, CT – 2.2-mile rails-to-trails multi-use trail
- Farmington Canal Greenway & Trail in Southington, CT
- Connecticut River Access project in Enfield, CT

These projects have required various types of site analysis, planning and municipal / community coordination.

Nitsch Engineering will be providing transportation engineering services led by John M. Michalak, PE, ENV SP, and structural engineering services led by Emad Elsakka, PE, Assoc. DBIA. Based out of offices in Boston and Worcester, they are familiar with the Town of Belmont and the surrounding municipalities. BL Companies has prior work experience with Nitsch staff including Mr. Michalak on the Bloomfield Greenway Trail and Connecticut River Access projects.

Nitsch Engineering is a 100+ multi-disciplined engineering and surveying firm offering an integrated suite of services including civil, transportation, and structural engineering; land surveying; planning; and GIS. Founded in 1989, Nitsch Engineering is a certified women-owned business enterprise (WBE) in Massachusetts, New York, Pennsylvania, and Virginia, and nationally through WBENC.

Our project team understands the key components to successfully complete this project for the Town of Belmont, including providing multi-discipline services, responsiveness, and a high quality of work. Given our depth and range of expertise and resources, we will be able to assist the Town in all aspects and phases of this project. We have successfully completed similar and relevant municipal projects from planning through construction phase services.

We are extremely excited about working with the Town on this important Feasibility Study, taking some of the vision, goals and objectives outlined in the 2014 Community Path Advisory Committee report to the next level. Through the development of trail plans and future improvements, there are significant opportunities that can be realized by the Town in connecting open space areas and providing new and enhanced recreational opportunities.

Our team of landscape architects, civil engineers, structural engineers, planners, geotechnical engineers and environmental professionals have significant experience in many of the elements that need to be addressed as part of the feasibility study including:

- Trail Design including parking and amenities
- Structural Design including Bridge and Tunnel crossings
- ADA Compliance
- Construction Cost Estimating
- Project Funding
- Public Participation & Outreach
- Stakeholder Collaboration & Communication

Mr. Matthew Hayes, PE, ENV SP, a licensed professional engineer in the Commonwealth of Massachusetts, with over 15 years of experience in trail studies and design, will serve as the team's Project Manager and be responsible for this contract. He will serve as the point of contact for the Town of Belmont and will be responsible for coordinating all aspects of assigned tasks from start through completion. Matt has extensive experience in managing municipal transportation and infrastructure projects and will lead the BL Companies' team in providing the required services identified in the Request for Proposals. Matt will work closely with our team of senior licensed landscape architects, civil engineers and environmental professionals throughout the duration of the project.

Mr. John Michalak, PE, ENV SP, a licensed professional engineer in the Commonwealth with over 22 years of experience in transportation and infrastructure improvement projects. His personal experience on trail projects throughout the Commonwealth and beyond will be an invaluable asset to the BL Team. His projects include:

- Paul Dudley White Bike Path Repair Study, Watertown, Newton, and Boston, MA
- Northern Strand Community Trail (Bike to the Sea), Everett, Malden, Revere, Saugus and Lynn, MA – *10-mile multi-use trail*
- Mystic Reservation Trail, Somerville, MA – *600-foot-long boardwalk with lighting*
- Restoration of the Cape Cod Rail Trail, Dennis, Harwich, Brewster, Orleans, Eastham, Wellfleet, MA – *22-mile Recreational Trail*
- Connecticut River Access, Enfield, CT – trail network connection to CT River

Our integrated and collaborative multi-discipline approach to the project will benefit the Town, in that we will be developing the feasibility study with input from all discipline perspectives, not just one view point. This approach will allow us to develop a context sensitive and comprehensive feasibility study which will pave the way for funding and preliminary and final design and construction of this very important Town facility and link in the eastern Massachusetts bike trail system.

We look forward to having the opportunity to work with the Town of Belmont and develop a long-term professional relationship. It is our intent over time to become one of the Town's trusted and respected consultants.

Sincerely,
BL COMPANIES NEW ENGLAND, INC.

Derek A. Kohl, PE
Director of Engineering, Principal

2 - PROJECT APPROACH

PROJECT ADMINISTRATION AND MANAGEMENT

Project administration and management for this project will be under the supervision of Mr. Matthew Hayes, P.E., ENV SP, a Licensed Professional Engineer in the Commonwealth of Massachusetts. Mr. Hayes will be responsible for all aspects of the work. Matt brings a wealth of relevant experience to this project, having been directly involved in the management, design, and construction of numerous public and private projects, including roadway reconstruction, enhancement, and specifically trail planning projects, over the past 22 years.

Matt will be supported by Nicholas Giardina, PE (QA/QC), Michael Fisher, PE (Geometric Design), Dennis Quinit, PE (Structures), Dominick Celtruda, PLA (Trail Design/Landscape Architecture), Kimberly Lesay, (Environmental Permitting) and Jessica Osborne, CPSM (Public Outreach) who will provide engineering support for this project. Mr. Giardina has close to 30 years of roadway design experience with state agencies and municipalities and will be responsible for the QA/QC of the project. Mr. Fisher has over 20 years of experience in the transportation field. He has designed and managed numerous projects involving multi-use trails and other pedestrian facilities, including safe routes to school and complete street designs for both municipalities and state agencies. Mr. Celtruda has an extensive resume in trail design and landscape architecture. His experience includes trail projects such as the Marshfield Comprehensive Trails Plan, the Open Space Assessment and Recreation Plan in Wareham, Connecticut River Access, the Bloomfield Greenway Multi-Use Trail, to name a few. Ms. Lesay has been working with municipalities and regulatory agencies for more than 20 years. She has extensive experience in natural resource assessment, permitting and mitigation throughout New England.

To augment BL Companies in-house staff capabilities, The BL Companies' Team will be joined by Nitsch Engineering (Nitsch). Nitsch will support the team by providing structural and planning services. Nitsch has significant experience in providing these services to municipalities in New England and along the east coast. Nitsch's design engineers and its Project Manager, John M. Michalak, P.E., ENV SP, have extensive experience conducting alternatives analyses and conceptual level trail designs, final design, construction cost estimates, and preparation of contract bid documents for towns, cities, and state agencies throughout Massachusetts and New England. John will assist BL Companies with the evaluation of design alternatives based on his over 20 years of experience designing rail trails and bike paths, trails along active railroad facilities, on-road bike lanes and bike routes, and integrating bicycle accommodations with complete streets designs. Emad Elsakka, P.E., Director of Structures at Nitsch, will be responsible for developing and evaluating structural components such as bridges, tunnels, and retaining walls incorporated into the various alternatives as part of the study. To determine the feasibility of certain major structural elements of the project, an evaluation of existing soil conditions may be required.

Our Project Team has significant, directly relevant experience on municipal, MassDOT, and Massachusetts Department of Conservation and Recreation design projects that require coordination with numerous stakeholders including state and city agencies along with regional and community

organizations. The BL Project Team employs numerous professionals experienced in roadway design, complete streets, multimodal transportation and landscape architecture.

The Project Team has significant experience and expertise in context sensitive projects for state and municipal clients throughout the Northeast. It is important that proposed trail projects be designed not only for the physical aspects of the facility but also for its effects on the aesthetics, social and environmental values, and community needs and opportunities. Designing a project within a context sensitive approach should include:

- Preservation of scenic, environmental, aesthetic, and natural resource values of the area
- A design that can be built with minimal disruption to the community
- Optimize safety and accessibility for all users
- Effective and efficient use of resources

Sustainability is an increasingly important goal for development. BL Companies has implemented sustainability practices through the use of energy efficient LED and solar lighting, specifying products with a high percentage of recycled content, and using pervious materials for off-street areas to promote both infiltration and storm water quality. The use of native planting treatments, which require no irrigation, is also an important choice, as well as the removal of invasive species to improve habitat and promote bio-diversity. These and other innovative solutions will be considered to meet the requirements of MassDOT's GreenDOT Policy Directive.

PROJECT UNDERSTANDING

The BL Companies Project Team understands that the Town of Belmont is seeking design consultant services for the preparation of a feasibility study for the 2.1 mile Belmont Community Path. The Path will provide recreational space, safe alternative routes to school and pedestrian and cycling connections with surrounding communities. This project will provide a much needed and important pedestrian and bicycle connection between the proposed Massachusetts Central Rail Trail (MCRT) in Waltham and points west and the existing Fitchburg Cutoff Path and Alewife MBTA Station to the east.

It is understood that the project consists of the development of a Feasibility Study that the Town will use to finalize the preferred route and to procure funding for the design and construction of the Belmont Community Path. A substantial amount of effort has been invested by citizens of the Town to advance this project. The Community Path Advisory Committee (CPAC) has prepared a Final Report (2014) highlighting the issues and concerns associated with development of the Path. Several other documents have been developed identifying constraints and other issues including the active MBTA Commuter Rail Line, limited right of way and possible abutter opposition. This multi-use trail Feasibility Study closely resembles trail projects BL has completed for the towns of Marshfield, Wareham, as well as, Suffield, Bloomfield and Southington, CT.

The Project Team has reviewed existing documents regarding the development of the Community Path, including the 2012 Belmont/Waltham Community Trail Alignment Study by the MAPC. As part of the proposed work, our team will present possible alignment alternatives, develop an engineered evaluation of these alternatives, calculate estimated construction costs associated with the individual route segments and offer advice and recommendations on project funding options.

GENERAL APPROACH

The BL Project Team intends to develop a feasibility study for the Belmont Community Path that draws on the work already completed by the Town in anticipation of submission of the feasibility study as one component of applications for funding for the design and construction of the Path. The BL Project Team will include as part of the feasibility study, possible funding sources for the construction of the Path. These funding sources may include Transportation Improvement Plan funding through the Commonwealth's TIP program; available grants for bicycle and pedestrian projects; DCR funding sources; and Community Preservation Act funds. The feasibility study will also include acquisition of property, necessary for the construction of the Path, through easements, donations of land and takings, where required. Finally, the feasibility study will include possible alternatives for ongoing maintenance for the Path.

Design Opportunities

- **Americans with Disabilities Act (ADA) Compliance**
  The new path and all path connections are required to comply with the Americans with Disabilities Act (ADA). The location of path alternatives will consider the surrounding topography, and any necessary construction to accommodate compliant connections will be quantified in the alternatives analysis.

- **Stormwater Management and Mitigation of Impacts**
  Our team is well versed in the requirements of stormwater design and mitigation measures. The proposed work shall not cause negative impacts to the surrounding land, and especially environmental resource areas. Utilizing best management practices (BMPs) our designs will evaluate and where appropriate, address existing stormwater deficiencies in order to improve the water quality of receiving waters.

- **Coordination with MBTA and DCR**
  Our design team has extensive experience working with the MBTA, DCR and MassDOT. Nitsch Engineering currently has on-call contracts and routinely interacts with all three of these organizations and is thoroughly familiar with the requirements and standards of these organizations.

- **Rails-with-Trails Design Considerations**
  Rails-with-trails designs require that the setback from existing tracks be maximized to accommodate future track expansions and provide sufficient separation, and protection for pedestrians, typically including fencing. Our team has experience designing rails-with-trails along active MBTA railroad tracks. It is also important to accurately determine the existing

railroad right-of-way and clearly document the cost and environmental impacts of the path, including new tunnels and bridges.

- **Underpass and Elevated Structure Concepts**
  Proposed underpass and bridge alternatives will consider their impacts to the environment, below and above ground, both during construction and for maintenance and access of the finished structures. Impacts to be considered during construction will include construction lay-down areas, crane locations, and areas required for jacking pits for constructing tunnels beneath the active railroad line.

- **Right-of-Way Impacts and the Need for Professional Land Surveying Services**
  Our team also consists of Professional Land Surveyors, giving us the ability to resolve property line and right-of-way locations that may affect the feasibility of specific alternatives. Our surveyors can utilize existing available record plans and supplement with on the ground property surveys to establish property lines and right-of-way if required.

- **Environmental Impacts**
  Utilizing available record plan information and MassGIS data, we will evaluate anticipated impacts to wetland resource areas and protected habitats that may be associated with each route alternative. As part of this task, we will identify the necessary permits that would be required to construct the trail along specific routes.

- **Utility Coordination**
  Our team will coordinate with public and privately owned utilities as required to assess the feasibility of each alternative. Utility relocation costs, as required, will be included in the estimated construction costs for each alternative.

- **Funding – TIP Experience**
  Implementing our past experience working with MassDOT and municipalities throughout Massachusetts, our team will assist the Town by preparing the Project Notification Forms and Project Initiation Forms to support approval of the project on the TIP. We also see opportunities to investigate other funding options such as the MassWorks Infrastructure Program and MassDOT's new Complete Streets Program – which could allow us to pursue funding for specific sections of the project if so desired by the Town.

VARIANCES

Most Path users, especially families and walkers, will arrive at the Path by automobile. Existing parking facilities will be reviewed in the feasibility study as well as the possible locations of additional parking to serve Path users.

INSIGHTS

As with any multi-use path project, abutter opposition may occur. The perception of an increase in crime and loss of privacy can be very unsettling to neighbors who have not lived adjacent to an active public recreational facility. Several studies can be referenced in an effort to alleviate the fear that accompany a change of this magnitude. The Town has noted several of these in the CPAC Final Report (June 2014). However, the concerns of abutters are not always swayed by reports. If the route of the Path is proposed adjacent to residential properties, it is very important to attempt to address the concerns of the residents through all practical means. Dialogue with opponents of the project will not only show good faith on the part of the Town, but could elicit reasonable solutions to perceived problems. This approach will give the stakeholders an appreciation for the project and will go a long way to obtaining their "buy-in" and support of the project. The Community Path project is proposed to bring the community together not to drive a wedge into the heart of Belmont. The BL Project Team has been involved in many multi-use path projects that have had vocal opposition. Through charrettes, dialogue, and incorporation of feasible measures, the Project Team has guided multi-use path projects from inception through construction completion by listening and addressing where possible the concerns of abutters and the community at large. The Project Team has the knowledge and experience to guide the Belmont Community Path project through the feasibility study process and beyond.

SCOPE OF WORK

PHASE 1 – REVIEW & PROPOSAL OF CONCEPTS

Phase 1 will consist of a review of the existing documents assembled for the Community Path. This will include review of the Central Massachusetts Rail Trail Feasibility Study (1997); the Belmont Bikeway Preliminary Feasibility Analysis (1997); the Belmont/Waltham Community Trail Alignment Study (2012); the Community Path Advisory Committee Final Report (2014); as well as PowerPoint presentations and meeting minutes from Town forums and board and committee meetings. Several websites have been created by interested parties in support of the Path, these will be reviewed for background information, including the Belmont Community Path Facebook page and the Belmont Citizens Forum website.

Based on the recommendations of the CPAC and the experience of the BL Project Team, one or two preferred Path routes will be proposed to be further evaluated in Phase 2. The alternatives will consider the feasibility of both on-road and off-road segments, with an emphasis on safety. The alternatives will also consider size, type and location of structural elements such as bridges and tunnels. We are mindful that there are two locations that may involve building tunnels under existing MBTA tracks. Every effort will be made to avoid this scenario as this will represent the most expensive option. In the event that other options are found to be unfeasible, we will consider jacking tunnels under the existing tracks. Timber bridges are popular in a bike trail setting. We anticipate that they will offer an economical and aesthetically pleasing option. The alternatives will be presented to CPIAC to develop consensus on which route or routes to advance to Phase 2 of the feasibility study.

Nitsch Engineering will assist BL Companies with the determination of proposed routes to be investigated as part of the study. We will conduct a field investigation to become familiar with the different potential routes for the Community Path. Nitsch Structural Engineers will propose up to two (2) potential locations for bridges and up to two (2) locations for tunnels along the study routes for further evaluation under Phase 2. Phase 1 work will include conceptual level plans (typical sections and elevation) for the proposed structures to be studied. This work will also include a conceptual level cost estimate for consideration and evaluation of the feasibility of the proposed crossing locations. Engineers from Nitsch will attend one kick-off meeting and one meeting with the CPIAC and Town representatives to present the alternatives.

Meetings: The BL Companies Team will schedule a kick-off meeting with the CPIAC shortly after award of the contract. The meeting will focus the team and the Town on the critical issues necessary to develop the feasibility study. The Project Team will gather local knowledge of the issues of concern to the citizens of Belmont.

Deliverables: At the completion of Phase 1, the Project Team will provide a memorandum report of the several Path segments. The report will offer recommendations regarding which alternative segments to include in Phase 2 of the Scope of Services.

PHASE 2 – ENGINEERING EVALUATION

Phase 2 will include the analysis of the Path segments agreed to in Phase 1. Consideration will be given to the location of the Path; connections to existing and proposed paths at the eastern and western termini; locations of at-grade and grade separated roadway and railroad crossings; new bridge and tunnel structures; evaluation of existing roadway and railroad crossing structures; the location and height of retaining walls; major grading issues; right of way impacts and easements; full accessibility of the path, meeting Architectural Access Board (AAB) requirements; landscaping and fencing; active railroad requirements; parking; and constructability. Alternative routes and crossing options may be proposed at this time for consideration by the CPIAC.

The Project Team, through the Town of Belmont, will schedule a public project charrette in order to gather input and design recommendations from Belmont citizens. The input from this charrette will be documented and reviewed. Where feasible and appropriate, recommendations from the project charrette will be included in the feasibility study.

The Project Team will produce a report summarizing the Path routes and the benefits and disadvantages of each. The report will indicate major existing and proposed Path elements for each of the selected route alternatives selected in Phase 1.

Nitsch Engineering will assist BL Companies with the evaluation of the selected routes under Phase 1. Additional structural evaluation will be done to determine the cost and impacts of proposed bridge and/or tunnel construction, including the determination of anticipated impacts associated with construction and maintenance of the structures. This work will include a more detailed cost estimate for the proposed structures. Engineers from Nitsch will attend and present at one design charrette in order to gather input and recommendations from the residents of Belmont and project stakeholders.

Meetings: The Project Team will keep the CPIAC updated on major issues with any of the Path segments and proposed elements. The issues will be presented to the CPIAC and the Project Team will offer recommendations to address any issues that arise during this Phase. A project charrette will be scheduled, with the assistance of the Town, to engage abutters, town officials and interested parties to share their ideas on the development of the Community Path.

Deliverables: At the completion of Phase 2, the Project Team will provide a preliminary engineering assessment of the several Path segments to the CPIAC. This assessment will be presented to the Committee prior to beginning Phase 3.

PHASE 3 – ENGINEERING ESTIMATES / FUNDING

The Project Team will develop conceptual level construction cost estimates for each segment of the proposed Community Path that has been advanced to this Phase. The cost estimates will include all major construction items proposed for the individual segments. The estimates will allow the Town to determine the feasibility and funding requirements of each segment and select the segments to be constructed that are in the best interests of the Town. The Project Team will provide recommendations as to which of the segments will achieve the desired goals of the project.

The Feasibility Study will include recommendations on possible funding sources for the design and construction of the Belmont Community Path. Due to the relatively high costs of construction for the Community Path project, it is anticipated that the Town will seek to have the project funded through the State Transportation Improvement Plan (TIP). The Feasibility Study will become an attachment to the MassDOT Project Need Form (PNF). The PNF is the first stage in becoming a recognized project on the TIP. Other funding sources, such as Community Preservation Act funds and state grants, will be reviewed and evaluated for their applicability to the proposed Path project. Funding sources as well as the requirements to apply for the funds will be included in the Feasibility Study.

The Project Team will prepare a draft copy of the final Feasibility Study. The Feasibility Study will be presented to the CPIAC and any changes and comments from the committee will be addressed and incorporated into the Final Feasibility Study. The Final Feasibility Study will be delivery to the Board of Selectmen and presented at a Board of Selectmen's meeting.

Nitsch Engineering will assist BL Companies with developing preliminary construction estimates for the proposed route(s) that have been advanced to this Phase. Nitsch will also assist with recommendations pertaining to possible funding sources for construction that could be used by the Town of Belmont to construct the entire trail or portions of the trail. Engineers from Nitsch will attend one meeting with CPIAC to review the Feasibility Study and one meeting with the Board of Selectmen to present the final study.

Meetings: The Project Team, with the assistance of the Town, will hold a public informational meeting. Prior to submission of the Draft Feasibility Study the meeting will demonstrate how the input received at the public charrette has been incorporated into the Feasibility Study and allow the public to ask questions on the alternatives recommended. The Project Team will keep the CPIAC updated on major issues with any of the Path segments and proposed elements. One meeting will be scheduled with CPIAC to present the draft feasibility study and solicit input prior to finalizing the Feasibility Study. One meeting will be scheduled with the Board of Selectmen to present the Final Feasibility Study.

Deliverables: A draft (3 copies) of the final Feasibility Study will be delivered to the CPIAC and presented and discussed at an open public meeting following CPIAC's review of the document. The Final Feasibility Study (3 copies) will be delivered to the Belmont Board of Selectmen and presented and discussed at an open public meeting.

PUBLIC OUTREACH / MEETINGS

The BL Project Team will conduct two (2) stakeholder meetings, one of which will be a project charrette, to solicit feedback and resolve outstanding concerns. Having completed numerous linear transportation studies and projects, our team has the experience and expertise to lead successful meetings, promote the participation process and engage stakeholders to obtain valuable project input.

BL Companies' Project Manager, Matthew Hayes, PE, will schedule a kick-off meeting with the CPIAC, and the BL Project Team to review objectives and define scope and baseline requirements for the project. A Project Work Plan will be created to clearly identify all work activities, project milestones, schedule, quality control/quality assurance procedures, and assigned resources to complete the project. This plan will serve as a guide for communicating project status to the Town throughout the project's life-cycle. The Design Team will prepare required graphics, attend public meetings and address comments.

Meeting participation will begin by engaging key stakeholders, including the Town, project abutters and interested citizens. The purpose of the kick-off meeting is to solicit comments on all aspects of the project. This will allow the Project Team to focus on key issues early in the process and will assist in the development of creative solutions to specific issues. Additional meetings are anticipated to solicit comments from community stakeholders to understand their needs and concerns. In addition to these meetings, we anticipate meetings with the Town and public to provide project updates and discuss technical issues related to project development.

The Project Team has the capability to prepare 3D computer generated perspective renderings of key areas which can be effectively utilized during the public outreach process, for local press and for

general informational purposes such as displays in Town Hall. BL has developed such renderings for numerous projects involving trails, bridges, streetscapes and roadways and intersections.

CONCLUDING STATEMENT

The Project Team is ideally suited to complete the Community Path Feasibility Study for the Town of Belmont and direct the project through the funding process, because our team can provide all the required services and can apply our extensive experience with design of multi-use paths, that are both functional and compatible with the surrounding environment.

We have the Project Manager and other supporting personnel with the significant municipal and state experience, to work with all stakeholders. Our staff of trail designers, landscape architects, and bridge designers have extensive experience with evaluating the most cost-effective solutions to maximize the Town's use of available funds. Finally, the BL Project Team is prepared to drive this assignment to a timely completion.

KEY PERSONNEL/STAFFING

The staffing plan below summarizes our key personnel assigned to the project with their project roles (titles in parentheses) and responsibilities, as well as projected hours, for the Town of Belmont Community Path Feasibility Study:

- **Derek Kohl, PE*** – Principal-in-Charge (Director of Engineering, Northeast Region, Principal), more than 20 years of experience. Will review financial invoices, aid in staffing schedules, and oversee the Project Manager. *9 hours projected.*

- **Matthew Hayes, PE, ENV SP*** – Project Manager (Senior Engineer), more than 20 years of experience. Will oversee the different disciplines to ensure that the project is on budget and on schedule, and will be the point of contact for the Town. *136 hours projected.*

- **Nicholas Giardina, PE*** – Quality Assurance/Quality Control (Senior Project Manager), nearly 30 years of experience. Will be responsible for QA/QC for the overall project. *16 hours projected.*

- **Dominick Celtruda, RLA, ASLA*** – Trail Design/Landscape Architecture (Lead Landscape Architect, Project Manager), 20 years of experience. Will be responsible for QA/QC of landscaping and funding source recommendations. *25 hours projected.*

- **Joshua Egnatz, RLA, LEED AP*** – Trail Design/Landscape Architecture (Senior Landscape Architect), 10 years of experience. Will be responsible for path landscaping. *110 hours projected.*

- **Michael Fisher, PE*** – Trail Alignment (Geometric Design) (Project Manager), more than 20 years of experience. Will be responsible for overseeing geometric design of path. *16 hours projected.*

- **Olivia Colangelo, EIT** – Trail Alignment (Horizontal/Vertical) (Project Engineer), more than 2 years of experience. Will be responsible for path alignment. *100 hours projected.*

- **John Michalak, PE, ENV SP* (Nitsch Engineering)** – Trail Alignment (Horizontal/Vertical) and Public Outreach (Civil Engineer), 22 years of experience. Will be responsible for assisting in path alignment, funding review, and public outreach support. *60 hours projected.*

- **Emad Elsakka, PE, Assoc. DBIA*** – Structures and Public Outreach (Structural Engineer), 26 years of experience. Will be responsible for overseeing structural elements and public outreach support. *16 hours projected.*

- **Chad Perkoski, PE*** – Structures (Project Manager/Structural Engineer), more than 12 years of experience. Will be responsible for review of structures. *24 hours projected.*

- **Dennis Quinit, PE** – Structures (Principal Bridge Engineer), more than 25 years of experience. Will be responsible for QA/QC for structures. *8 hours projected.*

- **Kimberly Lesay** – Environmental Permitting (Senior Project Manager), 20 years of experience. Will be responsible for review of permitting requirements for the project. *16 hours projected.*

- **Jessica Osborne, CPSM** – Public Outreach (Senior Marketing Coordinator), more than 12 years of experience. Will be responsible for public outreach. *16 hours projected.*

Individuals marked with an asterisk (*) are registered professionals in the Commonwealth of Massachusetts.

Organization charts and resumes for the project team are provided in Sections 4 and 5, respectively.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

BL Companies uses a three-tiered structure for QA/QC that includes: review by the Phase (discipline) Managers; review by the Project Manager; a peer review by a senior design professional within outside of the project team.

We believe that **quality assurance** begins with an individual's ownership of a project and a culture of insistence upon professional excellence. The Project Manager is responsible for quality control on a daily basis. It is his/her role to ensure that all disciplines have the appropriate staff assigned to the project, and reasonable time to perform the services. In addition, the Project Manager schedules time for milestone quality control reviews of the documents at pre-established intervals throughout the project.

Each design discipline at BL Companies is subject to stringent **quality control** procedures. Each discipline has a structured QC review process that involves designees from inside and outside the project team. The review process is built into the project schedule from the outset. The documents for a design phase are not complete until the QC process has been administered. This is memorialized in the project record by completion of a standardized QA/QC form, which documents significant coordination and review events throughout the project. This form becomes a record of the project that defines accountability for the design and documentation related to the project. Our inter-disciplinary structure assures that our project team has extensive experience collaborating and cooperating together toward the same project goals. Our company-wide adherence to these established processes also assures a consistency in approach that includes the regional offices.

Quality control is not automatic. It must be planned and monitored in order to be effective. Regularly scheduled design progress meetings are necessary, and coordination reviews are a required part of the design process. BL Companies is committed to performing these tasks and documenting their completion. The project manager is responsible for ensuring this process is scheduled, formalized, and documented for each project.

The following is an outline of the primary components involved in the Quality Control process for BL Companies:

I. Kick-Off Meeting
   1. Assemble project team.
   2. Review project scope with project manager, discipline managers, and key staff assigned to the project.
   3. Assign tasks.
   4. Formulate schedule. Identify critical path items and milestone review dates.
   5. Delineate internal and external paths of communication.
   6. Schedule coordination meetings.

II. Due Diligence and Deliverables
   1. Interdisciplinary review and coordination of concept/schematic design documents.
   2. Preliminary discussion and selection of products, materials, and systems.
   3. Discussion of deliverables (to Client) and document development.
   4. Quality review by Phase Managers, and formal sign-off.

5. Quality review by the Project Manager.
6. Revision of documents based on review comments.
7. Review by senior design professional outside of the project team, and formal sign-off.
8. Final revisions if required.
9. Release of documents to client.

III. Design Development and Deliverables
1. Team review and coordination of schematic design.
2. Interdisciplinary development and coordination of products, materials, and systems.
3. Team coordination meetings.
4. Execute coordination revisions as necessary.
5. Develop documentation.
6. Quality review by Phase Managers utilizing standard discipline product checklists, and formal sign-off.
7. Quality review by Project Manager.
8. Revision of documents based on review comments.
9. Review by senior design professional outside of the project team, and formal sign-off.
10. Final revisions if required.
11. Release documents.

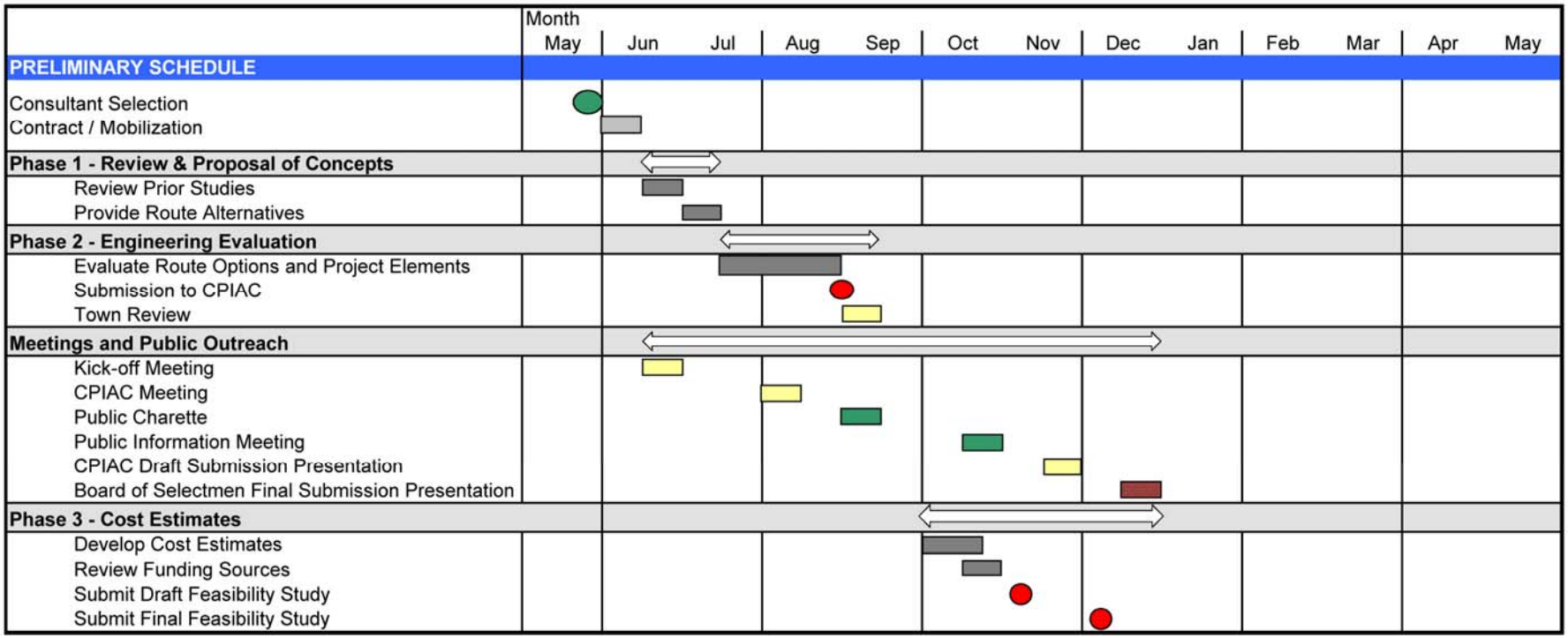
IV. Construction Documents and Deliverables
1. Team review and coordination of Design Development documents.
2. Interdisciplinary production of construction documents.
3. Team coordination meetings.
4. Execute coordination revisions as necessary.
5. Quality review by Phase Managers utilizing standard discipline product checklists, and sign-off.
6. Project Manager and Phase Managers coordination meeting – (The plan "walk-around" review).
8. Revision of documents based on review comments.
9. Review by senior design professional outside of the project team, and formal sign-off.
10. Final revisions if required.
11. Release documents for bidding and/or construction.

3 - SCHEDULE

BL Companies

PROJECT SCHEDULE

BELMONT - COMMUNITY PATH FEASIBILITY STUDY



BL Companies

4 - ORGANIZATION CHARTS

ORGANIZATIONAL STRUCTURE

PROJECT TEAM

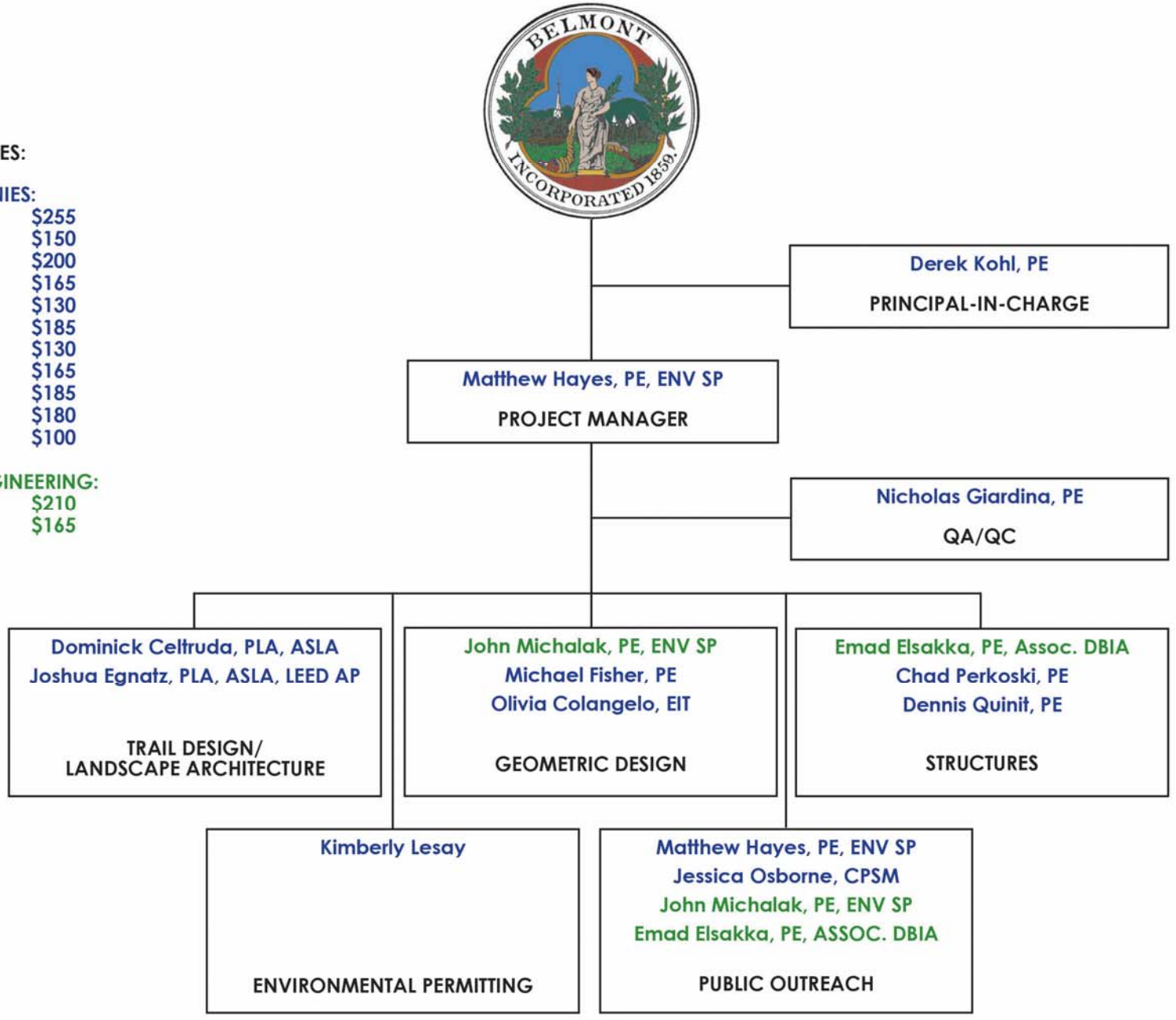
BILLING RATES:

BL COMPANIES:

Kohl	$255
Hayes	$150
Giardina	$200
Celtruda	$165
Egnatz	$130
Fisher	$185
Colangelo	$130
Perkoski	$165
Quinit	$185
Lesay	$180
Osborne	$100

NITSCH ENGINEERING:

Elsakka	$210
Michalak	$165



BL Companies

ORGANIZATIONAL STRUCTURE – HIGHLIGHTING NITSCH

PROJECT TEAM

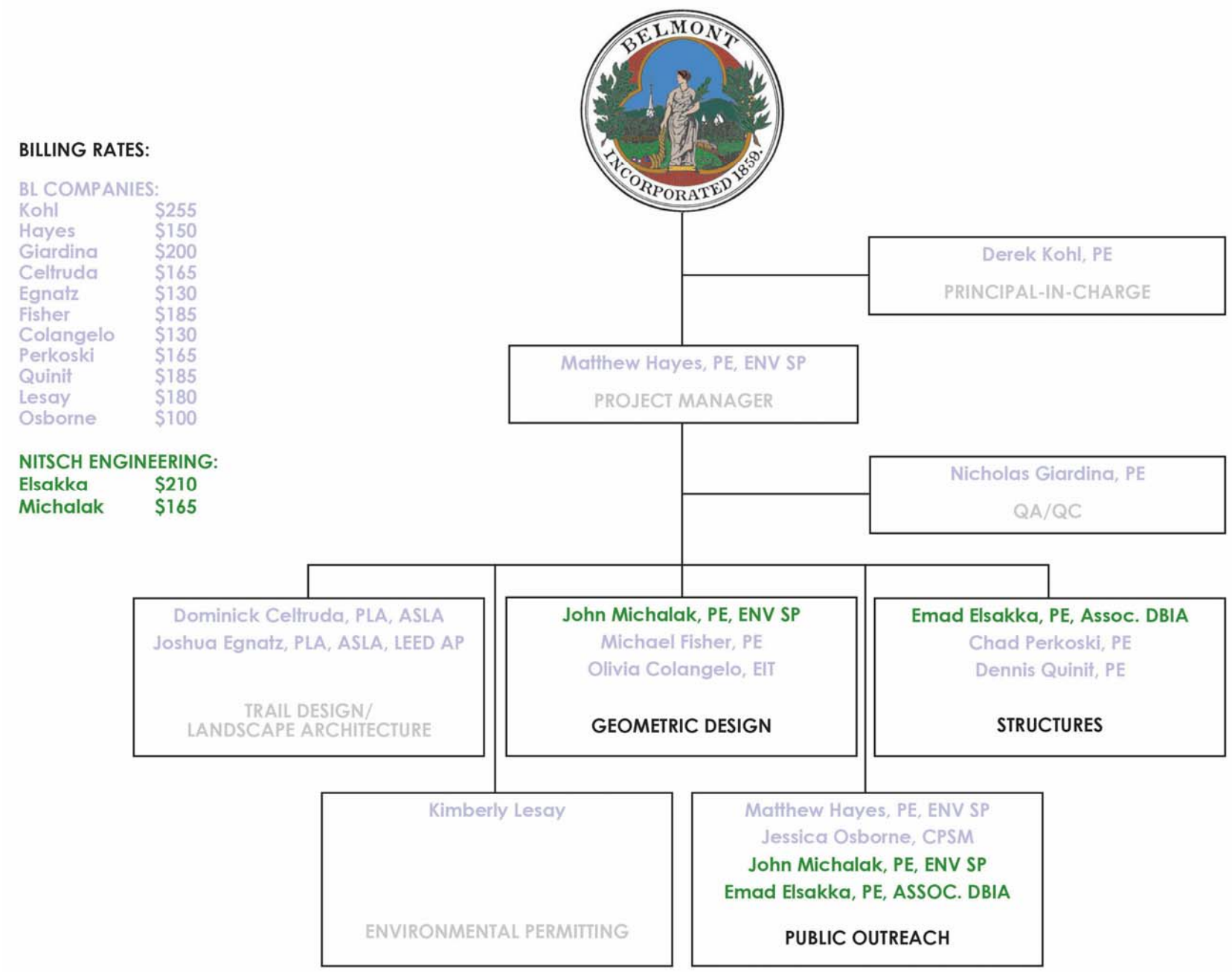
BILLING RATES:

BL COMPANIES:

Kohl	$255
Hayes	$150
Giardina	$200
Celtruda	$165
Egnatz	$130
Fisher	$185
Colangelo	$130
Perkoski	$165
Quinit	$185
Lesay	$180
Osborne	$100

NITSCH ENGINEERING:

Elsakka	**$210**
Michalak	**$165**



BL Companies

MATTHEW J. HAYES, PE, ENV SP

RESUME

PROJECT ROLE
Project Manager, Trail Design, and Public Outreach

EDUCATION
Bachelor of Science in Civil Engineering, Northeastern University 1994

REGISTRATION
Registered Professional Engineer, Massachusetts (2001 No. 41652)
Envision Sustainability Professional ENV SP (2014)

PROFESSIONAL MEMBERSHIPS
Barnstable County Public Works Association
Plymouth County Highway Association
American Society of Civil Engineers
Boston Society of Civil Engineers
Medway Planning and Economic Development Board Member

SUMMARY OF QUALIFICATIONS

Mr. Hayes has more than 20 years of experience in Highway and Multi-Use Path design. Matt has expertise in the areas of geometric design of highways, roadway drainage, permitting, utilities, civil/site work design, ADA and AAB accessibility and multi-use path design. He has extensive experience in the design and permitting of many types of projects for MassDOT and Massachusetts municipalities. He has worked extensively on MassDOT projects from conception to final construction. As Senior Engineer at BL Companies, Matthew's responsibilities include project conceptual design, design, specification writing, and quantity and cost estimating, Quality Assurance/Quality Control (QA/QC) and construction administration.

RELEVANT EXPERIENCE

Cape Cod Rail Trail, Yarmouth and Dennis, MA
Served as Senior Project Engineer for the 3½-mile extension of the popular multi-use path on Cape Cod. The project included three bridge crossings, one over the Bass River, multiple at-grade crossings, and a portion of the trail adjacent to an active rail line. Project responsibilities included geometric design, drainage, permitting, utility coordination and coordination of geotechnical, structural and environmental tasks. Mr. Hayes produced design and right-of-way plans, specifications, construction estimates and schedules. Worked with two municipalities, MassDOT and the Department of Conservation and Recreation (DCR) to advance the project. Mr. Hayes represented the municipalities and the state at public hearings and project meetings with various stakeholders. Design services were completed in 2015.

Shining Sea Bikeway – Phase III, Falmouth, Massachusetts
Served as Senior Project Engineer for the nearly 7-mile extension of the very popular multi-use path on Cape Cod. The project included one bridge crossing, multiple at-grade crossings, and a portion of the trail adjacent to an active rail line. Project responsibilities included geometric design, drainage, permitting, railroad coordination and coordination of geotechnical, structural and environmental tasks. Mr. Hayes produced design and right-of-way plans, specifications, construction estimates and schedules. Worked with the Town and MassDOT to advance the project. Mr. Hayes represented the municipalities and the state at public hearings and project meetings with various stakeholders. Construction was completed underbudget in 2010 for $3,600,000.

In-Town Multi-Use Path, Nantucket, MA
Served as Senior Project Engineer for the Project. The project includes approximately 700 feet of multi-use trail on an abandoned railroad berm. The location, adjacent to a freshwater pond and Nantucket Harbor, required the use of sheet piling retaining walls in order to widen the top of the RR berm and completely avoid impacts to either wetland resource. The purpose of the project was to provide a safer off-road alternative for cyclists and pedestrians to access the eastern side of the island by staying off of congested, narrow roadways in the center of downtown. The project also improved pedestrian and bicycle accommodations on a portion of Orange Street. Project responsibilities included geometric design, drainage, permitting, and coordination of geotechnical, structural and environmental tasks, as well as design and coordination of aerial and underground utilities.
Mr. Hayes produced design and right-of-way plans, specifications, construction estimates and schedules. Worked with the Town and MassDOT to advance the project to MassDOT bidding stage. Mr. Hayes represented the municipalities and the state at public hearings and project meetings with various stakeholders. Design services were completed in 2015.

Jackson Street Reconstruction, Lowell, MA
Served as Senior Project Engineer for the reconstruction of Jackson Street as part of the Hamilton Canal District Master Plan. The project included full reconstruction of Jackson Street, lighting, ADA accessible Canal Walk along the historic Hamilton Canal, plazas, landscaping, sidewalks, parking, drainage and utilities. The project required extensive coordination between the Jackson Street project and several other development and infrastructure projects in very close proximity. Project responsibilities included geometric design, drainage, permitting, and utility coordination. Mr. Hayes produced plans, specifications, and construction estimates. Mr. Hayes worked closely with the City to advance the project. Design services were completed in 2012.

I-93 Parking Lot and Pedestrian Improvements, Boston, Massachusetts
Served as Senior Project Engineer for the design and development of multiple parking lots beneath I-93 viaduct in the South End section of Boston as part of the revitalization project for the area. The parking lots included privately operated parking, drainage and utilities, storm water mitigation, multi-use path construction, artistic lighting installation and recreational space on Boston's Fort Point Channel. Mr. Hayes produced design and right-of-way plans, specifications, quantity and cost estimates and schedules.

Quaker Meeting House Road, Sandwich, MA
Served as Senior Project Engineer for the 3½-mile sidewalk construction project in Sandwich. This busy Cape Cod roadway, accessing two schools within the corridor, included narrow shoulders and no pedestrian accommodations. The project was designed to accommodate bicycle and pedestrian activity. The project included crossing over seventy driveways, a school crossing, sight distance improvements, and ADA accessible crossings at the Route 6 interchange. Project responsibilities included geometric design, drainage, grading, environmental permitting, MassDOT Access Permit and construction phase services. Mr. Hayes produced plans, specifications, quantity and cost estimates and schedules. Construction was completed underbudget in 2010 for $3,600,000.

Foundry Street (Route 123), Easton, MA
Served as Senior Project Engineer for the 2-mile Foundry Street roadway reconstruction project on the National Highway Sysytem (NHS) network. Project responsibilities included geometric design, drainage, permitting, utility coordination and coordination of environmental tasks. Mr. Hayes worked closely with the Town of Easton and MassDOT to reconstruct the roadway to MassDOT and NHS standards. The project included pavement reclamation, roadway widening, sidewalk construction, bicycle accomodation and design of new storm drainage system. Construction was completed underbudget in 2010 for $3,500,000.

Washington Street (Route 53), Hanover, MA
Served as Senior Project Engineer for the reconstruction of approximately 2,000 feet of this National Highway System principal arterial. The project represented the final phase of reconstruction of Route 53 through the Town of Hanover and included recoconstruction from a two lane section to four lanes with sidewalks on both sides of the roadway. The project was located in a high traffic commercial area of the Town. Project responsibilities included geometric design, drainage, permitting, utility coordination and coordination of environmental tasks. The project included pavement reclamation, roadway widening, sidewalk construction, bicycle accomodation and design of new storm drainage system. Mr. Hayes produced design and right-of-way plans, specifications, quantity and cost estimates and schedules. Design services were completed in 2015.

Little River Bank Stabilization, Westfield, Massachusetts
Served as Senior Project Engineer for river restoration, bank stabilization and parking lot reconstruction for the MassDOT maintenanace yard on the Little River. Mr. Hayes produced plans, specifications, quantity and cost estimates and schedules.

Coombs School Parking, Mashpee, Massachusetts
Served as Senior Project Engineer for the Coombs Elementary School parking lot reconstruction in Mashpee. Worked with school administration to develop revised school bus and parent pick-up/drop-off circulation. Project included parking lot lighting, sub-surface drainage system, signage and striping. Mr. Hayes produced plans, specifications, quantity and cost estimates and schedules for the project.

John M. Michalak, PE, ENV SP
Project Manager

Nitsch Engineering

Years of Experience
- *22 in industry*
- *<1 at Nitsch Engineering*

Registration
- *Massachusetts: Professional Engineer (Civil) #45444, 2003*
- *Institute for Sustainable Infrastructure, Envision Sustainable Professional, 2016*

Education
- *B.S., Civil Engineering, University of Massachusetts, Amherst, 1993*

Professional Affiliations
- *ACEC/MA Member*
- *Massachusetts Highway Association (MHA)*
  - *Worcester County Highway Association Vendor Member*
  - *Tri-County Highway Association Vendor Member*
- *Town of Holden*
  - *Planning Board Vice Chairman (2015)*
  - *Planning Board Secretary (2012 – 2014)*
  - *Water and Sewer Advisory Board Member (2007 – Present)*

John has over 22 years of experience specializing in civil engineering related to the management and implementation of complex transportation and infrastructure improvement projects throughout New England. John's work focuses on the design of municipal roadways, traffic improvements, Complete Streets design, and streetscape enhancement projects. His projects have included many municipal roadway projects throughout the Commonwealth including roadways in Gardner, Holden, South Hadley, Arlington, and Chester.

Representative Projects

Paul Dudley White Bike Path Repair Study (DCR), Watertown, Newton, and Boston, MA: Project Engineer for conducting an inventory and assessment of the existing trail conditions for sections of the Paul Dudley White Bike Path to assist the DCR in prioritizing the areas that would benefit the most from immediate repairs. The paved bicycle path runs on both sides of the river within the Charles River Reservation. The evaluation and preliminary construction cost estimates were used by the DCR to prioritize path repairs and initiate construction to portions of the path network that needed immediate repairs. Construction was completed in 2015. *Project experience with prior firm.*

Northern Strand Community Trail (Bike to the Sea), Everett, Malden, Revere, Saugus, and Lynn, MA: Project Engineer/Project Manager for the design of a 10-mile multi-use trail to serve bicyclists, walkers, joggers and others. Design included at-grade crossings, modifications to existing railroad bridges, drainage modifications and repairs, renovations to existing parking lots, and new signage and pavement markings for the entire facility. Project Manager for the City of Everett and the Malden Redevelopment Authority for several design and construction projects to provide temporary and finished trail surfaces, roadway crossings, and parking lot and drainage improvements throughout the design process and providing construction oversight for each phase. Construction was completed in 2015. *Project experience with prior firm.*

Mystic River Reservation Trail (DCR), Somerville, MA: Project Engineer/Project Manager responsible for design and construction oversight for the development of the Mystic River Reservation Trail along Somerville's riverfront in the Assembly Square District. The project involved the construction of a new boardwalk bridge that connects Ten Hills in the Mystic River Reservation with Sylvester Baxter Riverfront Park and Assembly Square. The boardwalk is nearly 600 feet long and 12 feet wide. The project involved construction of the boardwalk on helical screw foundations to minimize impacts to the Mystic River, environmental permitting, and the installation of new lighting along the boardwalk and under the Wellington Bridge (Route 28). The project also included the design and construction of a raised intersection with ADA compliant crossings for the City of Somerville at the trail terminus at Shore Drive to promote traffic calming and create a more visible crossing for pedestrians and bicyclists. Construction completed in 2014. *Project experience with prior firm.*

Northern Strand Community Trail (Bike to the Sea), Malden, MA

Representative Projects - continued

Restoration of the Cape Cod Rail Trail (DCR), Dennis, Harwich, Brewster, Orleans, Eastham, Wellfleet, MA: Project Engineer on fast paced project involving the design of improvements to this 22-mile recreational trail. Responsible for developing Conceptual Design, Preliminary Design, Final Plans, Specifications, and Construction Cost Estimates for an extremely aggressive design schedule. The project included full depth pavement reclamation and widening of the existing Cape Cod Rail Trail and the creation of new trailhead improvements consisting of landscaping, benches, kiosks, granite seat walls, and fencing. The project also involve significant safety improvements at each of the at-grade roadway crossings with trail alignment modifications to improve sight lines, imprinted brick medians, signage, and new crosswalks and pavement markings. Attended weekly construction meetings with the DCR resident engineers and Contractor to ensure the aggressive construction schedule was met. Construction completed in 2007. *Project experience with prior firm.*

Connecticut River Access, Enfield, CT: Project Engineer for designing a trail network connection to provide access to the Connecticut River. The design project began with a study of alternate trail locations to provide public access to the existing Donald Barnes Boat Launch and the planned intermodal transportation facility at the Casket Factory building in Thompsonville. Currently under design. *Project experience with another firm.*

Nonantum Road and Recreational Path Reconstruction, Newton, Watertown, and Boston, MA: Project Engineer for this roadway reconstruction project. Responsible for the design and development of Preliminary and Final Plans, Special Provisions, and Construction Estimate for the reconstruction of 5,500 feet of Nonantum Road and adjacent recreational path. Nonantum Road is a parkway owned and controlled by the DCR. The objectives were to convert a 4-lane section of Nonantum Road to a 2-lane section of roadway and to improve safety by developing wider shoulders and a 4-foot flush median. The project also included widening the existing adjacent recreational path and providing landscaped separation from the roadway where possible, and the installation of a new traffic signal at Charlesbank Road. Construction was completed 2014. *Project experience with prior firm.*

Cape Cod Rail Trail Tunnel Alternatives Analysis (DCR), Eastham, MA: Project Engineer for the preparation of an alternatives analysis to evaluate the feasibility of implementing tunnel modifications or construction of a new replacement tunnel to improve trail alignment and safety. The combination of steep tunnel approaches and the existing skewed tunnel alignment contribute to bicyclist accidents along this very busy rail trail. The alternatives analysis consisted of developing proposed trail alignment and profile modifications and construction costs estimates for each alternative. Improvements considered also include drainage system modifications, new tunnel lighting, and temporary traffic control during construction. Report was completed 2015; construction not yet scheduled. *Project experience with prior firm.*

DEREK A. KOHL, PE

RESUME

PROJECT ROLE
Principal-in-Charge

EDUCATION
Bachelor of Science, Civil Engineering, University of Connecticut, 1995

REGISTRATION
Professional Engineer: Connecticut, Florida, Idaho, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Washington

PROFESSIONAL MEMBERSHIPS & TRAINING
NCEES Record Holder, American Society of Civil Engineers, Connecticut Society of Civil Engineers, American Railway Engineering and Maintenance-of-Way Association (AREMA) Full Member, Central Connecticut State University Civil Engineering Program Advisory Board

SUMMARY OF QUALIFICATIONS

Mr. Kohl is the Director of Engineering for the Northeast Region and a Principal at BL Companies with over 19 years of experience on State, municipal and development projects. His experience includes extensive involvement and oversight of numerous transportation planning and design projects. He is responsible for the management / operations and technical oversight of the division which provides engineering services for public and private sector clients on transportation, utility infrastructure and site development projects. Services for the division include highway and roadway design, structural design (bridges, culverts and retaining walls), traffic signal analysis and design, streetscape design/enhancement, Context Sensitive Design / Solutions, transportation planning, hydrologic / hydraulic analysis and design, Rights of Way Involvement, stormwater management design, site access, traffic impact feasibility studies, State and local permitting, environmental permitting, parking and traffic circulation and subsurface utility engineering.

RELEVANT EXPERIENCE

Marshfield Trails Plan, Marshfield, Massachusetts

Serving as Director-in-Charge for the analysis and development of a comprehensive trails plan for the more than 25 miles of existing and proposed trails of the shore side town of Marshfield. As an extension of the town's 2012 Open-space Master Plan, this plan carefully dissects the existing public trail system, utilizing TRACS and USDA review criteria to determine areas for improvement and enhancement. Additional tasks include meeting with a working group and public stakeholders, and guiding them through a consensus building process, The Final plan will provide an existing conditions assessment, recommendations for maintenance, cost breakdowns for future expansion, and suggestions for the procurement of funding. Final submission of complete document to be issued Spring of 2016.

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut

Serves as Director-in-Charge for the trail and amenity design of this 2.2-mile segment of multi-use trail within the Town of Bloomfield. The project will be constructed on land owned and managed by Northeast Utilities and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. Trail features include layout conforming to AASHTO trail design criteria, parking facilities, rest areas, planting and site restoration design, pedestrian bridge, fencing and street crossings.

Connecticut River Access over Amtrak, Enfield, Connecticut

Serves as Director-in-Charge for the Connecticut River Access project. This project will provide public access to the riverfront and promote the recreational potential of the river while preserving the unique, natural, historic and scenic areas along this reach of the Connecticut River. The project will provide access to the Connecticut River at the Enfield falls/dam and provide facilities for a variety of activities and passive recreation for the general public, including those with physical disabilities. The proposed improvements include parking facilities, a pedestrian bridge/tower crossing over the Amtrak New Haven to Springfield Railroad, linear trails and paths, scenic overlook areas, an observation deck and a fishing pier and dock.

Playground and Open Space Recreation Assessment, Wareham, Massachusetts

Serves as Director-in-Charge responsible for all assessment support services for the rehabilitation of the recreational assessments and generation of a Town wide playground and open space evaluation and recommendation report. The report will assess existing sites and recommend site-specific playground and open space program improvements along with maintenance plans for those playgrounds and open spaces listed in the request for proposal. The assessment involves reviewing a total of 21 playground sites and three open space sites located around the Town of Wareham.

BL Companies

On-Call Consulting Services, Wareham, Massachusetts
Serves as Director-in-Charge responsible for providing the Town of Wareham Department of Community and Economic Development Authority with On-Call Engineering and Architecture Services. BL Companies is one of three firms used on an on-call basis for various town initiatives such as Hynes Field and Union Street Parking Lot Construction, Merchant's Way Development, Recovery Road Building Improvements, Onset Beach Bath House Rehabilitation and Lopes Field Rehabilitation.

Hoppers/Birge Pond Nature Preserve, Bristol, Connecticut
Served as Director-in-Charge responsible for improvements to this Nature Preserve, which is located close to Downtown Bristol. Featuring dramatic glacially influenced geologic formations and rich in archaeological and historical resources, the preserve is a unique area as yet undiscovered by many residents. The City has owned the property since 1973. Birge Pond is largely a man-made impoundment of ~14 acres; the current dam and spillway were constructed approximately 75 years ago. The pond is clearly a visual and recreational amenity to the preserve. Improvements included enlarged gravel parking areas on either side of the existing dam and an accessible pedestrian path between lots. A pedestrian bridge now spans the dam to complete the linkage. Amenities included boardwalks, timber guiderail, lighting, benches and tables complementing major program elements.

Pepper Street Reconstruction, Monroe, Connecticut
Serves as Director-in-Charge responsible for roadway reconstruction of Pepper Street. This project is funded through the Greater Bridgeport Regional Planning Agency (GBRPA) under the STP Urban Program and involves minor widening and intersection improvements on approximately 4,500 feet of Pepper Street from Grant Road north to the Cambridge Drive and at the northern intersection of Pepper Street with Route 25. Also included in the design are a new signalized intersection, safety and geometric improvements, a linear trail extension, and culvert replacement. One of the cross culverts to be replaced with a 12'x6' box culvert carries the Pequonnock River, is within FEMA Floodplain and Floodway, and is hydraulically inadequate. BL Companies is responsible for survey, roadway design, traffic signal design, hydraulics and drainage design, as well as, environmental permitting, property map development and coordination with various Department design units, utility companies and DEEP.

Hammonasset Beach State Park Trail/Utility Replacement, Madison, Connecticut
Serves as the Director-in-Charge responsible for design services for the State of Connecticut Department of Administrative Services (DAS), formerly known as the Department of Construction Services. The services include engineering design, landscape architecture and construction administration services for the Hammonasset Beach State Park Combined Major Utility Replacement Project. BL Companies will be working with the CTDAS to prepare design plans for a ±2.5-mile Beach Recreational Trail (BURT) system that will also serve as a utility corridor. The utility corridor will accommodate a water main system, underground primary electrical replacement system conduits and a small diameter natural gas pipeline. Additionally, the design plans for branch service connections will be required. The project includes approximately 5,000 feet of water main services, 13,000 feet of electrical conduit and 500 feet of 2" diameter gas service lines.

Willow Brook Park Pedestrian Bridge, New Britain, Connecticut
Served as Project Manager and performed hydraulic analysis of proposed pedestrian bridge using HEC-RAS software. Prepared contract drawings using AutoCAD software and cost estimate for site plan including grading and erosion control measures.

Snows Creek Culvert Replacement, Ocean Street, Hyannis, Barnstable, Massachusetts
Serves as Director-in-Charge for the design of Snows Creek Bridge, which involves the design and permitting of a tidally influenced structure within a FEMA floodplain. The existing structure is a structurally deficient and hydraulically inadequate corrugated metal culvert which is restricting the flushing of the upstream salt marsh. This structure is a connection between Snow's Creek and Lewis Bay which has a high ecological importance to the area and is an important local access route to the local community and residents. The purpose of this assignment is to address the structural deficiencies and poor hydraulic performance of the existing culvert while minimizing impacts to the environment and local communities.

Rehabilitation of Bumps River Bridge, Osterville, Barnstable, Massachusetts
Serves as Director-in-Charge for the design of the rehabilitation of the South Main Street Bridge over Bumps River in the Village of Osterville in Barnstable, Massachusetts. The overall project involves rehabilitating the South Main Street Bridge over Bumps River with the objective of providing necessary repairs to the existing structure to increase the structural capacity, extend the structure's life expectancy with simple maintenance while minimizing the initial and life-cycle costs. BL Companies is also providing roadway design, including the incorporation of context sensitive solutions; determining hydraulic requirements; streamlining environmental permitting; and conducting construction staging and traffic management planning methodologies as part of the overall project development.

NICHOLAS GIARDINA, JR., PE

RESUME

PROJECT ROLE
Quality Assurance/Quality Control

EDUCATION
Master of Business Administration, Finance, University of Hartford, 1994
Bachelor of Science, Civil Engineering, University of Connecticut, 1986

REGISTRATION
Professional Engineer: Connecticut, Massachusetts, New York, Ohio, Rhode Island

PROFESSIONAL MEMBERSHIPS & TRAINING
Connecticut Association of Street and Highway Officials, Inc. (CASHO) Associate

SUMMARY OF QUALIFICATIONS

Mr. Giardina has more than 29 years of significant experience in transportation engineering, including highway and site design, and has in-depth knowledge of Connecticut Department of Transportation (CTDOT) policies, procedures and guidelines. He is the Manager of Transportation and Infrastructure at BL Companies and is the Program Manager for the CTDOT State Bridge Program, responsible for the oversight of dozens of projects in both regards. Mr. Giardina also served as project engineer for the CTDOT's highway design unit for over 10 years. His responsibilities included the design, development and preparation of plans, specifications, permits and cost estimates for various projects that involved roadway design plans for intersection improvements, interchange modifications, bridge replacements, at-grade railroad crossings, maintenance and protection of traffic plans, roadway realignments and reconstructions, highway resurfacing and safety improvements.

RELEVANT EXPERIENCE

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut
Serves as the Project Manager for this 2.2-mile segment of multi-use trail within the town of Bloomfield. The project will be constructed on land owned and managed by Eversource Energy and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. Trail features include layout conforming to AASHTO trail design criteria, parking facilities, rest areas, planting and site restoration design, pedestrian bridge, fencing and street crossings. Responsibilities include oversight of the design and documentation conforming to CTDOT guidelines and report writing, preparing and presenting. This project is currently in construction.

Connecticut Department of Transportation (CTDOT), Route 74 Bridge Replacement over the Willimantic River, Tolland and Willington, Connecticut
Currently serving as the Project Manager for the replacement of this CTDOT List 15 Bridge. The design is currently in construction and includes the design of a temporary roadway and bridge for the maintenance and protection of traffic during the construction of the new bridge. In charge of the permitting, drainage and horizontal and vertical alignments. Prepared and held several meetings with the town, department personnel and the utility companies. Prepared the plans, permits, specifications and cost estimate.

Goold Road Bridge Raise over CSXT Railroad in Chatham, New York
Served as Design Task Manager responsible for oversight of the completion of the final design plans, specifications and estimates for the local road bridge raise over the CSXT Railroad line to improve the vertical clearance for this overpass. The project involved the revised vertical realignment of Goold Road and regarding of the approach embankments. Coordination with the local officials was required.

Connecticut Department of Transportation (CTDOT), Amtrak Railroad Bridge Replacement over U.S. Route 1 in Branford, CT
Served as Project Engineer for design services during construction. Prepared several construction change orders, as the project survey was over 20 years old. Construction change orders included realignment of a sanitary sewer line, realignment of the railroad tracks for all stages of construction, upgrading the curbing and sidewalk along US
Route 1 and retaining wall modifications.

Intersection Improvements at Lower Westfield Road and Homestead Avenue, Holyoke, Massachusetts
Served as Project Manager for the design of this key intersection improvement project for the city of Holyoke. Significant coordination was required with a major developer and MassDOT.

BL Companies

Reconstruction of Baldwinville Road, Templeton, Massachusetts
Served as Project Manager for this 2-mile roadway reconstruction project. Roadway design included added sidewalk and landscaping for the Town of Templeton, Massachusetts. Project had MassDOT oversight.

Connecticut Department of Transportation (CTDOT), Resurfacing and Safety Improvements to U.S. Route 6, Andover, Connecticut
Served as Project Engineer for the $6 million resurfacing and safety improvements of three separate sections of Route 6 in Andover. Designed a new Lake Road extension to Route 6 and closed several town roads with cul-de-sacs. Eliminated a 200-foot steel bridge and replaced it with a 400-foot bikeway culvert under Route 6. Designed an at-grade bikeway crossing which intersects with the new town road. Prepared plans, property maps, permits, specifications and cost estimate. Prepared and held several meetings with the town, department personnel and the utility companies. Coordinated and monitored the maintenance and protection of traffic plan.

City of West Haven Planning Unit, West Haven Railroad Station at Saw Mill Road, West Haven, Connecticut
Served as Project Manager providing conceptual design services on this $28 million project. The project will provide commuters with a new train station along the Metro-North line in the City of West Haven. The project work involved the layout of new railroad station parking areas, high-level platform locations, proposed station building location, intersection improvements and a new pedestrian bridge over an active Metro-North Railroad line. This project also included the structural analysis of an existing building for the potential change in use to a parking garage. Responsibilities included preparation of the conceptual design report that required preliminary alignments, colored plans and estimates of probable costs.

Connecticut Department of Transportation (CTDOT), Route 15 Interchange Improvements, Greenwich, Connecticut Served as Project Engineer for the $4 million improvements to the Route 15 Interchange at North Street. Project work involved the realignment of the on and off ramps for the northbound and southbound directions of the Merritt Parkway (Route 15) interchange 31 to provide better acceleration and deceleration lanes. Prepared plans, specifications and cost estimate. Prepared and held several presentations for the town and Merritt Parkway Advisory Committee, department personnel and utility companies.

Fairfield Train Station at Commerce Drive, Connecticut Department of Transportation (CTDOT), Fairfield, Connecticut
Served as Project Manager for the preliminary and semi-final design for civil/site and roadway work associated with the design of a new train station on Metro-North Railroad's New Haven line. Prepared the preliminary design report which includes the complete project description, alignments, plans and preliminary cost estimates. Coordinated meetings with CTDOT, the utility companies and the design team.

Connecticut Department of Transportation (CTDOT), I-84 Interchange Improvements, Danbury and Newtown, Connecticut
Served as Project Manager for a preliminary engineering study for the I-84 improvements at interchanges 1, 2, 4, 5, 6, 8, 9 and 11 and preliminary design services for interchanges 5, 6 and 11. Responsibilities included preparing the report that contained preliminary alignments, colored plans and preliminary estimates for these interchanges.

Connecticut Department of Transportation (CTDOT), Two Bridge Replacements over Route 8, Shelton, Connecticut
Served as Project Engineer for replacement of superstructures for the Coram Avenue and Prospect Street Bridges over Route 8. Town roads were closed during construction. Designed drainage and horizontal and vertical alignments. Prepared and held several meetings with the town, department personnel and the utility companies. Prepared the plans, detour routes, specifications and cost estimate. Coordinated and monitored the maintenance and protection of traffic plan.

Connecticut Department of Transportation (CTDOT), Realignment of Route 163, Montville, Connecticut
Served as Design Engineer for the realignment of 3,600 feet of Route 163. The project included replacement of a bridge and construction of a retaining wall. Prepared the horizontal and vertical alignments, drainage design and quantity estimates.

Connecticut Department of Transportation (CTDOT), Metro-North Railroad Bridge Replacement over Route 67, Seymour, CT
Served as Project Engineer for replacement of this bridge to provide increased vertical clearances for Route 67 under the bridge. The roadway under the bridge had to be lowered and the bridge was replaced to obtain the necessary vertical clearance under the Metro North Railroad Bridge. Designed the drainage and the horizontal and vertical alignments. Prepared and held several meetings with the town, department personnel and the utility companies. Prepared the plans, permits, specifications and cost estimate. Coordinated and monitored the maintenance and protection of traffic plan.

DOMINICK J. CELTRUDA, PLA, ASLA

RESUME

PROJECT ROLE
Trail Design/Landscape Architecture

EDUCATION
Bachelor of Landscape Architecture, SUNY College of Environmental Science and Forestry, 1997
Associate of Applied Science, Landscape Development, SUNY College of Agriculture and Technology, 1994

REGISTRATION
Landscape Architect: Connecticut, License No. LAR882
Emergency Medical Responder: Connecticut, Certification No. 9565

PROFESSIONAL MEMBERSHIPS
Member, American Society of Landscape Architects
Member Advocacy Committee, Connecticut Chapter American Society of Landscape Architects
Member / Officer (Lieutenant), Mystic Fire Department (B.F. Hoxie Engine Company) - Mystic, CT
Certified Hazardous Material Technician

SUMMARY OF QUALIFICATIONS

Dominick Celtruda has 20 years of experience in planning, design and construction experience. Mr. Celtruda possesses a strong background in planning, design, construction and maintenance of corporate, institutional, educational and municipal campuses. He has performed studies identifying factors that can be recognized, quantified and utilized during planning and design process to provide a better understanding of how spaces can be shaped to provide optimal use by the intended inhabitants (social cultural interaction). Mr. Celtruda has expertise in site analysis, concept analysis, schematic design, design development, contract documents, construction development and detailing, bidding, construction administration and management, presentation graphics, and design guideline creation. He is proficient in AutoCAD, Adobe Photoshop, and Microsoft Office Suite of Programs (Word, Excel, PowerPoint, etc.). Experienced in Autodesk Land Desktop, Civil 3d, Google Sketchup, Newforma. Dominick serves as Lead Landscape Architect and Project Manager at BL Companies, providing professional landscape architecture services to a variety of public and private clients.

RELEVANT EXPERIENCE

Marshfield Trails Plan, Marshfield, Massachusetts
Serving as Project Manager for the analysis and development of a comprehensive trails plan for the more than 25 miles of existing and proposed trails of the shore side town of Marshfield. As an extension of the town's 2012 Open-space Master Plan, this plan carefully dissects the existing public trail system, utilizing TRACS and USDA review criteria to determine areas for improvement and enhancement. Additional tasks include meeting with a working group and public stakeholders, and guiding them through a consensus building process, The Final plan will provide an existing conditions assessment, recommendations for maintenance, cost breakdowns for future expansion, and suggestions for the procurement of funding. Final submission of complete document to be issued Spring of 2016.

Connecticut River Access, Enfield, Connecticut
Serves as Landscape Architect for this project which will provide public access to the riverfront and promote the recreational potential of the river while preserving the unique, natural, historic and scenic areas along the northernmost point of the Connecticut River. It will also offer facilities for a variety of activities and will serve as an area of passive recreation for the public including those individuals with physical disabilities. The project includes parking facilities, linear trails and paths, pedestrian bridge/tower, an observation deck and a fishing pier and dock.

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut
Currently the Lead Landscape Architect for trail and amenity design of this 2.2 mile segment of multi-use trail within the town of Bloomfield. The project will be constructed on land owned and managed by Northeast Utilities and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. Trail features include layout conforming to AASHTO trail design criteria, parking facilities, rest areas, planting and site restoration design, pedestrian bridge, fencing and street crossings. Responsibilities include preparation of design and documentation conforming to CTDOT guidelines and report writing, preparing and presenting. Design is scheduled for completion fall 2014.

Sherwood Island State Park Main Pavilion Centennial Improvements, Westport, Connecticut
Served as Landscape Architect for the renovation of the existing Main Pavilion at Sherwood Island State Park. The site renovation consisted of rehabilitation of the existing pavilion service area, reconfiguration of the pavilion entrance sequence and the addition of a bike respite area.

Hammonasset Beach State Park, Madison, Connecticut
BL Companies has been selected by the State of Connecticut Department of Administrative Services (CTDAS) for engineering design, landscape architecture and construction administration services for the Hammonasset Beach State Park Combined Major Utility Replacement Project. BL Companies will be working with the CT DAS to prepare design plans for a 2.5 +/- mile Beach Utility Recreational Trail (BURT) system that will serve as a utility corridor below ground and a multi-use recreational trail above ground. Mr. Celtruda is currently serving as Landscape Architect for the recreational trail which will serve as a link between the regional bikeway adjacent to the site and all of the onsite state park amenities. The trail blends all areas of the site in a pedestrian-friendly navigational experience. The trail takes into account safe routes for individuals traversing the site on foot, bicycle, stroller or wheelchair. It provides safe identifiable interaction nodes in areas where pedestrians need to interact with standard automobile as well as recreational vehicle circulation.

Quinnipiac River Linear Trail, Wallingford, Connecticut
BL Companies is providing landscape architecture, civil engineering, and master planning services to prepare a preliminary design study for Phase IV of the Quinnipiac River Trail from the north side of Hall Avenue at Community Lake Park in Wallingford, CT, to Toelles Road where the proposed North Haven Trail will begin. The primary goal of the project is to determine the route and improvements needed to create a coherent system of multi-use off-road trails in order to provide recreational opportunities for the public. The study will identify routes most suitable for the facilities while minimizing adverse environmental impacts as well as promoting active and passive recreational uses for the enjoyment of both the urban and natural environment. The study will also consider access points, potential parking areas, scenic views, ADA compliance, rest facilities and connectivity to archaeological, historical and environmental resources, and points of interest. An estimate of probable cost and the identification of the environmental permits required to construct the project are part of this scope.

Boston Housing Authority, Orient Heights Feasibility Study, Massachusetts
Served as Landscape Architect. Completed a feasibility study for the conceptual redevelopment of the existing Orient Heights affordable housing community in East Boston. Was tasked with evaluating the existing property for a proposed conceptual redevelopment plan aspects included study of the existing site in terms of topography, site utilities and drainage systems to develop a recommendation as to the viability of the proposed design alternative. Further provided alternatives for phasing of the plan based on the current site configuration, reallocation of existing site utilities and the desire to keep portions of the site operational as residential housing community.

Fort Trumbull Master Development Plan, Riverwalk, New London, Connecticut
Served as Landscape Architect for the design of a pedestrian universally accessible riverwalk along the Thames River in New London. Responsibilities included site analysis, historical site data gathering, pedestrian and vehicular circulation analysis, layout, and presentation graphics.

Janosko Park – Clover Field, Stratford, Connecticut
Served as Landscape Architect. Developed a Master Plan and construction documents for renovations to Janosko Park in Stratford, Connecticut. Program included the reconstruction of the two Cal Ripken level baseball fields, irrigation, fencing, introduction of a post tensioned concrete basketball court, playscape area and accessible paths.

Route 1 and Route 122 Intersection and Streetscape, West Haven, Connecticut
Served as Landscape Architect for the redesign of the Intersection of Routes 1 and 122 in West Haven, Connecticut. The project Involved sidewalk widening, ADA routing, bicycle route evaluation and accommodation. Other aspects introduced were stenciled concrete sidewalks, benches, flush tree planters, bus stop areas, raised planters, and the placement of all new urban trees throughout the area of construction. The project also renovated one park let area and a "Town Green" park area to promote pedestrian interaction zones.

Silas Deane Highway Streetscape (Route 99) Phase II, Rocky Hill, Connecticut
Serves as Project Manager for the Phase II streetscape planning, design, and construction administration engineering services for a portion of the Silas Deane Highway (Route 99) in Rocky Hill, Connecticut. The project runs for an approximate length of 1,500 feet, from Dividend Street to Elm Street. This project serves as a new identity and gateway into the existing Town Center. Intersection realignments, street trees, landscaped medians, ornamental lighting, brick pavers, and a variety of other aesthetic amenities will be incorporated to create and promote a pedestrian-friendly environment.

JOSHUA EGNATZ, PLA, ASLA, LEED AP

RESUME

PROJECT ROLE
Trail Design/Landscape Architecture

EDUCATION
Bachelor of Science, Landscape Architecture, Cornell University, 2005

REGISTRATION
Landscape Architect: Connecticut (LAR.0001249), Massachusetts (#1628), New York (#002208-1)
LEED Accredited Professional: GBCI#:10695854

PROFESSIONAL MEMBERSHIPS
American Society of Landscape Architects

SUMMARY OF QUALIFICATIONS

Mr. Egnatz has 10 years of diversified experience in the field of Landscape Architecture. His areas of expertise include campus, urban waterfront park, streetscape, trail, courtyard, green roof, planned unit development, retail, and country residential. As Landscape Architect at BL Companies, Mr. Egnatz is responsible for the planning, design, documentation, presentation and construction observation of a project's landscape and site scope. In executing these tasks, Mr. Egnatz will utilize his extensive Landscape Architecture experience as demonstrated by the following projects.

RELEVANT EXPERIENCE

Marshfield Trails Plan, Marshfield, Massachusetts
Currently the senior Landscape Architect for the analysis and development of a comprehensive trails plan for the more than 25 miles of existing and proposed trails of the shore side town of Marshfield. As an extension of the town's 2012 Open-space Master Plan, this plan carefully dissects the existing public trail system, utilizing TRACS and USDA review criteria to determine areas for improvement and enhancement. Additional tasks include meeting with a working group and public stakeholders, and guiding them through a consensus building process, The Final plan will provide an existing conditions assessment, recommendations for maintenance, cost breakdowns for future expansion, and suggestions for the procurement of funding. Final submission of complete document to be issued Spring of 2016.

Route 37 Intersection Improvements, Danbury, Connecticut
Currently Consultant Liaison Engineer for the Connecticut Department of Transportation Division of Highway Design. Improvements at these intersections are geared towards safety and include widening, regarding, realignment, site distance improvement, and signalization. Responsibilities include project scoping, estimating, scheduling, assisting with fee negotiations, review of progress payments, review of engineering documents, plans, specifications, and estimates, preparation of project-related correspondence and documentation, and preparation of environmental documents.

Hammonasset State Park Multi-Use Trail, Madison, Connecticut
BL Companies has been selected by the State of Connecticut Department of Administrative Services (CTDAS) for engineering design, landscape architecture and construction administration services for the Hammonasset Beach State Park Combined Major Utility Replacement Project. BL Companies will be working with the CT DAS to prepare design plans for a ±2.5-mile Beach Utility Recreational Trail (BURT) system that will serve as a utility corridor below ground and a multi-use recreational trail above ground. Mr. Egnatz is currently serving as Project Landscape Architect for the recreational trail which will serve as a link between the regional bikeway adjacent to the site and all of the onsite state park amenities. The trail blends all areas of the site in a pedestrian friendly navigational experience. The trail takes into account safe routes for individuals traversing the site on foot, bicycle, stroller or wheelchair. It provides safe identifiable interaction nodes in areas where pedestrians need to interact with standard automobile as well as recreational vehicle circulation.

Brooklyn Bridge Park, Brooklyn, New York
Served as Designer for an 80-acre waterfront park development. Extending over one mile south along the East River from the Brooklyn bridge, this park has transformed dilapidated storage piers into parkland, running paths, playgrounds, athletic fields and nesting habitat for native fauna. Responsibilities included field surveying, inventory and analysis, preparation of construction documents, layout plans, furnishing details and construction phasing documentation.

BL Companies

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut
Currently the Project Landscape Architect for trail and amenity design of this 2.2-mile segment of multi-use trail within the town of Bloomfield. The project will be constructed on land owned and managed by Northeast Utilities and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. Trail features include layout conforming to AASHTO trail design criteria, parking facilities, rest areas, planting and site restoration design, pedestrian bridge, fencing and street crossings. Responsibilities include preparation of design and documentation conforming to CTDOT guidelines and report writing, preparing and presenting.

Playground and Open Space Recreation Assessment, Wareham, Massachusetts
Served as Project Landscape Architect for recreational assessments and generation of a town wide playground and open space evaluation and recommendation report. The report assesses existing sites and recommends site-specific playground and open space program improvements along with maintenance plans for those playgrounds and open spaces listed in the request for proposal. Our efforts identified improvements most suitable for the specific sites while minimizing adverse environmental or historical impacts. They also enhanced the visual, transportation and recreational uses for the enjoyment of residents and visitors alike.

Princeton University, Cannon Walk, Princeton, New Jersey
Served as Designer for campus path realignment and planting. Responsibilities included design, preparation of construction documents and construction observation.

Greater Springfield Reliability Project, Agawam, West Springfield, Springfield, Chicopee, and Ludlow, Massachusetts
Served as Landscape Designer for the Visual Impact Mitigation (VIM) program as part of the Greater Springfield Reliability Project (GSRP). GSRP is one of four major transmission projects that are part of the New England East-West Solution (NEEWS) for Northeast Utilities. The project consists of 39 corridor miles of new and reconstructed transmission lines within Connecticut and Massachusetts. The VIM program is offered to property owners along the right-of-way to provide additional screening of the new poles and transmission lines. Screening includes trees, shrubs, window awnings and fencing. Project responsibilities include construction administration during the installation of the screening methods.

The Winsor School, Boston, Massachusetts
Served as Job Captain for the site work associated with the construction for the school's new Center for Performing Arts and Wellness. Design includes outdoor seating plaza, parking areas, streetscape, pathways and plaza. Responsibilities include the drafting and assembly of construction drawings, LEED documentation and addendum submissions.

Fawcett Street, Cambridge, Massachusetts
Served as Project Manager for bioretention tree and understory planting design along ½-mile stretch of road and sidewalk re-development. Project seeks to encourage a new stormwater management paradigm for City of Cambridge. Responsibilities included planting design, specifications formatted to City of Cambridge standards and construction documentation.

Penn Park Athletic Complex, Philadelphia, Pennsylvania
Served as Senior Designer in the development of a 23 acre-athletic complex situated on an alluvial flood plain that required careful geotechnical analysis in the final placement and engineering of site features. Owned and operated by the University of Pennsylvania, but made accessible to the entire city of Philadelphia, this park includes pedestrian pathways, bridges and lawns woven through a collection of tennis courts, sports fields and concessions. Responsibilities included production of construction documents, collaboration with structural engineers in the design of pedestrian bridges and submittal and shop drawing review during construction.

Hudson River Park, Segment 5, New York, New York
Served as Senior Designer for an 8.3-acre segment of the 550-acre New York City Hudson River Park network. Public amenities of this river front park include active and passive lawn areas, seating areas, running paths, skatepark, carousel and café. Responsibilities included construction documentation, construction observation, plant tagging, plant placement, submittal review and mock-up review. As a member of the prime consultant team, responsibilities included the coordination of sub-consultants' communications, payment applications and other administrative services.

MICHAEL G. FISHER, PE

RESUME

PROJECT ROLE
Geometric Design

EDUCATION
Bachelor of Science, Civil Engineering, University of Connecticut, 1994

REGISTRATION
Professional Engineer: Connecticut, Massachusetts, Ohio, Vermont

PROFESSIONAL MEMBERSHIPS
American Society of Civil Engineers
Institute of Transportation Engineers

SUMMARY OF QUALIFICATIONS

Mr. Fisher has over 20 years of experience including the design of numerous Connecticut state highway and municipal roadway design projects. He has been the Project Manager and Lead Engineer for projects involving major highway/roadway improvements, roadway realignment, intersection improvements, and resurfacing and safety improvements. He worked for the Connecticut Department of Transportation's Division of Highway Design for 6 years as the lead designer for a wide range of highway projects. The projects he has been responsible for have involved environmental, historical and sociological impacts, which have required coordination with various federal, state, and local agencies. Mr. Fisher is experienced in the application of CTDOT and FHWA Design Standards, environmental permitting, as well as all documentation required for the development of a project. He is very familiar with current software applications such as Microstation V8i, InRoads V8i and ProjectWise. He has also been responsible for the review of CTDEEP Stormwater General Permits prepared by the department and consultants. Mr. Fisher has performed hydraulic analyses and design of various state and municipal drainage systems. Mr. Fisher has been responsible for preparing project plans and allied documents for advertising by the Division of Contracts for numerous projects within the Connecticut Department of Transportation.

RELEVANT EXPERIENCE

Wilcoxson Elementary School Safe Routes to School, Stratford, Connecticut
Serves as Project Manager responsible for the design of pedestrian safety improvements under the Safe Routes to School Program (SRTS). This project was initiated by the Town of Stratford's Town Council as part of the (SRTS) program. The purpose of this project is to encourage students to walk and bike to school by improving pedestrian safety for those accessing Wilcoxson Elementary School. In particular, this project aims to revise the existing pick-up and drop-off procedure and enhance pedestrian safety at the school. This project will include a bus turn out on Wilcoxson Avenue, installation of new sidewalks, realignment of existing sidewalks, providing decorative bituminous pavement at the intersection of Wilcoxson Avenue and Beacon Street, and updating parking lot pavement markings to include a parent drop-off zone.

Pepper Street Reconstruction, Monroe, Connecticut
Serves as Project Manager responsible for the roadway reconstruction of Pepper Street. This project is funded through the Greater Bridgeport Regional Planning Agency(GBRPA) under the STP Urban Program and involves minor widening, and intersection improvements on approximately 4,500 feet of Pepper Street from Grant Road north to the Cambridge Drive and at the northern intersection of Pepper Street with Route 25. Also included in the design are a new signalized intersection, safety and geometric improvements, a linear trail extension, minor widening and culvert replacement. One of the cross culverts carries the Pequonnock River and is within a FEMA Floodplain and Floodway; it is hydraulically inadequate and will be replaced with a 12'x6' box culvert. BL Companies is responsible for survey, roadway design, traffic signal design, hydraulics and drainage design, as well as environmental permitting, property map development and coordination with various Department design units, utility companies and DEEP.

Reconstruction of CT Route 219 at Johnnycake Lane, Connecticut Department of Transportation, New Hartford, Connecticut
Serves as Project Manager responsible for the roadway realignment of 2,300 linear feet to improve a series of reverse curves and intersection geometrics on Route 219 in the Town of New Hartford. Bridge No. 02848 over Carter Brook will be replaced with a hydraulically adequate structure designed for the 100 year flood. The design will also include drainage and safety improvements as necessary. BL Companies is responsible for the review of the existing Preliminary Design documents prepared

by the Department in 2002. Additionally, BL Companies is responsible for a hydraulic design of the bridge crossing, environmental permitting, development of final design plans and documents, and coordination with various Department design units, utility companies and DEEP.

Realignment of Route 2 and Route 214, Ledyard and Stonington, Connecticut
Served as Project Manager/Lead Project Engineer for the realignment of Route 2 to provide a bypass for through traffic past Foxwoods Resort Casino. The $50 million project, funded in whole by Mashantucket Pequot Tribal Nation, was a two mile length of Route 2 which was realigned and elevated in front of the casino and involved the construction of 5 new bridges and numerous retaining walls, a redesigned interchange with Route 214, and several environmental enhancements. Project responsibilities included roadway design, hydraulics and drainage design, permitting, maintenance and protection of traffic, and construction management. Design services were completed in 2010.

Realignment of Route 94, Glastonbury, Connecticut (State Project #53-165)
While working at the Department of Transportation served as Lead Design Engineer for a 1-mile length of Route 94 which was realigned in order to improve sight lines at the intersection of Keeney Street and Hebron Avenue. Project responsibilities included roadway design, drainage design, permitting, maintenance and protection of traffic, and overall project coordination. Design services were completed in 1996.

Resurfacing of Pequot Trail, Mashantucket Pequot Tribal Nation, Ledyard, Connecticut
Served as Project Manager for the design of resurfacing and drainage improvements on a 2-mile length of Pequot Trail on tribal land. This project funded by the Bureau of Indian Affairs involved roadway and drainage design, and coordination with BIA and MPTN. Design services were completed in 2011.

Intersection Improvements of Routes 57 and 136 at Clinton Avenue, Connecticut Department of Transportation, Westport, Connecticut
Serves as Project Manager responsible for the design of a culvert replacement and intersection Improvements of Routes 57 and 136 at Clinton Avenue in Westport, Connecticut. Under this contract BL Companies was asked to provide engineering services for the intersection improvements of Routes 57 and 136 at Clinton Avenue in Westport Connecticut. The purpose of this assignment is to improve the safety and operation characteristics of the signalized intersection. The intersection has poor sight lines due to an offset and skew alignment. Due to the poor geometry and lane arrangement the intersection is a location of numerous rear-end and turning type accidents. In order to improve the safety and traffic operations at this intersection, minor widening on Route 57 will provide opposing exclusive left-turn lanes in both directions. Additionally, Route 136 will be widened to provide an exclusive left turn lane and realigned to minimize the offset arrangement. A new traffic signal will be designed for the intersection to improve traffic operations. Hydrologic and Hydraulic analysis and design for a new twin 5'x7' precast concrete box culvert carrying Willow Brook under Route 136 is also a part of the scope of services for this project.

On-Call Engineering and Architecture Services, Wareham, Massachusetts
Serves as Project Manager responsible for providing the Town of Wareham Department of Community and Economic Development Authority with On-Call Engineering and Architecture Services. BL Companies is one of three firms used on an on-call basis for various town initiatives such as Hynes Field and Union Street Parking Lot Construction, Merchant's Way Development, Recovery Road Building Improvements, Onset Beach Bath House Rehabilitation and Lopes Field Rehabilitation. Mr. Fisher has coordinated the development of conceptual plans and estimates for the Town's planning purposes and grant applications.

Bridge Replacements on Revere Beach Parkway (Route 16) over Malden River and over MBTA and Rivers Edge Drive, MassDOT, Everett/Medford, Massachusetts
Served as Project Manager responsible for the roadway and drainage portion of the design of Revere Beach Parkway and surrounding roadways in the towns of Everett and Medford MA. The overall project involved the replacement of an existing non-operating draw bridge over the Malden River as well as a bridge over MBTA and Rivers Edge Drive. Mr. Fisher provided oversight for the roadway design which included improving the geometry of the bridge approaches, off-ramps and surrounding roadways. In addition Mr. Fisher provided oversight for the design of drainage systems and stormwater treatment as well as the maintenance and protection of traffic during construction.

OLIVIA COLANGELO, EIT

RESUME

PROJECT ROLE
Geometric Design

EDUCATION
Bachelor of Science, Civil & Environmental Engineering, University of Notre Dame, 2012
Master of Science, Civil Engineering (Transportation Engineering), University of Pittsburgh, 2015

REGISTRATION
Engineer-in-Training

PROFESSIONAL MEMBERSHIPS
American Society of Civil Engineers
Institute of Transportation Engineers
Society of Women Engineers

SUMMARY OF QUALIFICATIONS

Ms. Colangelo has three years' experience in transportation engineering and administration of transportation projects. Ms. Colangelo previously worked for the Pennsylvania Department of Transportation for two years as a Local Projects Manager and Civil Engineer Trainee on a variety of bridge and highway projects in Western Pennsylvania. As a Project Engineer at BL Companies, Ms. Colangelo's responsibilities include supporting the project team in designing/reviewing roadway components, developing contract drawings, preparing cost estimates, assisting in environmental permitting, and providing site inspections.

RELEVANT EXPERIENCE

Pepper Street Reconstruction, Monroe, Connecticut

Serves as Project Engineer in roadway design for the reconstruction of Pepper Street. This project is funded through the Greater Bridgeport Regional Planning Agency (GBRPA) under the STP Urban Program and involves minor widening and intersection improvements on approximately 4,500 feet of Pepper Street from Grant Road north to the Cambridge Drive and at the northern intersection of Pepper Street with Route 25. Also included in the design are a new signalized intersection, safety and geometric improvements, a linear trail extension, minor widening and culvert replacement. One of the cross culverts to be replaced with a 12'x6' box culvert carries the Pequonnock River, is within FEMA Floodplain and Floodway, and is hydraulically inadequate. BL Companies is responsible for survey, roadway design, traffic signal design, hydraulics and drainage design, environmental permitting, property map development and coordination with various Department design units, utility companies, and DEEP.

Ocean Avenue Culvert Replacement over Snow's Creek, Barnstable, Massachusetts

Serves as Project Engineer to provide roadway and drainage drafting and design services for the replacement of the Snow's Creek Culvert on Ocean Ave. The overall project involves the design and permitting of a tidally influenced structure within a FEMA floodplain. The existing structure is a structurally deficient and hydraulically inadequate corrugated metal culvert which is restricting the flushing of the upstream salt marsh. This structure is a connection between Snow's Creek and Lewis Bay which has a high ecological importance to the area and is an important local access route to the local community and residents. The purpose of this assignment is to address the structural deficiencies and poor hydraulic performance of the existing culvert while minimizing impacts to the environment and local communities.

Route 11 Expressway and Interstate 95 Interchange, East Lyme, Montville, Salem, and Waterford, Connecticut

Serves as Project Engineer on the extension of Route 11 as a four-lane limited access roadway from the I-95/I-395 interchange in East Lyme and Waterford to the existing terminus of Route 11 in Salem. As part of this contract, BL Companies provides preliminary engineering and estimating, wetlands mitigation and tolling and financing study for the Route 11 corridor as well as 3D modeling of the Route 11, I-95 and I-395 interchange.

Beaver County Bridge No. 52 Replacement, Beaver County, Pennsylvania, Fallston, Pennsylvania

Served as Local Projects Manager for the Pennsylvania Department of Transportation. Assisted with administration of contracts between consulting engineers and Beaver County to provide a replacement project of a National Bridge Inventory local bridge, rated structurally deficient, under the Federal Local Bridge Program. Coordinated scoping field views with local sponsor and department units to establish true needs of their project. Prepared, monitored and updated project agreements for reimbursement and consultant design between individual sponsors and the Commonwealth. Participated in planning and design review meetings with local sponsor and consultants.

BL Companies

South Hills Safety Improvement Projects, Pennsylvania Department of Transportation, Bethel Park, Pennsylvania
Provided design assistance for the rehabilitation of two ½-mile segments of state highway in the South Hills of Pittsburgh, PA, including preparing right of way plans, layouts, sections, pavement designs, estimates, and details and drafting in Microstation.

Beaver County Bridge No. 24 Replacement, Beaver County, Pennsylvania, Raccoon Township, Pennsylvania
Served as Local Projects Manager for the Pennsylvania Department of Transportation. Assisted with administration of contracts between consulting engineers and Beaver County to provide a replacement project of a National Bridge Inventory local bridge, rated structurally deficient, under the Federal Local Bridge Program. Coordinated scoping field views with local sponsor and department units to establish true needs of their project. Prepared, monitored and updated project agreements for reimbursement and consultant design between individual sponsors and the Commonwealth. Reviewed design submissions and verified required plan checks and design reviews were completed by the correct District Unit or agency. Participated in planning and design review meetings with local sponsor and consultants.

Beaver County Bridge No. 30 Replacement, Beaver County, Pennsylvania, Greene Township, Pennsylvania
Served as Local Projects Manager for the Pennsylvania Department of Transportation. Assisted with administration of contracts between consulting engineers and Beaver County to provide a replacement project of a local bridge, rated structurally deficient, under the State Bridge Bill Program. Coordinated scoping field views with local sponsor and department units to establish true needs of their project. Prepared, monitored and updated project scope of work, budget, schedule and agreements for reimbursement and consultant design between individual sponsors and the Commonwealth. Reviewed design submissions and verified required plan checks and design reviews were completed by the correct District Unit or agency. Participated in planning and design review meetings with local sponsor and consultants.

South Negley Avenue Bridge Replacement, Pittsburgh (Shadyside), Pennsylvania
Served as Local Projects Manager for the Pennsylvania Department of Transportation. Assisted with administration of contracts between consulting engineers and the City of Pittsburgh to provide a replacement project of a National Bridge Inventory local bridge, rated structurally deficient, under the Federal Local Bridge Program. Coordinated scoping field views with local sponsor and department units to establish true needs of their project. Prepared, monitored and updated project agreements for reimbursement and consultant design between individual sponsors and the Commonwealth. Assisted with consultant selection. Participated in planning and design review meetings with local sponsor and consultants.

PA 0065 Section A53 Project, Pennsylvania Department of Transportation, Pittsburgh, Pennsylvania
Provided preliminary design assistance for the rehabilitation of approximately three miles of state highway in the Pittsburgh, PA, including preparing right of way plans, layouts, and pavement designs in Microstation and InRoads.

PA 0051 Section B46 Project, Pennsylvania Department of Transportation, Chippewa Township, Pennsylvania
Provided design assistance for the rehabilitation of a 4 mile section of state highway in the Chippewa Township, PA, including highway hydraulic and guiderail calculations, final design estimate preparation, specification writing, and preparing a public information meeting presentation.

PA SR 0028 Section A29 Project, Pennsylvania Department of Transportation, Millvale, Pennsylvania
Served as Civil Engineer Trainee construction manager and inspector on pavement and highway ramp preservation project in Millvale, PA. Assisted with inspection of contractor's daily work for compliance with contract plans and specifications. Monitored project budget and schedule, documented daily work and performed quantity calculations and estimates for concrete, asphalt, earthwork and subbase payments. Monitored bridge jacking and rehabilitation, reinforced concrete, asphalt pavement, and latex bridge deck placement, earthwork, traffic control, and thermoplastic pavement marking applications.

Veterans Memorial Bridge Construction, Beaver County, Pennsylvania, New Brighton, Pennsylvania
Served as Civil Engineer Trainee construction manager and inspector on construction of a new river crossing in New Brighton, PA. Assisted with inspection of contractor's daily work for compliance with contract plans and specifications. Monitored project budget and schedule, documented daily work and performed quantity calculations and estimates for concrete, asphalt, earthwork and subbase payments. Monitored reinforced concrete, asphalt pavement, water line, and deck pan placement, earthwork, traffic control, railroad embankment construction, and thermoplastic pavement marking applications.

Emad Elsakka, PE, Assoc. DBIA
Director of Structural Engineering

Nitsch Engineering

Years of Experience
- *26 in industry*
- *<1 at Nitsch Engineering*

Registration
- *Massachusetts: Professional Engineer (Civil) #40441, 1998*
- *Associate Design-Build Professional (Assoc. DBIA)*

Education
- *B.S., Civil Engineering, Northeastern University, 1984*

Professional Affiliations
- *Boston Society of Civil Engineers, Member*
  - *Past Chair, Infrastructure Group*
- *American Council of Engineering Companies/ Massachusetts*
  - *Transportation Agencies Liaison Committee (TALC), Member*

Emad is a structural engineer with more than 26 years of experience leading the design of building, bridge, and waterfront structures. Emad specializes in providing structural engineering services to support horizontal construction such as roadways, bridges, culverts, and other site elements. As the Director of Nitsch Engineering's structural engineering group, Emad is also responsible for the management and growth of our structural engineering practice.

Representative Projects

Church Street over Bike Path and Access Road, Falmouth, MA: Project Manager responsible for all design stages from type studies to final design of a three-span, prefabricated Timber Bridge. Design challenges included detailed seismic analysis since this bridge in classified as an irregular bridge having a SPC B according to the latest AASHTO Specifications. *Project experience with prior firm.*

Ponkapoak Trail over I-93/Route 1, Milton, MA: Project Manager and Lead Bridge Engineer for the deck replacement of this four span continuous steel plate girders bridge. Designed repairs for impact damaged girders by heat straitening techniques. Project experience with prior firm.

The Old Northern Avenue Bridge over the Fort Point Channel, Boston, MA: Project Manager responsible for evaluating several future uses for a historic steel truss bridge. Evaluation included determining replacement and rehabilitation options. Presented design to public officials including City of Boston Mayor and Department of Public Works Commissioner. *Project experience with prior firm.*

City of Boston Bridges, Boston, MA: Project Manager responsible for the design of the replacement of two bridges in a tight urban location; Massachusetts Avenue over Commonwealth Avenue and Ipswich Street over Muddy River. Design challenges included maintaining pedestrian and vehicular traffic during construction. *Project experience with prior firm.*

Vernon Avenue over Ware River, Barre, MA: Project Manager for the replacement of the 145-foot-long, three-span bridge. Supervised design from preliminary through final PS&E submittal. The replacement structure is a three span steel stringer bridge supported by cast in place concrete piers which in-tum is supported by drilled shafts. *Project experience with prior firm.*

The Arthur Smith Covered Bridge, Colrain, MA: Project Manager for supervising the design of the complete structural restoration of a historically significant structure. State-of-the-art computer modeling techniques were utilized to investigate the structure's ability to resist H-15 truck loading and AASHTO's wind and snow loads. *Project experience with prior firm.*

The Bissell Covered Bridge, Charlemont, MA: Project Manager for preparing the design approach, scope of work, and estimate of man-hour budget. Assembled and supervised design team for the structural restoration of a historic, covered bridge. Design challenges included determining the cause of cracking in critical structural members that resulted in bridge

Representative Projects - continued

closure. *Project experience with prior firm.*

Chestnut Street over Chicopee Brook, Monson, MA: Bridge Engineer for the total replacement of this bridge spanning the Chicopee River in the Town of Monson. Prepared preliminary and final design drawings and cost estimates. Supervised design and drafting personnel to produce final construction documents. *Project experience with prior firm.*

Water Street over Waters River, Danvers, MA: Project Manager and Lead Bridge Engineer for the total replacement of a two-cell concrete culvert. The replacement structure is a two-span continuous prestressed concrete bridge superstructure supported by drilled shafts. *Project experience with prior firm.*

Route 24 over Access Road, Fall River, MA: Project Manager and Lead Bridge Engineer for the superstructure replacement of this single span steel bridge. The new superstructure will be a precast prestressed concrete steel bridge (INVERSET). The existing gravity abutments will be modified to support the new superstructure. *Project experience with prior firm.*

Cadwell Road over Housatonic River, Pittsfield, MA: Project Engineer responsible for preliminary and final designs prepared for a precast concrete double barrel culvert. Checked shop drawings and culvert manufacturer's design. *Project experience with prior firm.*

Lighthouse Road Bridge over Weir Creek, Dennis, MA: Project Manager providing complete structural engineering services for this prefabricated stress laminated timber bridge. Prepared preliminary design drawings, specifications, and bid documents. Checked and coordinated final design requirements and calculations with bridge fabricator. Periodic field inspection was provided during construction. *Project experience with prior firm.*

The Conway Covered Bridge, Conway, MA: Bridge Engineer for the restoration of a second historic, timber-covered bridge. Performed three-dimensional finite element analysis to investigate structure's ability to resist H-15 truck loading and AASHTO's snow and wind loads. Designed connections taking into account the historic significance of the structure. *Project experience with prior firm.*

Cooper Street Bridge over MBTA, Wakefield, MA: Project Engineer responsible for the rehabilitation of this turn-of-the-century concrete arch. The feasibility of retaining the existing structure was evaluated. Prepared a type study report and made repair recommendations. Prepared plans, specifications, and estimates based on the recommended repair scheme. Provided advice during construction and supervised review of shop drawings. *Project experience with prior firm.*

CHAD E. PERKOSKI, PE

RESUME

PROJECT ROLE
Structures

EDUCATION
Bachelor of Science, Civil Engineering, University of Connecticut, 2003

REGISTRATION
Professional Engineer: Connecticut, Massachusetts

PROFESSIONAL MEMBERSHIPS & TRAINING
OSHA 10-Hour Outreach for Construction
Confined Space Entry Training Course (2012)
NHI Bridge Evaluation for Rehabilitation Design Consideration (2012)
NCEES Record Holder

SUMMARY OF QUALIFICATIONS

Mr. Perkoski has over 12 years of experience in bridge and structural engineering in the consultant engineering market. Specifically, he has been involved in providing design work and consultation associated with the design of various types of bridges for various Municipal and State agencies. Mr. Perkoski's expertise is in bridge engineering. As a Project Manager and Senior Engineer at BL Companies, Mr. Perkoski's responsibilities include designing primary structural bridge components, preparing contract drawings and construction technical specifications, construction consultation, and developing the ensuing contract documents/reports.

RELEVANT EXPERIENCE

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut
Serves as Project Engineer responsible for bridge and structural engineering for the trail and amenity design of this 2.2-mile segment of multi-use trail within the Town of Bloomfield. The project will be constructed on land owned and managed by Northeast Utilities and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. Trail features include layout conforming to AASHTO trail design criteria, parking facilities, rest areas, planting and site restoration design, pedestrian bridge, fencing and street crossings.

Rehabilitation of the Main Street Bridge over Bumps River, Barnstable, Massachusetts
Serving as Lead Bridge Engineer responsible for providing design and construction support services for the rehabilitation of the Bumps River Bridge in the Village of Osterville, Barnstable, Massachusetts. The work involves developing a detailed evaluation of the existing bridge's condition, including a load rating analysis, and conducting site inspections to identify and prioritize areas of deterioration for the development of the structure rehabilitation study. The rehabilitation involves utilizing reinforced fiber polymer and either epoxy or concrete to encapsulate deteriorating timber piles from the seabed to above the tidal zone; installing a new bridge expansion joint sized to better meet thermal expansion and contraction requirements; and reinforcing concrete bents as well as the bituminous concrete deck surface.

Ocean Avenue Culvert Replacement over Snow's Creek, Barnstable, Massachusetts
Serves as Lead Bridge Designer for providing structural design services for the replacement of the Snow's Creek Culvert on Ocean Avenue. The existing pipe culvert will be replaced with a precast concrete box culvert. The project also involves utility relocation along with minor approach roadway reconstruction work. The project also includes drainage/stormwater management improvements, sidewalk reconstruction, and minor driveway reconstruction.

Arctic Street Bridge Replacement, Bridgeport, Connecticut
Project Manager for the replacement of the aging and deteriorated Arctic Street Bridge over the Pembroke Lakes. The project objective is to provide a safe structure that meets current load standards, has low initial and life-cycle costs, is easy for the City to maintain and minimizes impacts to local residents. BL Companies' approach involves over-spanning the existing substructure with new pile-supported foundations that will accept the proposed precast concrete three-sided frame bridge to preserve the arch's aesthetic appearance while relocating underground utilities and addressing roadside safety concerns to the area. This approach minimizes the Contractor's work in the waterway, which will significantly reduce the overall construction cost and duration.

East Town Road Pedestrian Bridge over Indian River, Milford, Connecticut
Served as Lead Designer/Drafter and Chief Inspector on the East Town Road Pedestrian Bridge project. Westfield Corporation retained BL Companies to provide construction documents for the installation of a pedestrian bridge located immediately downstream of the existing vehicular bridge on East Town Road over the Indian River in Milford. The pedestrian bridge is an 85-foot simple span prefabricated weathered steel Pratt truss style superstructure that bears on cast-in-place reinforced concrete abutments. The reinforced concrete abutment substructure is supported on approximately 30-foot-deep load bearing timber piles driven to bedrock. Mr. Perkoski provided structural design services along with construction support services through-out the duration of the project. During construction, Mr. Perkoski was the Chief Inspector while providing quality assurance/ quality control for the contract drawings/documents. He also was a consultant during the construction of this project.

Skiff Street Bridge Replacement, Hamden, Connecticut
Served as Lead Bridge Engineer for the replacement of this four-lane bridge located on a major arterial road over the Mill River in Hamden. Responsibilities included management of bridge and roadway design services, entitlement permitting, and coordination with utility companies, local and State officials. BL Companies provided land surveying and mapping, preparation of engineering studies, preliminary and final design, permitting, bid phase services, and shop drawing review. The project was funded through the Federal-Local Bridge Program.

Kennedy Road Rehabilitation, Windsor, Connecticut
Served as the Project Manager and Resident Engineer for the construction inspection services for the Kennedy Road Pavement Rehabilitation project for the Town of Windsor. This is the first project under the State's new LOTCIP funding program. The project involved milling and overlaying the southbound lane of Kennedy Road between CT Route 20 and I-91 for a distance of approximately 4,500 feet. The project also includes replacing catch basin tops and manhole covers within the project limits. Other incidental construction included reconstructing sections of concrete sidewalks, ramps, detectable warning strips as well as restoring any of the areas disturbed during the construction process.

Hillfield Road Bridge Replacement over Eaton Brook, Hamden, Connecticut
Serving as Project Manager and Lead Bridge Designer on the Hillfield Road Bridge replacement project. This project includes wetlands evaluations, developing demolition limits and details, water handling details, structural details for reconstruction, roadway detour plans, and roadway cross-sections. The project also required hydraulics and drainage analyses, utility coordination, and the design of pavement markings and signage. Mr. Perkoski is providing structural and roadway design oversight throughout the duration of the project. Mr. Perkoski will also being the Resident Engineer and Chief Inspector as the project moves into construction. His responsibilities will include oversight of all contract work to ensure the contractor is constructing the bridge in accordance with the contract drawings, specifications, CTDOT Form 816, and the CTDOT Construction Manual.

CTDOT Bridge Preservation Program, Bridge Expansion Joint Replacement Project, Statewide, Connecticut
Served as Project Manager and Lead Bridge Engineer responsible for preparing contract documents to complete various repairs to existing bridges throughout the State under the Bridge Preservation Program for the Connecticut Department of Transportation (CTDOT). The project included replacement of expansion joints on 28 bridges in three separate construction contracts. The project also included repairs to steel girders, bearing replacements, painting ends of steel beams and miscellaneous repairs to 49 bridges in four separate construction contracts. Design work included structural design of repairs to the bridges as well as traffic engineering for maintenance and protection of traffic and review of each project for determination of required permits and regulatory approvals. Work was completed on a fast-track basis and within five months of receiving notice to proceed. Seven separate construction/bid documents were prepared for the structures included in this program based upon locations within the respective CTDOT Districts. During construction, Mr. Perkoski provided construction engineering support to the various District Inspectors throughout the duration of the construction phase of the project.

Arctic Street Bridge Replacement, Bridgeport, Connecticut
Project Manager for the replacement of the aging and deteriorated Arctic Street Bridge over the Pembroke Lakes. The project objective is to provide a safe structure that meets current load standards, has low initial and life-cycle costs, is easy for the City to maintain and minimizes impacts to local residents. BL Companies' approach involves over-spanning the existing substructure with new pile-supported foundations that will accept the proposed precast concrete three-sided frame bridge to preserve the arch's aesthetic appearance while relocating underground utilities and addressing roadside safety concerns to the area. This approach minimizes the Contractor's work in the waterway, which will significantly reduce overall construction cost and duration.

DENNIS QUINIT, PE

RESUME

PROJECT ROLE
Principal Bridge Engineer

EDUCATION
Master of Science in Civil Engineering (Structures), San Jose State University, 1989
Bachelor of Science in Civil Engineering, University of Santo Tomas, 1983

REGISTRATION
Professional Engineer: Connecticut (1996), California (1997), Rhode Island (2014), Ohio (2015), Pennsylvania (2015)

PROFESSIONAL MEMBERSHIPS & TRAINING
FHWA-NHI Safety Inspection of In-Service Bridges (2011)
ConEd Subsurface Electrical Awareness Training (2009)
Confined Space Entry Training Course (2008)
American Society of Civil Engineers / Connecticut Society of Civil Engineers

SUMMARY OF QUALIFICATIONS

Mr. Quinit is a Structural Engineer with over 25 years of experience in project management and structural engineering involving the design of replacement and rehabilitation of a variety of bridge from single to multi-span concrete and steel bridges, retaining walls, prestressed and post-tensioned concrete structures, as well as utility and pedestrian bridges. He has performed structural analyses, structure type studies and project due diligence, structural design and detailing, bridge inspection, bridge evaluation and load rating, development of contract plans, specifications, estimates, provided construction support services and construction engineering, and prepared front-end bid documents. He has also been involved in several accelerated bridge construction design projects. As Principal Bridge Engineer at BL Companies, Mr. Quinit's responsibilities include project management and design of various bridges and roadway infrastructures, preparation and development of contract documents, construction plans, specifications and estimates, construction consultation and construction engineering, and design oversight including quality control and quality assurance.

RELEVANT EXPERIENCE

Bloomfield Greenway Multi-Use Trail, Bloomfield, Connecticut

Performed feasibility study and coordinated preparation of final structure design plans for the trail and amenity design of this 2.2-mile segment of multi-use trail for the Town of Bloomfield. The project will be constructed on land owned and managed by Northeast Utilities and the Town of Bloomfield. The Greenway will be a key component for the multi-use trail system of the Farmington Valley and the East Coast Greenway. The trail features a pedestrian bridge and retaining walls in addition to parking facilities, rest areas, planting, as well as site restoration, fencing, and street crossings. Responsibilities include technical coordination in the preparation of design and construction documents for the pedestrian bridge and retaining walls. Served as technical design resource providing design oversight and QA/QC. Design was completed in December 2015 and anticipated start of construction is Spring 2016.

MA State Route 7A (Bridge No. S-10-023 (BDD)) over Housatonic Railroad Bridge Replacement Project, Sheffield, Massachusetts, Massachusetts Department of Transportation

Served as Project Manager and Senior Bridge Engineer for the design of the Route 7A replacement bridge. Provided project management and design services for a Geosynthetic Reinforced Soil – Integrated Bridge System (GRS-IBS) replacement bridge. As part of MassDOT's Accelerated Bridge Program, the replacement bridge is a pilot program implementing FHWA's GRS-IBS, the first of its kind in the State of Massachusetts. Prepared construction plans, specifications and estimates. Duration: 2011-2013.

Rehabilitation of the Main Street Bridge over Bumps River, Barnstable, Massachusetts

Served as Principal Bridge Engineer responsible for the rehabilitation of the Bumps River Bridge in the Village of Osterville, in Barnstable. The work involves developing a detailed evaluation of the existing bridge's condition, including a load rating analysis, and conducting site inspections to identify and prioritize areas of deterioration for the development of the structure rehabilitation study. The rehabilitation involves utilizing reinforced fiber polymer and either epoxy or concrete to encapsulate deteriorating timber piles from the seabed to above the tidal zone; installing a new bridge expansion joint sized to better meet thermal expansion/contraction requirements; and reinforcing concrete bents as well as the bituminous concrete deck surface.

Massachusetts Statewide Bridge Load Rating Services, Massachusetts Department of Transportation

Served as Project Manager and Senior Bridge Engineer for the analysis and load rating of various bridges statewide. Provided project management, project and staff coordination, and bridge load rating services for various single and multi-span highway steel bridges. Project completed in 2012.

Route 34 Alignment Study – Stevenson Dam By-Pass, Monroe/Oxford, Connecticut Department of Transportation (CTDOT)
Served as Project Engineer (Bridge) for the roadway re-alignment feasibility study of Route 34 to by-pass the Stevenson Dam, where the existing roadway bridge is currently supported. The project consists of the investigation and evaluation of five roadway alignments with a river crossing downstream of the dam. The study includes structure type studies of a bridge over the Housatonic River, retaining walls, and replacement of existing bridges along and within the proposed project limits. Provided preliminary engineering, structure type studies and structure layouts, and cost estimates as well and preparation of study report.

Ocean Avenue Culvert Replacement over Snow's Creek, Barnstable, Massachusetts
Served as Principal Bridge Engineer for the reconstruction of the Snow's Creek Culvert on Ocean Avenue. The overall project involves the design and permitting of a tidally influenced structure within a FEMA floodplain. The existing culvert, which connects Snow's Creek to Lewis Bay, is a structurally deficient and hydraulically inadequate corrugated metal culvert that is restricting the flushing of the upstream salt marsh. This structure has a high ecological importance to the area and is an important local access route to the local community and residents. The replacement box culvert addresses the structural deficiencies and poor hydraulic performance of the existing culvert while minimizing impacts to the environment and local communities. Provided technical design oversight and QA/QC for the structural aspect of the project.

Stamford Metro North Railroad Bridge Replacement Feasibility Study (State Project No. 135-301), CTDOT
Served as Project Engineer (Bridge) for the feasibility study to replace five Metro North bridges. Provided feasibility study and preliminary engineering services for the replacement of five Metro North Railroad multi-track under-grade open-deck bridges. The feasibility study provided an overview of the construction and constructability issues of replacing the structurally deficient bridges with ballasted deck bridges and lowering the roadway crossings in order to provide adequate vertical clearance, including identification and evaluation of construction issues pertaining to roadway and drainage construction, traffic movement during construction, utility relocations and railroad operations. The study identified roadway crossings and appurtenant and adjacent structures that were directly and/or indirectly impacted by the reconstruction of the bridges and roadways. The study was also in conjunction with the Stamford Urban Transit-way system and the installation of a future LRT system. Responsibilities included coordination with CTDOT and the City of Stamford, establishment of study guidelines and alternatives, structure type studies, constructability evaluation, construction staging, manpower, personnel and training, and preparation of study reports, preliminary engineering plans, and construction estimates. Project duration: 2009-2010.

Rehabilitation of Richmond Hill Avenue over Rippowam River, Stamford, Connecticut
Served as Project Manager and Lead Bridge Engineer for the replacement of the Richmond Hill Bridge under the State Local Bridge Program for the City of Stamford. Provided project management, project coordination and design services for the rehabilitation of the two-span bridge over Rippowam River. The design consisted of replacing the two simple spans with a two-span continuous multi-steel girder superstructure, eliminating the intermediate deck joint over the pier, which was the primary cause of girder deteriorations. The design also included the replacement of a retaining wall alongside Richmond Hill Avenue and adjacent to a historic cemetery. Prepared rehabilitation study, performed preliminary and final design, utility coordination, coordination of CTDEP permit applications, bridge lighting design and coordinated archaeological sensitivity assessment pertaining to potential disturbance to the cemetery. Project duration: 2007-2009.

Reconstruction of Lakeview Avenue over the Five Mile River, New Canaan, Connecticut
Served as Project Manager for the replacement of the Lakeview Avenue Bridge. Provided design services for the complete replacement of the existing superstructure and the widening/modification of the existing reinforced concrete abutments with U-type wing-walls. The new 32-foot single-span superstructure consists of a concrete deck with rolled weathering steel beams supported on conventional reinforced concrete abutments. Work was coordinated with the CTDOT Consultant Liaison Engineer, Town of New Canaan, abutting landowners, utilities, inland wetlands and CTDEP. Responsibilities included the production of bridge plans and contract documents, review of shop drawings, construction support services and construction inspection oversight. Project duration: 2006-2008.

Replacement of Old Main Street Bridge (Bridge No. 118008) over Goff Brook, Rocky Hill, Connecticut
Served as Principal Bridge Engineer for the design of the Old Main Street replacement bridge. Served as the technical design resource, provided design oversight and QA/QC. Prepared construction plans, estimates and specifications, prepared structure layout for a three-sided precast concrete rigid frame structure, and designed micro-pile foundation system for bridge replacement structure.

KIMBERLY LESAY

RESUME

PROJECT ROLE
Environmental Permitting

EDUCATION
Bachelor of Biological Sciences, Ecology & Evolutionary Biology, University of Connecticut, 1993

TRAINING
PSMJ Resources A/E/C Project Management Bootcamp (November 2013)
Leadership Program Graduate Connecticut Department of Transportation (2012-2013)
OSHA 10 Hour Construction Safety and Health (August 2013)
NHI/ FHWA Managing Road Impacts on Stream Ecosystems (August 2011)
NHI / FHWA NEPA and Transportation Decision Making (May 2011)
NHI / FHWA NEPA Project Development and 4f

PROFESSIONAL MEMBERSHIPS
Connecticut Association of Wetland Scientists, Women in Transportation Member

SUMMARY OF QUALIFICATIONS

Ms. Lesay has over 20 years of experience specializing in natural resource assessment, permitting, mitigation and long-term monitoring. More than 18 years of her experience was in transportation planning in the public sector. She has specialized in providing wetland and natural resource assessments, permitting guidance and mitigation services associated with large- and small-scale roadway, bridge, railroad, transit, facility and airport projects. Ms. Lesay has expertise in the areas of inland and tidal state and federal wetland permitting including impact avoidance techniques and mitigation design, as well as proper water handling, drainage design, stormwater treatment and constructability as they apply to the permitting process. She also has extensive experience in listed species coordination on both State and Federal levels, including providing plans and contract specifications for compensatory habitat. While with the Connecticut Department of Transportation, Ms. Lesay was responsible for ensuring that long-term mitigation monitoring was completed for numerous large-scale projects across the state in order to fulfil permit special conditions. She also has extensive experience in obtaining State and Federal permit approvals for emergency infrastructure repairs following storm events. As a Senior Project Manager at BL Companies, her responsibilities include project management, field investigations and permit coordination and preparation.

She has experience conducting environmental reviews to determine documentation needs under the National Environmental Policy Act (NEPA) and the Connecticut Environmental Policy Act (CEPA), preparing and reviewing environmental documents to meet both NEPA and CEPA requirements. She also has experience in wetland mitigation site selections, grading and planting plan design, streambank stabilization, fish passage enhancements and river restoration techniques, and construction oversight. Ms. Lesay has provided expert testimony at Connecticut Department of Energy and Environmental Protection (CTDEEP) adjudicated hearings and has presented numerous projects within large public forums.

Ms. Lesay focused much of her career on streamlining various permit processes both within the Department of Transportation, and in conjunction with the Department of Energy and Environmental Protection. Ms. Lesay developed the State of Connecticut's first Drainage Maintenance Plan under the Inland Wetland General Permit, allowing for certain activities to be performed under one authorization instead of numerous individual permit applications. Her plan has since been utilized by many municipalities to permit various required routine maintenance activities for roadways. Ms. Lesay also authored the Flood Management General Certification and created this process within the CT Department of Transportation to allow for in-house approval of certain routine activities. Ms. Lesay was also a key developer of the Flood Management Memorandum of Understanding (FM-MOU) between the Department of Transportation and the Department of Energy and Environmental Protection. She provided guidance to numerous Connecticut Cities and Towns regarding project permitting needs and has successfully seen many municipally initiated projects through flood management exemptions, listed species issues and mitigation needs, at the rate of approximately 20 approvals each year.

RELEVANT EXPERIENCE

Arctic Street Bridge Replacement, Bridgeport, Connecticut
Currently serving as manager responsible for overseeing tidal wetland delineation and the coastal permitting for the replacement of Arctic Street over Pembrook Lakes in Bridgeport. This project is being funded via the CTDOT State Local Bridge Program (SLBP). Structure layout was recently completed and coordination has already commenced with CTDEEP Marine Fisheries Division and CTDEEP Wildlife. The project is currently moving into the permitting phase with CTDEEP Office of Long Island Sound Programs and the U.S. Army Corps of Engineers.

Rails to Trails, Various Locations, Connecticut
Experience in guiding numerous portions of various rails to trails and river trails through the state and federal permitting process, including the Still River Greenway, Quinnipiac River Trail and Hockanum River Trails.

Hammonasset Beach State Park BURT Trail, Madison, Connecticut
Managed permitting efforts for the design and construction of a 2.5-mile-long Beach Utility Recreation Trail (BURT) that will accommodate water, electrical and gas utility services and will also serve as a multi-use path for park visitors for the Connecticut Department of Administrative Services, Division of Construction Services. Efforts include identification of state and federal jurisdictional limits, tidal wetland delineation and preparation of a Structures and Dredging, Tidal Wetlands and 401 Water Quality Certification application to the Connecticut Department of Energy and Environmental Protection, (CTDEEP) Office of Long Island Sound Programs, Flood Management Certification, General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities as well as an application to the U.S. Army Corps of Engineers. The projects has entailed close coordination with CTDEEP Wildlife and Parks Divisions to properly phase and avoid impacts to listed species, and will include a 24,000 sf tidal wetland mitigation area and habitat enhancements. This project is currently in construction.

Pepper Street Reconstruction, Monroe, Connecticut
Currently overseeing wetland delineation, assessment and permitting efforts for the Town of Monroe utilizing funding through the CTDOT Local Roads Unit for reconstruction, minor widening, and intersection improvements on approximately 4,500 linear feet of Pepper Street, from Grant Road north to the Cambridge Drive intersection and at the northern intersection of Pepper Street with Route 25 (Main Street) in Monroe. Improvements include replacement of the crossing of the West Branch of the Pequonnock River, drainage and stormwater treatment upgrades and extension of the Housatonic Valley Rail Trail through the project area.

New Britain-Hartford Busway (FastTrack), Connecticut
Oversaw permitting for project 171-305, a dedicated Bus Rapid Transit facility along a 9.4-mile corridor between Hartford and New Britain including the construction of eleven stations, a new Amtrak access road and a multi-use trail in portions of the project area. The project includes approximately 4.8 acres of wetland creation and 3.9 acres of wetland restoration as mitigation for the project's wetland impacts. Engineer of Record: CT Department of Transportation

Naugatuck Avenue Drainage Improvements, Milford, Connecticut
Successfully oversaw tidal wetland delineation and led state and federal coastal permitting efforts for the City of Milford for drainage improvements and a new outfall along Beaver Brook. Permits included CTDEEP Office of Long Island Sound Programs Structures and Dredging, Tidal Wetlands and 401 Water Quality Certification approvals, as well as permit approval from the U.S. Army Corps of Engineers. Flood Management Certification was issued via the FM MOU process via CTDOT.

Reconstruction of I-84, Waterbury, Connecticut
Provided permitting oversight for project 151-273 which involves widening and safety improvements to Interstate 84 and realignment of the highway in the City of Waterbury. Project responsibilities included permit coordination, mitigation site selection and oversight of mitigation plans. The project required relocation of portions of the Mad River and Beaver Pond Brook, with restoration of floodplain values a key goal of the plan. Wetland mitigation site selection was challenging in this urban setting with contaminated soils as well as potential 4f issues. Engineer of Record: CT Department of Transportation

Fairfield Rail Station, Fairfield, Connecticut
Served as the permitting specialist for the State portions of the Fairfield Metro Center, (State Project 301-060), obtaining an Inland Wetland General Permit, CAM Consistency and Flood Management Certification and Exemption approval for the bridge, drainage improvements and parking lot. Working closely with the developer, the Town of Fairfield, this was CTDOT's first endeavor to complete a transportation facility utilizing a third-party agreement. Ms. Lesay was also responsible for aiding in coordination with state and federal regulatory agencies and in overall site mitigation design, as well as construction compliance oversight. Permitting for the state actions was completed in 2007. Designer of Record: Connecticut Department of Transportation.

JESSICA OSBORNE, CPSM

RESUME

PROJECT ROLE
Senior Marketing Coordinator

EDUCATION
Bachelor of Science, Marketing & Corporate Communications, Bentley University, 2004

CERTIFICATION
Certified Professional Services Marketer (CPSM), 2014

PROFESSIONAL MEMBERSHIPS
Society for Marketing Professional Services (SMPS)

SUMMARY OF QUALIFICATIONS

Jessica Osborne has more than 12 years of experience in marketing, public relations, graphic design and corporate communications.

Proven capabilities and responsibilities throughout her career and in her present position include:

- Website development and maintenance through various Content Management Systems.
- Creation and management of email campaigns and surveys using Constant Contact.
- Management of professional photo shoots for completed projects.
- Assistance with preparation for public presentations and interviews.
- Establishment of a media presence utilizing press releases, publications and organization affiliations.
- Conceptualization, design and creation of internal manuals and documents, including: Employee Handbook, New Employee Orientation Program Materials, Company-wide Newsletter
- Conceptualization, design and creation of promotional collateral including brochures and advertisements.
- Management of all logistics involved in the company's presence at tradeshows, meetings, and conferences.
- Development and production of proposals, qualifications packages and general marketing materials

RELEVANT EXPERIENCE

BL Companies, Meriden, CT — May 2010 – Present
Senior Marketing Coordinator

Flansburgh Architects, Boston, MA — 2008 - 2010
Marketing Coordinator

Oakwood Worldwide, Los Angeles, CA — 2005 - 2007
Marketing & Communications Coordinator

PROFESSIONAL AFFILIATIONS

President, 2015 – 2016, Society for Marketing Professional Services (Connecticut Chapter)
Communications Director, 2011 – 2015, Society for Marketing Professional Services (Connecticut Chapter)

SPECIALIZED KNOWLEDGE

Microsoft Office Suite: Word, Excel, Powerpoint, Outlook, Publisher
Adobe Creative Suite: InDesign, Illustrator, Photoshop
Deltek Vision
WordPress CRM System
SquareSpace CRM System
Constant Contact (email marketing)

BL Companies

6 - PROJECT EXAMPLES

BL Companies

Comprehensive Trails Plan

EXPERIENCE

BL Companies is providing consultant services for the Town of Marshfield Community Preservation Committee in the preparation of a Comprehensive Trails Plan for the town's existing and future recreational trail system. This plan emerged out of a need for Marshfield to preserve and better manage these public lands in the interest of protecting the precious and fragile aquifers from which the public drinking water supply relies, and in protecting the local history that pre-dates the earliest European settlers.

Located on public and private lands, this 40-mile trail network was inventoried and analyzed, and recommendations for improvements and future connections are being compiled in a graphically evocative report. This report includes trail system mapping with trail-by-trail difficulty ratings using established USFS rating systems, trail maintenance recommendations, town-wide diagramming using GIS base mapping, feedback from the community through public survey, property acquisition analysis, and recommendations for the procurement of funds for future development

BL Companies worked closely with a "working group" comprising local stakeholders from various town offices, commissions and organizations. BL Companies met regularly with this group to present the analysis and received critical feedback from this eclectic group. This process ensured that the report and final recommendations are consistent with the committees values and goals.

Services are scheduled for completion in July 2016.

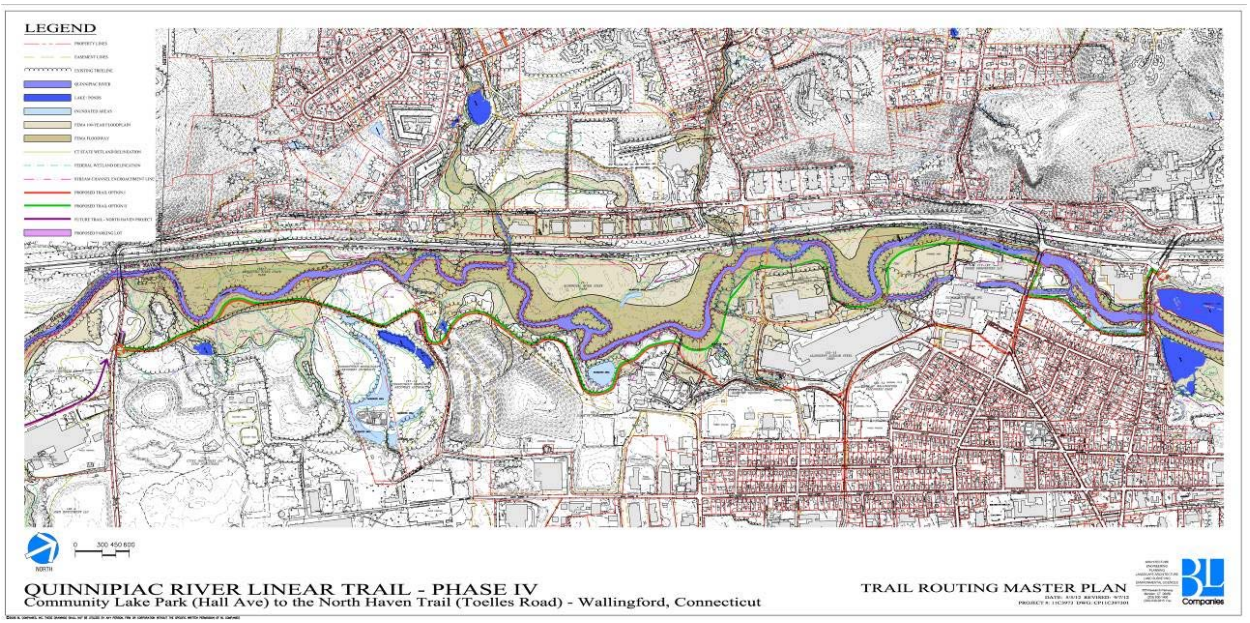
LOCATION
Marshfield, Massachusetts

SERVICES
Planning, Landscape Architecture, Civil Engineering, Transportation Engineering

BL Companies

Quinnipiac River Linear Trail Master Plan

EXPERIENCE



BL Companies provided landscape architecture, civil engineering and master planning services to prepare a preliminary master plan study for Phase IV of the Quinnipiac River Trail from the north side of Hall Avenue at Community Lake Park in Wallingford, CT, to Toelles Road where the proposed North Haven Trail will begin.

The primary goal of the project was to determine the route and improvements needed to create a coherent system of multi-use, off-road trails in order to provide recreational opportunities for the public. The study identifies routes most suitable for the facilities while minimizing adverse environmental impacts as well as promoting active and passive recreational uses for the enjoyment of both the urban and natural environment. The study considers access points, potential parking areas, scenic views, ADA compliance, rest facilities and connectivity to archaeological, historical and environmental resources and points of interest. An estimate of probable cost and the identification of the environmental permits required to construct the project were part of this scope.

LOCATION
Wallingford, Connecticut

SERVICES
Civil Engineering, Environmental Resources, Landscape Architecture, Land Surveying

BL Companies

Bloomfield Multi-Use Trail

EXPERIENCE

BL Companies is providing design services for a 2.2-mile multi-use trail proposed in the north corner of Bloomfield from the Windsor town line to the Simsbury town line. Conceived through a feasibility study performed by the Rails-To-Trails Conservancy, the route follows an old rail grade along an existing utility right of way, and will provide a critical pedestrian connection between the Farmington Valley trail network and the City of Hartford. BL Companies' project team performed wetland analysis, environmental assessment and structural review to provide critical information in assisting the BL design group in developing safe, AASHTO-compliant, environmentally sensitive and aesthetically pleasing trail alignments and street crossings. BL Companies also prepared design documents and cost estimates that accommodate a phased construction schedule as necessary due to funding limitations. Construction is scheduled to begin in the spring of 2016.

LOCATION
Bloomfield, Connecticut

SERVICES
Civil Engineering, Environmental Sciences, Landscape Architecture, Structural Engineering

BL Companies

Tariffville Greenway Multi-Use Trail

EXPERIENCE

BL Companies developed a design and prepared conceptual plans for a section of multi-use greenway trail system from the Simsbury town green southwest of the Winthrop Street and Main Street Intersection at Tariffville Center, heading south along Main Street, and continuing along Routes 187/189 to the future Bloomfield Greenway Multi-Use Trail System. In addition to the conceptual design, BL Companies provided an opinion of probable cost and participated in meetings with CTDOT and Town of Simsbury officials to discuss the various design aspects (e.g., trail system, traffic modifications, environmental concerns, structural issues, property impacts). The design work included trail and potential parking lot locations, for eventual connection with the Bloomfield Greenway Multi-Use Trail.

The conceptual trail design was prepared in accordance with Town and CTDOT standards and requirements. Conceptual trail plans and potential roadway crossing treatments were developed in sufficient detail to prepare a cost estimate that could be used by the Town for a grant application to acquire funding for the trail.

LOCATION
Simsbury, CT

SERVICES
Civil Engineering, Transportation Engineering, Structural Engineering, Land Survey, GIS, Landscape Architecture

BL Companies

Reconstruction of Pepper Street

EXPERIENCE

BL Companies is providing land surveying and engineering services for the preparation of contract plans and documents for the Reconstruction of Pepper Street (State Project No. 84-109). This project involves the realignment, reconstruction and widening of approximately 4,500 LF of Pepper Street from Grant Road to Cambridge Drive. The proposed improvements to the roadway also include the widening of Pepper Street at it northern terminus with Main Street (Route 25) to provide for two turn lanes at this intersection. A new signal will be provided and revisions to the vertical geometry between Cambridge Drive and Grant Road are included in this project to provide improved intersection and stopping sight distances.

This project also includes the construction of approximately 2,000 LF of a new multi-use trail to provide a complete streets approach as well as the replacement of the Pepper Street box culvert over the Pequannock River to improve its hydraulic capacity and allow for the additional width for the multi-use trail.

As part of this project, the roadway will be reconstructed and the storm drainage will be upgraded as required. This project will be designed in accordance with applicable Connecticut Department of Transportation (CTDOT) and Federal Highway Administration (FHWA) design guidelines and standards, including the CTDOT Form 816.

LOCATION: Monroe, Connecticut

SERVICES: Civil Engineering, Environmental Sciences, Landscape Architecture, Land Surveying, Transportation Engineering

PROJECT VALUE: $5,500,000

TIMELINE: Design 2014, Construction Est. 2016, Completion Est. 2017

BL Companies

Hammonasset Beach State Park Utility & Trail Improvements

EXPERIENCE

BL Companies provided design services for the State of Connecticut Department of Administrative Services (DAS), formerly known as the Department of Construction Services. The services included engineering design, landscape architecture and construction administration services for the Hammonasset Beach State Park Combined Major Utility Replacement Project. BL Companies worked with CTDAS to prepare design plans for a ±2.5-mile Beach Utility Recreational Trail (BURT) system that will also serve as a utility corridor. The utility corridor will accommodate a water main system, underground primary electrical replacement system conduits and a small diameter natural gas pipeline. Design plans for branch service connections were also required. The project includes approximately 5,000 feet of water main services, 13,000 feet of electrical conduit and 500 feet of 2"diameter gas service lines.

BL Companies also worked with CTDAS, CT DEEP and Hammonasset Park Staff to develop the design plans and coordinate with the respective utility companies, Eversource (formerly Connecticut Light & Power), Southern Connecticut Gas Company and Connecticut Water Company to ensure their standards were met. The design was multi-disciplined and consisted of land surveying and mapping, landscape architecture, civil site design, mechanical, electrical and plumbing engineering, geotechnical engineering, archeological services as well as natural and cultural resources management.

Coastal permitting efforts included identification of State and Federal jurisdictional limits, vegetated tidal wetland delineation and identification and avoidance of listed species. Efforts included preparation of a Structures and Dredging, Tidal Wetlands and 401 Water Quality Certification application to the CTDEEP Office of Long Island Sound Programs, Flood Management Certification, General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities as well as an application to the U.S. Army Corps of Engineers. The project entailed close coordination with CTDEEP Wildlife and Parks Divisions to properly phase and avoid impacts to listed species while minimizing impacts to Park visitors and will include a 24,000-square-foot tidal wetland mitigation area, relocation of a section of roadway out of the high tide line/coastal jurisdiction line and numerous habitat enhancements.

The project is now under construction.

LOCATION
Madison, Connecticut

SERVICES
Surveying and Mapping, Landscape Architecture, Civil Site Design, Mechanical, Electrical and Plumbing Engineering, Cultural Resources Management

BL Companies

Stamford Boardwalk

EXPERIENCE

BL Companies provided civil engineering and landscape architecture services to the City of Stamford for a new section of a public access boardwalk along Stamford Harbor. Services addressed ADA compliance, grading with spot elevations, boardwalk details, fencing and railings, utility relocation(s) and coordination, drainage design with a drainage impact statement, inspection and evaluation of existing piles and boardwalk, structural design and retaining wall design. The scope included meeting attendance, construction documents and cost estimating.

The primary goal of the project was to create a new section of boardwalk in order to connect to the existing boardwalk systems to the north and south of the project site. This project provided the missing link, created a linear pedestrian connection to Southfield Park from the north and provided associated amenities and landscaping along the boardwalk.

LOCATION: Stamford, Connecticut

SERVICES: Civil Engineering, Landscape Architecture, Transportation Engineering

PROJECT VALUE: $250,000

TIMELINE: Design 2011, Construction 2012, Completion 2013

BL Companies

Bumps River Bridge Rehabilitation

EXPERIENCE

BL Companies is providing design and construction support services for the rehabilitation of the Bumps River Bridge in the Village of Osterville, Barnstable, MA. The bridge traverses the Bumps River inlet on South Main Street in Osterville. Barnstable, MA, is a commercial and transportation center for Cape Cod and the bridge is a well-travelled thoroughfare. The Bumps River Bridge was originally constructed in 1957. After more than a half-century of usage, the bridge deck and timber pilings have begun to deteriorate and are in need of repair.

Because of significant experience and expertise in bridge rehabilitation and transportation projects for state and municipal clients throughout the Northeast, including numerous projects within coastal zones or tidally-influences areas, BL Companies was chosen to provide the design and support services required to rehabilitate the bridge.

BL Companies' team of multiple-disciplined, senior licensed professionals is currently developing a detailed evaluation of the bridge, performing a load rating analysis and conducting site inspections to identify and prioritize areas of deterioration for the development of the structure rehabilitation study. The study will summarize the findings and also provide preliminary engineering structural rehabilitation alternatives and cost projections. To strengthen the bridge's structural capacity and extend its longevity, BL Companies is utilizing reinforced fiber polymer and either epoxy or concrete to encapsulate deteriorating timber piles from the seabed to above the tidal zone; installing a new bridge expansion joint sized to better meet thermal expansion and contraction requirements; and reinforcing concrete bents as well as the bituminous concrete deck surface.

BL Companies is also providing roadway design, including the incorporation of context sensitive solutions; determining hydraulic requirements; streamlining environmental permitting; and conducting construction staging and traffic management planning methodologies as part of the overall project development.

LOCATION
Osterville, Massachusetts

SERVICES
Bridge / Structural Engineering, Environmental Sciences, Land Surveying, Transportation Engineering

BL Companies

Playground & Open Space Recreation Assessment EXPERIENCE

BL Companies provided consultant services to the Town of Wareham, working in partnership with Wareham Open Space Committee, for recreational assessments and generation of a Town-wide playground and open space evaluation and recreational recommendation report. The report assessed 24 selected sites and recommended site-specific playground and open space program improvements along with maintenance plans for those playgrounds and open spaces. The project evaluated 21 playground sites and three open space sites located within the Town of Wareham.

BL Companies utilized existing Town-provided data along with our specialized analysis expertise to create a refined and all inclusive list of elements that fit the Town's current and future recreational and open space needs for incorporation into a community-based design dynamic.

As part of BL Companies' design process, the site history and current natural opportunities were inventoried, investigated and incorporated into a community-based vision for each site. Our process identified improvements most suitable for the specific sites, while minimizing adverse environmental or historical impacts and balancing the visual, transportation and recreational uses for the enjoyment of residents and visitors alike.

Services were completed in October 2014.

LOCATION
Wareham, Massachusetts

SERVICES
Civil Engineering, Landscape Architecture

BL Companies

Silas Deane Highway Streetscape

EXPERIENCE

BL Companies provided streetscape planning, design and engineering services for a portion of the Silas Deane Highway (Route 99) in Rocky Hill, Connecticut with funding administered by the Connecticut Department of Economic and Community Development. The project runs for an approximate length of 1,500', from Dividend Street to Elm Street. This project has created a new identity and gateway into the existing town center and provided greater connectivity from the retail corridor by converting a section of roadway into a linear park leading to the Town Hall. Intersection realignments, new traffic signal, access management, traffic calming, street trees, landscaped medians, ornamental lighting, brick pavers and a variety of other aesthetic amenities were incorporated to create a pedestrian-friendly environment. Three-dimensional concepts were prepared for presentations during public outreach meetings. The design covers the first two construction phases of the multi-phase streetscape enhancement program for the Silas Deane Highway.

LOCATION: Rocky Hill, Connecticut

SERVICES: Construction Administration/Inspection, Land Surveying, Landscape Architecture, Planning, Transportation Engineering

PROJECT VALUE: $1,000,000

TIMELINE: Planning 2008, Design 2010, Construction 2012, Completion 2012

BL Companies

Northern Strand Community Trail (Bike to the Sea)
Everett, Malden, Revere, Saugus, and Lynn, MA

Nitsch Engineering

Since 1993, Bike to the Sea, Inc. had been working towards creating the approximately 10-mile long trail along the former Boston & Maine Railroad's Saugus Branch Railroad. The new trail provides non-motorized access from Everett and Malden to the beaches in Revere, Lynn, and Nahant, and includes at-grade crossings, modifications to existing railroad bridges, drainage modifications and repairs, renovations to existing parking lots, and new signage and pavement markings along the entire facility. Prior to joining Nitsch Engineering, Project Engineer, John Michalak, worked closely with Bike to the Sea to develop alternative trail alignments consisting of sections of rail trail and on-road sections in order to evaluate trail options and determine the most feasible route. John prepared Preliminary Design Plans for the entire trail using aerial survey data, which included the existing railroad layout and were used to identify trail crossings, resource areas, and potential construction issues.

In 2012, the Cities of Everett and Malden constructed recycled trail surfaces along their respective sections of the Northern Strand. John prepared preliminary and final design and bid documents for the trail construction in Malden. The design consisted of 11 at-grade trail crossings with new cement concrete ramps, signs, bollards, and pavement markings to improve safety at each roadway crossing. The design also consisted of a new alignment to avoid an existing contaminated section of the railroad corridor and improvements at three parking lots along the trail and drainage system improvements at two locations. During design and construction of the trail, close coordination with Transit Realty Associates (TRA) to determine encroachments and right-of-way issues along the MBTA owned corridor was required.

In 2013, John was the Project Manager for the City of Everett's Planning and Development Department for preparing design plans, and for providing construction administration and construction oversight for paving the section of the Northern Strand Trail in Everett. John was also the Malden Redevelopment Authority's Project Manager for preparing design plans, specifications, and bid documents, and for providing construction administration and construction oversight for paving the section of the Northern Strand Trail in Malden.

In 2015, John was the Project Manager for designing the trail extension and crossing through Linden Square in Malden to the Revere Town line. This crossing included the installation of new Rapid Rectangular Flashing Beacons (RRFB), signs, pavement markings, bollards, hot mix asphalt trail surfaces, and cement concrete sidewalks and wheelchair ramps. The design also included minor geometric changes to curbing and adjusting existing drainage structures.

Northern Strand Community Trail in Malden

Project Features
- *Developed alternative trail alignments*
- *11 at-grade trail crossings*
- *New Rapid Rectangular Flashing Beacons (RRFB), signs, pavement markings, bollards, hot mix asphalt trail surfaces, and cement concrete sidewalks and wheelchair ramps*

Client/Owner
Bike to the Sea

Completion Date
2015

Project completed by John Michalak, PE, with a prior firm.

Mystic River Reservation Trail
Somerville, MA

Nitsch Engineering

John Michalak, PE was the Project Engineer responsible for the design for the City of Somerville and the Project Manager responsible for construction administration and oversight for the Department of Conservation and Recreation for the Mystic River Reservation Trail boardwalk along Somerville's riverfront in the Assembly Square District. The project involved the construction of a new boardwalk bridge that connects Ten Hills in the Mystic River Reservation with Sylvester Baxter Riverfront Park and Assembly Square. John was responsible for the design and the preparation of contract documents, preparing environmental permitting, preparing specifications, and preparing construction cost estimates. He was also responsible for shop drawing review, responding to contractor questions during construction, attending and coordinating construction meetings, and for providing oversight during construction operations. Environmental permitting consisted of filing a Notice of Intent with the Somerville Conservation Commission, and Environmental Notification Form with the Energy and Environmental Affairs (EEA) and Massachusetts Environmental Policy Act (MEPA); coordinating with the Army Corps of Engineers, MassDEP, and the Commonwealth of Massachusetts Division of Fisheries and Wildlife.

The boardwalk meets the American with Disabilities Act (ADA) standards and is nearly 600 feet long and 12 feet wide. A 10-foot wide path constructed with hot mix asphalt pavement connects the ends of the boardwalk to Shore Drive and Assembly Square. The bridge was constructed of IPE wood decking and railings. IPE is one of the strongest natural wood products, is insect resistant, and is naturally resistant to rotting, abrasions, and weather. The project involved construction of the boardwalk on helical screw foundations to minimize impacts to the Mystic River, and the installation of new LED lighting along the boardwalk and under the Wellington Bridge (Route 28).

Working closely with the Department of Conservation and Recreation's (DCR) Project Manager, John managed the design of the installation of engraved granite bounds, new granite plaques, and a bronze bas-relief portrait of Sylvester Baxter at the trail termini. Coordination was required with the granite vendor, the Boston Public Library, and the Contractor in order to have the plaques fabricated and installed in time for the trail opening ceremony.

At the request of the City of Somerville Engineering Department, the design and construction of a raised intersection with ADA compliant crossings was incorporated into the project at the trail terminus at Shore Drive to promote traffic calming and create a more visible crossing for pedestrians and bicyclists. John managed the design of the raised intersection, which included new sidewalks, pedestrian ramps, curbing, signs, and pavement markings.

Project Features
- *Boardwalk along riverfront*
- *ADA compliant*
- *IPE wood decking bridge*
- *LED lighting*

Client/Owner
Massachusetts Department of Conservation and Recreation (DCR)

Completion Date
2014

Project completed by John Michalak, PE, with a prior firm.

Massachusetts Department of Transportation Bicycle Path
Belmont, Cambridge, and Somerville, MA

Nitsch Engineering

Nitsch Engineering led a multi-disciplined team in the design and preparation of construction documents for the Massachusetts Department of Transportation's (MassDOT's) Belmont to Somerville Bicycle Path project. The project corridor extends for 2.7 miles from Brighton Street in Belmont, along an abandoned railroad corridor to the Massachusetts Bay Transportation Authority's (MBTA) Alewife Station in Cambridge, around Russell Field and along the Linear Park to Davis Square in Somerville, and along the Somerville Community Path to Cedar Street. Most of the corridor was at one time an at-grade freight and commuter rail transportation corridor; it has now become a popular pedestrian and bicycle route even though it was developed piecemeal over time and is only a narrow dirt path west of the Alewife MBTA station. The objectives of the project are to link existing bike path segments into a cohesive corridor; improve safety by designing new connections, a new bridge, and a new traffic control signal (to cross Massachusetts Avenue in Cambridge); and extend the existing Minuteman Path from Alewife in Cambridge westward to Belmont.

Nitsch Engineering provided field survey and permitting services, as well as transportation and traffic engineering design services. We provided topographic mapping to document the existing conditions for the corridor; Nitsch Engineering's property research revealed that the path west of Alewife Station is mostly located on property owned by the MBTA and a private abutter. The project implemented a transfer of land from the MBTA to the Department of Conservation and Recreation (DCR) so the bikepath will become part of their Alewife Reservation; a permanent easement is being donated to DCR by the private abutter. Because the path crosses the MBTA's Davis Square and Alewife Stations, we worked closely with the municipalities of Cambridge and Somerville and the MBTA to develop bike path designs that are well suited to the interests of the community and that are compatible with the present and future needs of the MBTA, as well as adjacent projects. For example, the path runs through Alewife Reservation and past Yates Pond, which are sensitive wildlife habitats and wetland resources. To widen the sidewalk adjacent to Yates Pond without impacting these sensitive resources, a cantilever structural design was implemented.

Project Features
- *2.7-mile corridor*
- *New bridge, traffic control signal, and connections*
- *Linking bike paths*
- *Widened sidewalk*

Owner/Client
Massachusetts Department of Transportation

Completion Date
2012

Connect Historic Boston
Boston, MA

Nitsch Engineering

Nitsch Engineering worked with the National Park Service (NPS) and the City of Boston Public Works Department to make it easier for residents and tourists alike to walk, bike, or take the MBTA to a variety of historic (and NPS) sites in downtown Boston easy. The Connect Historic Boston project includes four separate locations for improvements; Nitsch Engineering provided land surveying, design, and permitting for the Constitution Road and Joy Street sections of the project. Funded by a $15.5 million Transportation Investment Generating Economic Recovery (or TIGER) discretionary grant and $5.3 million from the City, Nitsch Engineering designed improvements that help create safe, attractive, and easy-to-navigate pedestrian and bicycle connections between the MBTA and the City's historic sites.

On Constitution Road, Nitsch Engineering designed improvements to turn the road, which is the primary entrance into the Charlestown Navy Yard, into a multimodal street. A wider sidewalk and two-way, sidewalk-level, cycle track create a new route for local residents, visitors walking to the park, and commuters originating from North Station and downtown Boston. On Joy Street, Nitsch Engineering designed a more prominent pedestrian entrance and a curbless streetscape at Joy and Cambridge Streets, which makes the African American National Historic Site more accessible to people traveling to the site from the nearby MBTA and bicycle routes.

Project Features
- *Historic sites*
- *Pedestrian and bicycle connections*
- *Multimodal street*

Owner/Client
City of Boston Public Works Department

Completion Date
2014

EXAMPLES OF WORK PRODUCT

BL Companies

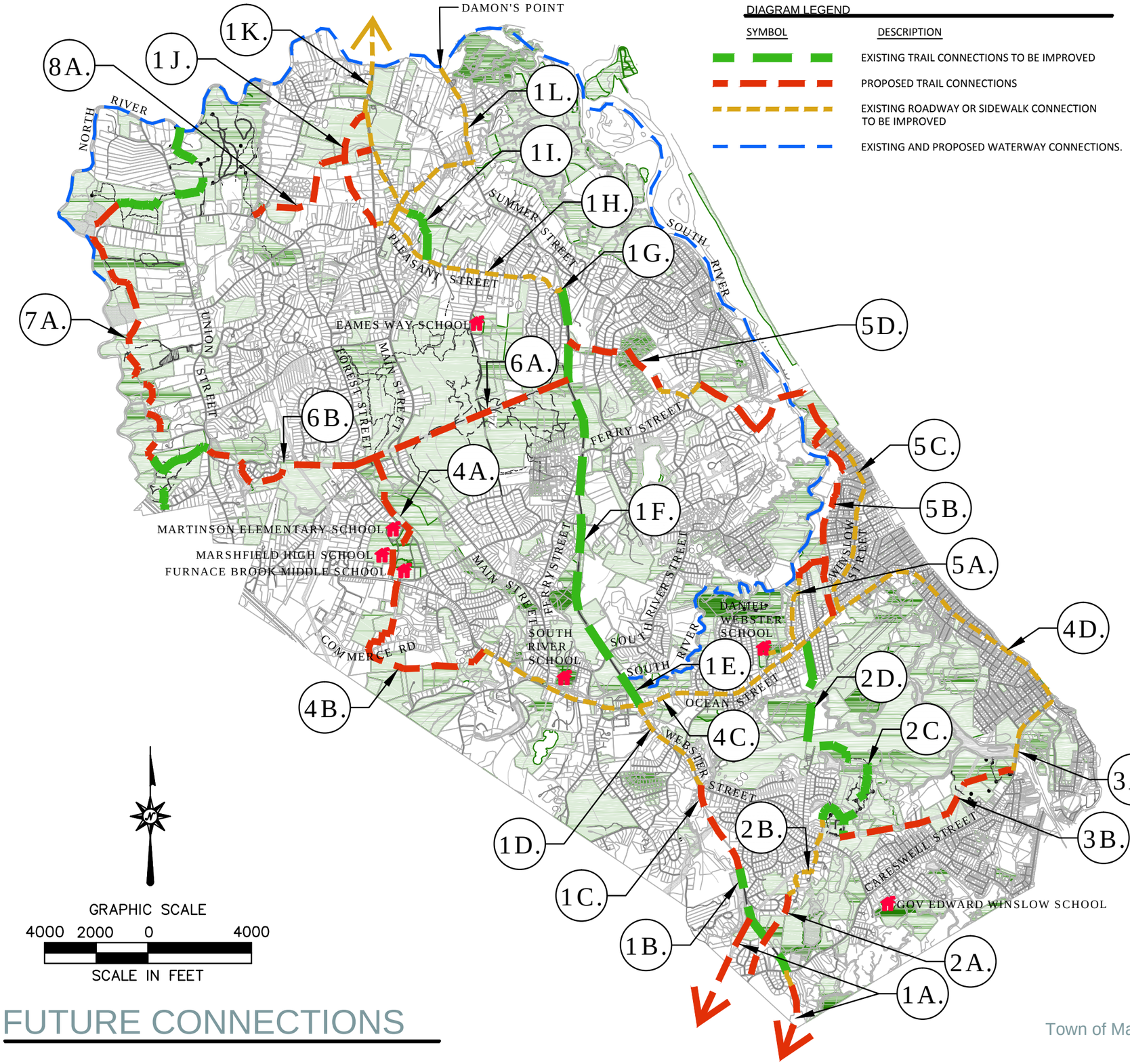


DIAGRAM LEGEND

SYMBOL	DESCRIPTION
	EXISTING TRAIL CONNECTIONS TO BE IMPROVED
	PROPOSED TRAIL CONNECTIONS
	EXISTING ROADWAY OR SIDEWALK CONNECTION TO BE IMPROVED
	EXISTING AND PROPOSED WATERWAY CONNECTIONS.

GRAPHIC SCALE

4000 2000 0 4000

SCALE IN FEET

FUTURE CONNECTIONS

DESCRIPTIONS

1A. CONNECT RAIL TRAIL INTO DUXBURY VIA ONE OF TWO OPTIONS.
1B. UPGRADE RAIL TRAIL TO ACCOMMODATE ADDITIONAL USERS.
1C. CONNECT RAIL TRAIL TO WEBSTER STREET VIA UTILITY CORRIDOR.
1D. IMPROVE EXISTING WEBSTER STREET SIDEWALK TO ACCOMMODATE ADDITIONAL USERS.
1E. IMPROVE RAIL TRAIL TO SOUTH RIVER STREET.
1F. IMPROVE BRIDLE TRAIL NORTH OF SOUTH RIVER STREET, THROUGH CAROLINA HILLS TO OAKLEAF DRIVE.
1G. CONNECT EXISTING TRAIL TO PLEASANT STREET VIA MONICA WAY.
1H. IMPROVE AND CONSTRUCT SIDEWALK AT PLEASANT STREET TO ACCOMMODATE ADDITIONAL USERS.
1I. ROUTE OPTION 1: CONNECT TO MAIN STREET VIA HAGAR FOREST AND OLD MAIN STREET.
1J. ROUTE OPTION 2: CROSS MAIN STREET AND RECONNECT TO MAIN STREET THROUGH SPRING SAINT LAND.
1K. PROVIDE SHOULDER CONNECTION ACROSS ROUTE 3A BRIDGE INTO SCITUATE.
1L. PROVIDE STREET SIGNAGE GUIDING PEDESTRIANS AND VEHICLES ALONG PROSPECT STREET, SUMMER STREET, AND DAMON'S POINT ROAD TO DAMON'S POINT SCENIC OVERLOOK.

2A. BEGIN PILGRIM TRAIL AT CARESWELL STREET AND CONNECT TO AUNT LIZZI LANE.
2B. IMPROVE EXISTING SIDEWALKS ALONG AUNT LIZZ AND PILGRIM WAY TO ACCOMMODATE ADDITIONAL USERS.
2C. ROUTE TRAIL THROUGH WEBSTER'S WILDERNESS AND CONNECT INTO DANIEL WEBSTER WILDLIFE SANCTUARY VIA BOARDWALK AND BRIDGE
2D. CONNECT TRAIL ALONGSIDE MARSHFIELD AIRPORT TO OCEAN STREET.

3A. IMPROVE EXISTING DYKE STREET SIDEWALK AND CONNECT FROM PETER IGO PARK TO ESTES WOODS.
3B. CONNECT TO WHEELER ATHLETIC FIELDS AT SENIOR CENTER VIA UTILITY CORRIDOR.

4A. CONNECT SCHOOLS AT FOREST STREET AND FURNACE STREET ALONG ROAD AND UTILITY EASEMENTS TO CONSERVATION LANDS SOUTH OF COMMERCE ROAD.
4B. CONNECT SPRAGUE, DRAKE, VEADER, AND ELLIS LANDS TO OCEAN STREET VIA HIKING TRAIL.
4C. IMPROVE EXISTING PEDESTRIAN CONNECTIONS ALONG NORTHSIDE OF OCEAN STREET TO WINSLOW STREET.
4D. CONTINUE PEDESTRIAN IMPROVEMENTS ALONG OCEAN STREET TO CONNECTION WITH DYKE STREET.

5A. ROUTE OPTION 1: CONNECT DANIEL WEBSTER SCHOOL TO BEACH ACCESS VIA JOHN STREET, LIBERTY STREET AND BOURNE PARK AVENUE. FOLLOW TIDAL MARSH TO PEDESTRIAN WAY ALONG LOCAL STREETS.
5B. ROUTE OPTION 2: CONNECT OCEAN STREET TO REXHAME BEACH VIA MULTI-USE TRAIL FOLLOWING SOUTH RIVER TIDAL MARSH.
5C. ROUTE OPTION 3: CONNECT OCEAN STREET TO REXHAME BEACH VIA IMPROVED VEHICLE AND PEDESTRIAN FACILITITIES ALONG WINSLOW STREET.
5D. CONTINUE TRAIL CONNECTION NORTH ALONG REXHAME OVER SOUTH RIVER VIA NEW PEDESTRIAN BRIDGE, NORTH PAST COAST GUARD HILL, ALONG LOCAL ROADS AND PUBLIC LANDS TO BRIDLE TRAIL.

6A. IMPROVE CAROLINA HILL UTILITY CORRIDOR TRAIL TO ACCOMMODATE ADDITIONAL USERS.
6B. CONNECT CAROLINA HILLS TRAILS TO UNION STREET TRAILS VIA FURNACE BROOK, EDGEWOOD, AND OAKMAN PUBLIC LANDS.

7A. CONNECT UNION STREET CONSERVATION LANDS VIA EXISTING AND PROPOSED TRAILS ALONG NORTH RIVER SHORE. IMPROVE EXISTING TRAILS TO PROVIDE BETTER CONNECTIONS TO NORTH RIVER BOAT LAUNCH LOCATIONS.

8A. CONNECT PHILLIPS FARM PRESERVE TRAILS WITH ROUTE 3A VIA SPRING SAINT LAND.

Town of Marshfield, Massachusetts

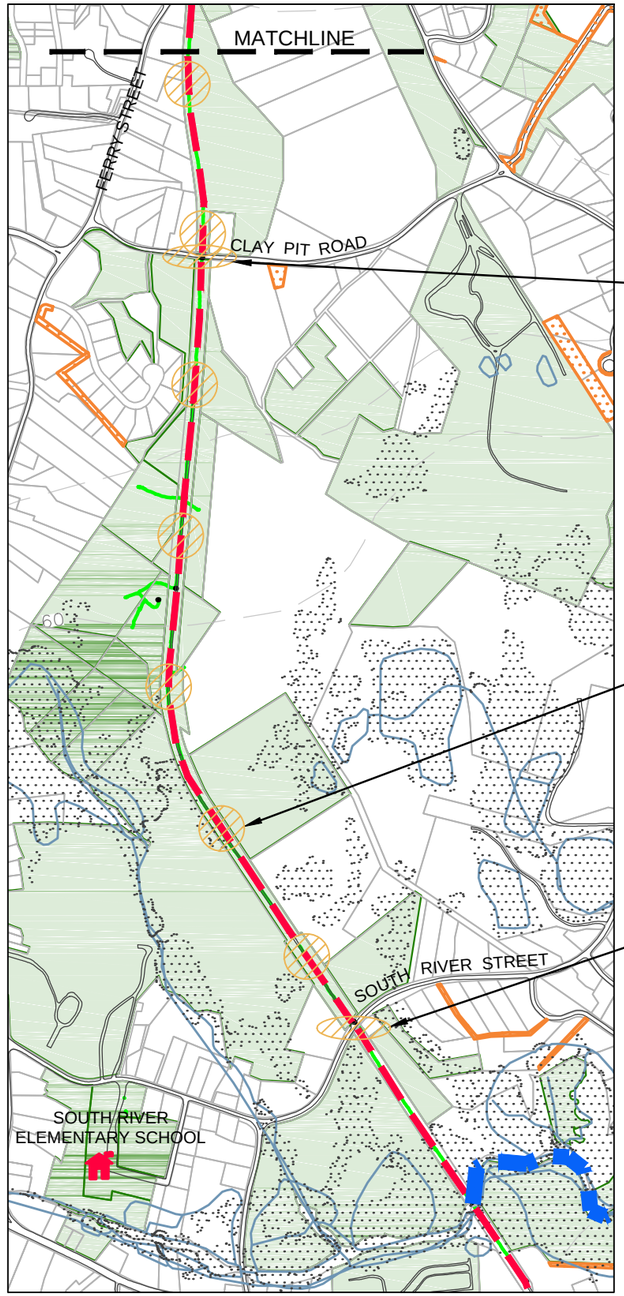
MARSHFIELD, MASS. 1640 — HOME OF DANIEL WEBSTER — GREEN HARBOUR · REXHAME

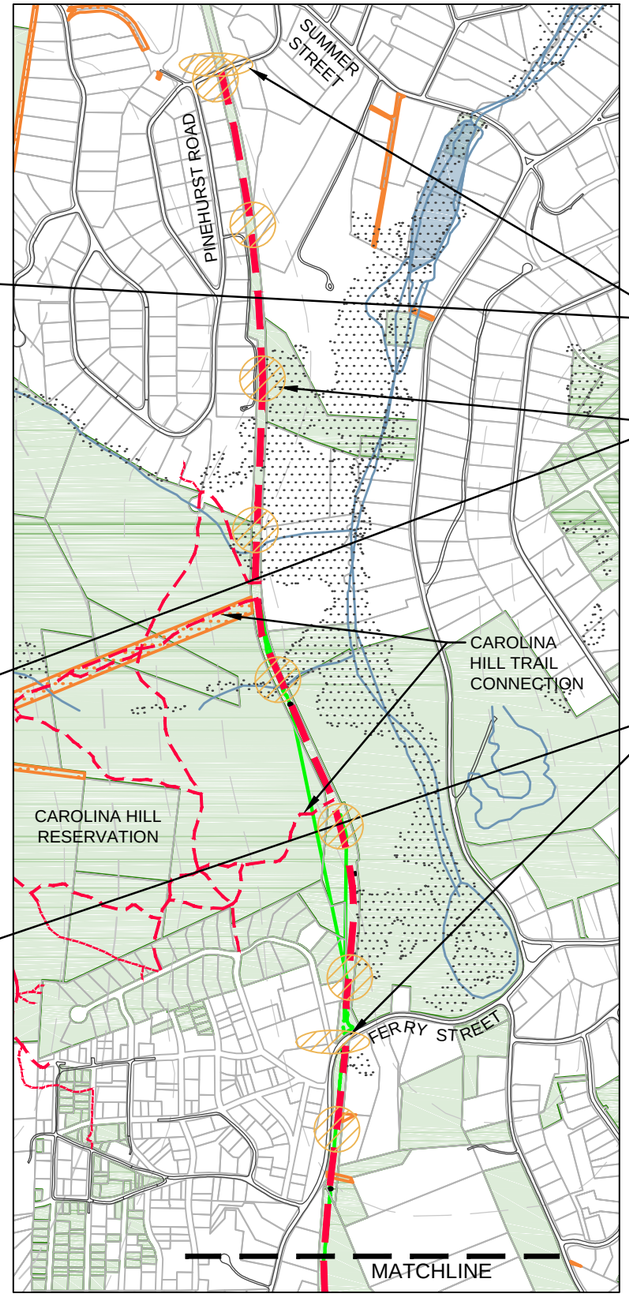
BL Companies
Architecture
Engineering
Environmental
Land Surveying

MARSHFIELD RECREATIONAL TRAILS

BRIDLE TRAIL

NORTH OF SOUTH RIVER ROAD





IMPROVE INTERSECTION SIGNAGE AND MARKINGS

ADD SEATING AT 1000' INTERVALS (TYP.)

CAROLINA HILL TRAIL CONNECTION

IMPROVE INTERSECTION SIGNAGE AND MARKINGS

RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

SECONDARY RECOMMENDATIONS

- REFER TO RECOMMENDATIONS SECTION OF REPORT FOR TRAIL IMPROVEMENT OPTIONS A, B, AND C

GRAPHIC SCALE

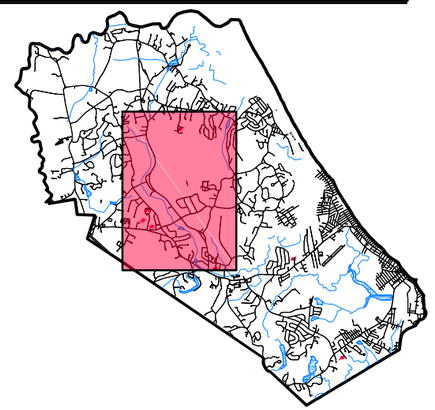
1000 500 0 1000

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED TRAIL CLASS 3
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)

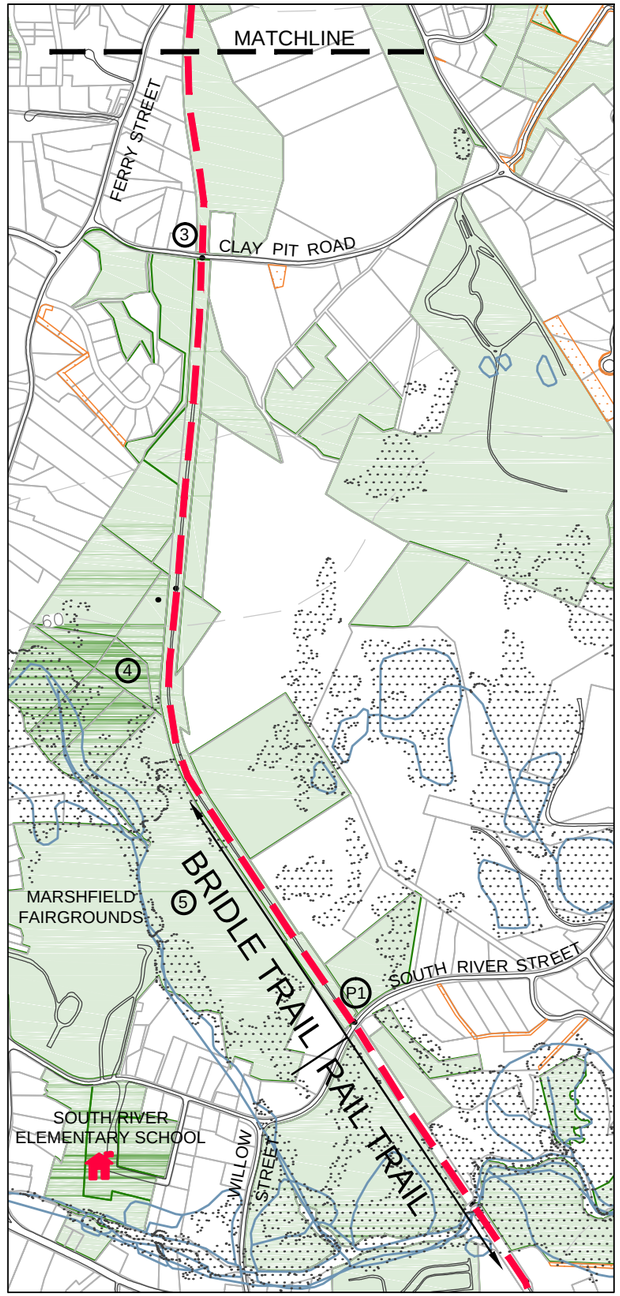


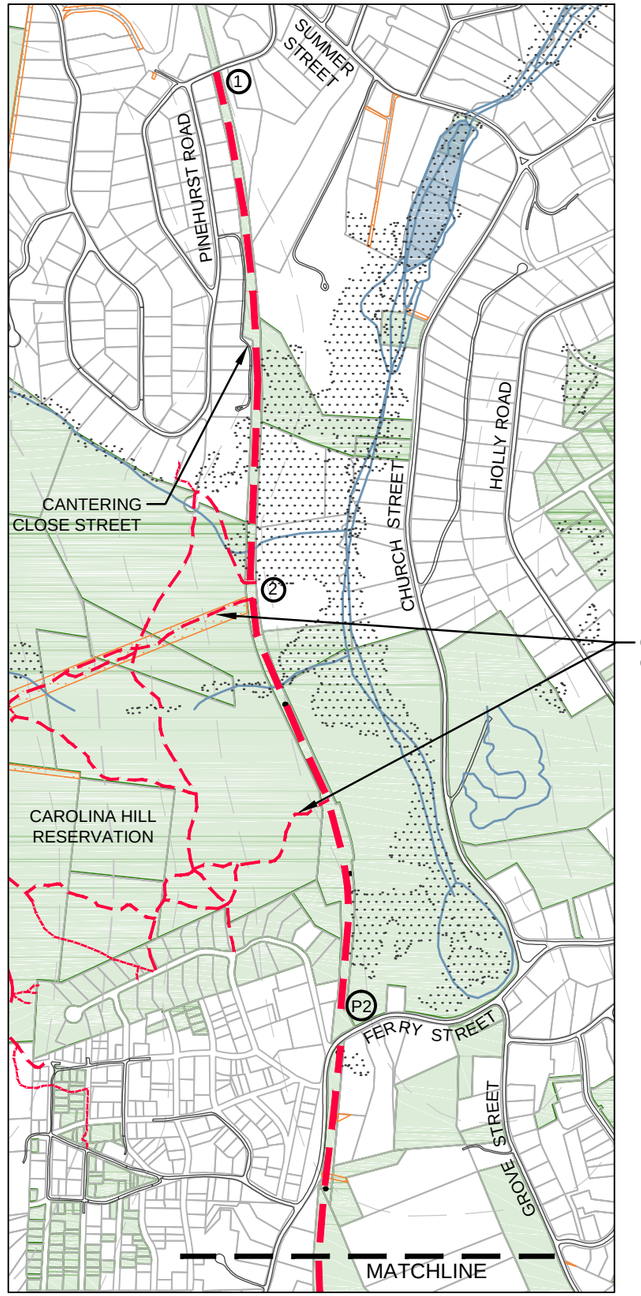
MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

BRIDLE TRAIL

NORTH OF SOUTH RIVER STREET





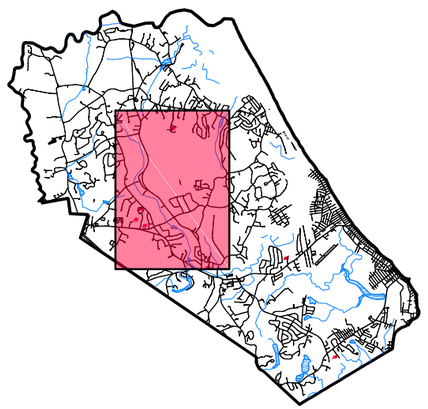
MAP KEY

1. TRAIL TERMINUS AT PINEHURST ROAD, NO PARKING.
2. PRIMARY CONNECTION INTO CAROLINA HILLS TRAIL SYSTEM.
3. TRAIL INTERSECTION AT CLAY PI T ROAD, NO PARKING.
4. SUBSTATION, ACCESS PROHIBITED.
5. MARSHFIELD FAIRGROUNDS, ACCESS PROHIBITED.
- P1 TRAIL TERMINUS AT SOUTH RIVER STREET. PARKING AVAILABLE NEXT TO SUBSTATION. DO NOT BLOCK SUBSTATION ACCESS.
- P2 PARKING FOR 15 VEHICLES AT FERRY STREET. DO NOT BLOCK TRAIL.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# # TRAIL PARKING AND TRAIL MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

1000 500 0 1000

SCALE IN FEET

MAP UPDATED: MAY, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

BRIDLE TRAIL

NORTH OF SOUTH RIVER ROAD

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

NOTE: Exclusion of an activity from these lists does not imply its prohibition. Activities not on the prohibited list and not permitted under Massachusetts or Federal law are also prohibited. Refer to Town of Marshfield Conservation Commission list of Rules and Regulation for up to date information.

DESCRIPTION

LAND DESCRIPTION:
THE BRIDLE TRAIL BEGINS AT SOUTH RIVER STREET AND EXTENDS NORTH TO ITS INTERSECTION WITH PINEHURST ROAD, A DISTANCE OF ROUGHLY 2¾ MILES. TRAIL ACCESS CAN BE FOUND AT FERRY STREET, CLAY PIT ROAD, AND INTERSECTIONS AT PINEHURST ROAD AND SOUTH RIVER STREET. MOST OF ITS LENGTH FOLLOWS AN OLD RAIL BED, IS LEVEL, AND WELL-GRADED. A WIDE RANGE OF USES CAN BE ACCOMMODATED ALONG THIS LENGTH, PERHAPS MOST NOTABLY BEING EQUESTRIAN USE. THE TRAIL WIDTH VARIES FROM 8' TO GREATER THAN 25' IN OTHER LOCATIONS. THE SURFACE IS A MIX OF COMPACTED EARTH, GRAVEL, AND INTERMITTENT PAVED SURFACE.

PARKING:
PARKING IS AVAILABLE AT THE TRAIL ENTRANCE ON SOUTH RIVER STREET NEXT TO THE SUBSTATION, DO NOT BLOCK THE SUBSTATION ACCESS. PARKING IS ALSO AVAILABLE FOR ROUGHLY 15 VEHICLES AT THE FERRY STREET ENTRANCE.

MARKINGS AND WAYFINDING:
THERE IS SOME WAYFINDING SIGNAGE ALONG THE TRAIL, THOUGH SIGNAGE IS GENERALLY LIMITED. TRAIL USERS MUST USE CAUTION AT INTERSECTIONS AND YIELD TO ONCOMING VEHICLES.

DIFFICULTY AND TRAIL LENGTH:
THE ENTIRE TRAIL IS VERY EASY TO NAVIGATE WITH A MIX OF ASPHALT AND GRAVEL SURFACE. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- ENTIRE LENGTH FROM SOUTH RIVER STREET TO PINEHURST ROAD = 2.75 MILES OR APPROXIMATELY 90 MINUTES.
- SOUTH RIVER STREET TO CLAY PIT ROAD = 1.2 MILES OR APPROXIMATELY 40 MINUTES.
- CLAY PIT ROAD TO FERRY STREET = .6 MILES OR APPROXIMATELY 20 MINUTES.
- FERRY STREET TO PINEHURST ROAD = 1.2 MILES OR APPROXIMATELY 80 MINUTES.

NORTHERN END OF BRIDLE TRAIL AT PINEHURST ROAD.

VIEW SOUTH AT CLAY PIT ROAD INTERSECTION.

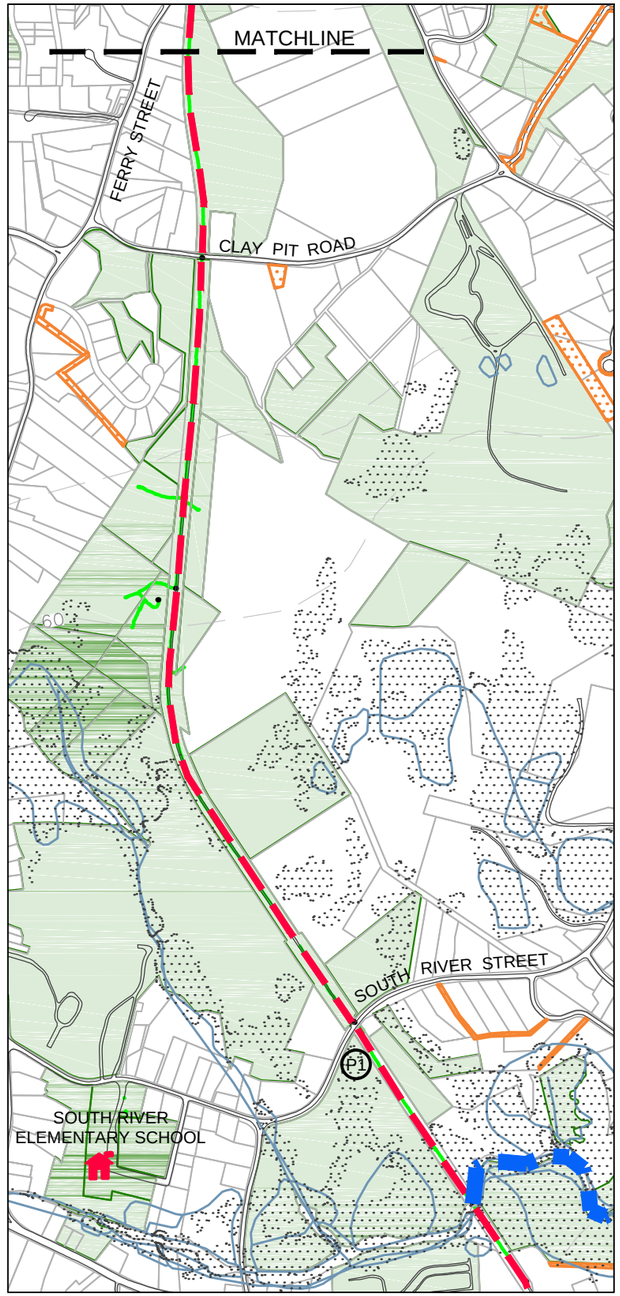

TRAIL SECTION WITH ASPHALT PAVEMENT.

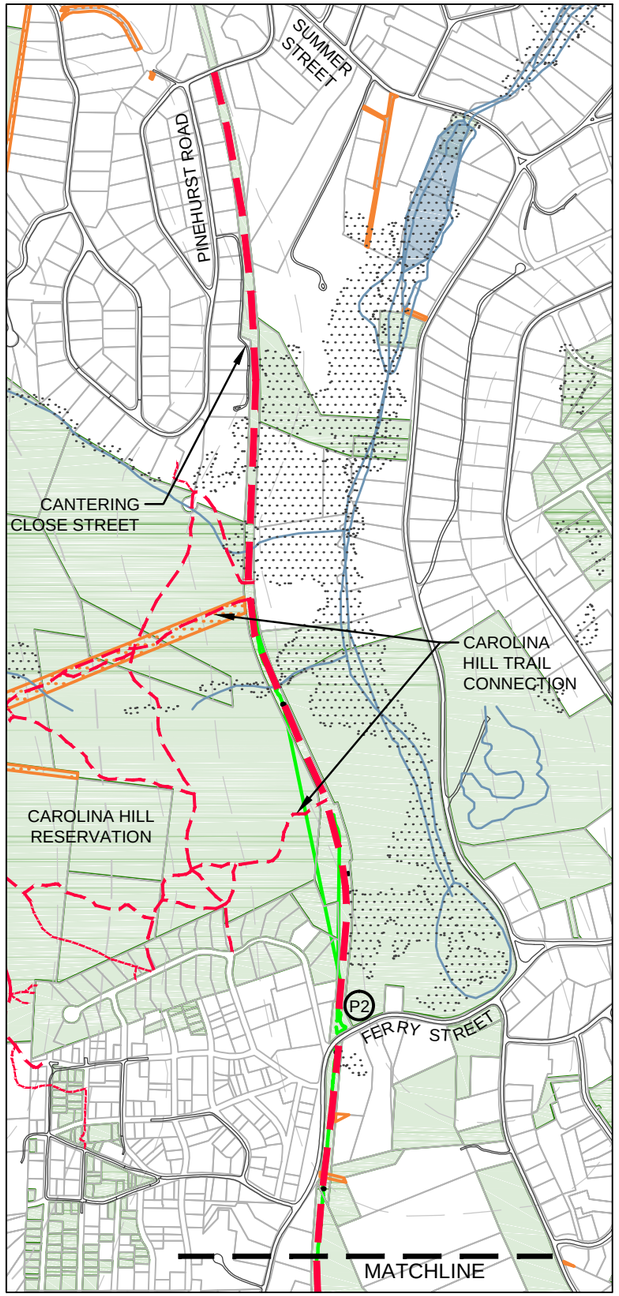

TRAIL SECTION WITH GRAVEL PAVEMENT.

MARSHFIELD RECREATIONAL TRAILS

BRIDLE TRAIL

NORTH OF SOUTH RIVER ROAD



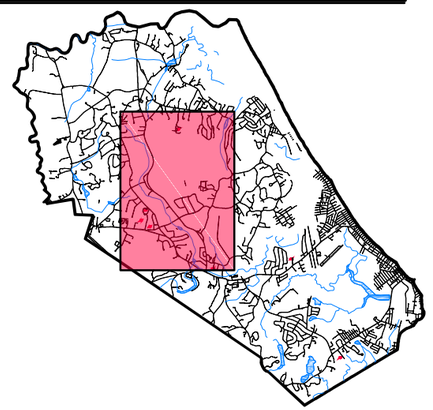


RECOMMENDATIONS

LEGEND

- TRAIL CLASS I
  NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II
  MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III
  BROAD WIDTH, EASY GRADE, WELL-MARKED TRAIL CLASS 3
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

1000 500 0 1000

SCALE IN FEET

BOUNDARY LINES, WETLAND/WATERBODY LIMITS, AND OTHER INFORMATION PROVIDED ON THESE MAPS ARE APPROXIMATE AND SUBJECT TO CHANGE. WHILE EVERY EFFORT HAS BEEN MADE TO ACCURATELY INVENTORY THE TRAIL SYSTEM AND EXISTING CONDITIONS, ACTUAL CONDITIONS MAY VARY FROM THOSE PRESENTED ON THIS MAP. THE TOWN OF MARSHFIELD AND THE CONTRIBUTORS TO THE CREATION OF THIS MAP TAKE NO RESPONSIBILITY FOR ANY LOSS, DAMAGE, OR INJURY ARISING FROM ANY INACCURACIES IN THIS MAP.

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

CAROLINA HILL

AT MAIN STREET, EAMES WAY AND BRIDLE TRAIL

MAP KEY

1. NORTH TRAILS: TRAILS ARE WINDING, NARROW, RUGGED, AND STEEP. LIMITED MAINTENANCE PERFORMED AND USERS SHALL PROCEED WITH CAUTION.
2. UTILITY CORRIDOR. TRAILS ARE WIDE BUT SURFACE IS ROUGH.
3. SOUTH TRAILS: TRAILS ARE BROAD WITH MODERATE GRADE AND REASONABLE FOOTING.
4. CAROLINA HILL HIGH POINT: FIRE BURNING PROHIBITED
5. WATER TOWER: ACCESS PROHIBITED.

P1. PARKING AT FERRY STREET. NO SPACE MARKINGS. SPACE FOR ABOUT 15 VEHICLES.

P2. CULDESAC APPROXIMATELY 800 FEET SOUTH OF EAMES WAY SCHOOL. PARALLEL PARKING PERMISSABLE ALONG OUTSIDE SHOULDER OF CULDESAC. NO SPACE MARKINGS. SPACE FOR ABOUT 10 VEHICLES.

P3. PARKING AREA AT WOODED LOT 0.66 MILES NORTH OF FURNACE STREET INTERSECTION. NO SPACES MARKINGS. SPACE FOR ABOUT 8 VEHICLES.

P4. PARKING AT SAINT CHRISTINE'S PARISH. TRAIL ACROSS STREET FROM SOUTH END OF PARKING AREA. PARKING PROHIBITED DURING CHURCH SERVICES.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
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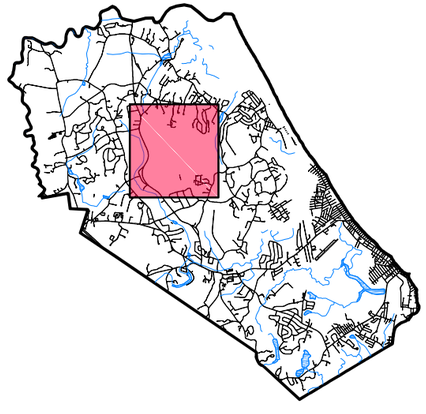
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# TRAIL PARKING

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

1000 500 0 1000

SCALE IN FEET

MAP UPDATED: MAY, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

CAROLINA HILL

AT MAIN STREET, EAMES WAY AND BRIDLE TRAIL

PREPARED BY BL COMPANIES, INC.

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:
THIS CONTIGUOUS 775 ACRE RESERVATION IS CURRENTLY INTERCONNECTED BY A TRAIL NETWORK OF VARIABLE DIFFICULTY. ALSO REFERRED TO AS HARRINGTON'S WILDERNESS, CAROLINA HILL IS THE ONLY TOWN HILLTOP OPEN TO THE GENERAL PUBLIC AND OFFERS THE UNIQUE OPPORTUNITY FOR THE PUBLIC TO GAIN ACCESS TO BOTH UPLAND AND WATER VIEWS. THE OVERHEAD UTILITY LINES RUNNING EAST-WEST AND THE GRAVEL ROAD EAMES WAY RUNNING NORTH-SOUTH PROVIDE A FRAMEWORK FROM WHICH A MORE RUGGED AND ADVENTUROUS COLLECTION OF TRAILS BRANCH. WITH THE HEAVILY USED BRIDLE TRAIL AT THE EAST EDGE AND THE EAMES WAY SCHOOL TO THE NORTH, A CONSISTENT FLOW OF USERS VISIT THE RESERVATION DAILY.

PARKING:
THERE ARE SEVERAL PARKING LOCATIONS SURROUNDING THE RESERVE AND PROVISIONS FOR INFORMATIVE SIGNAGE HAVE BEEN PROVIDED AT EACH LOCATION, THOUGH AT SOME THE INFORMATION AND FALLEN INTO DISREPAIR OR HAS BEEN REMOVED.

MARKINGS AND WAYFINDING:
MANY BUT NOT ALL OF THE TRAILS ARE INTERMITTENTLY MARKED WITH YELLOW AND WHITE TREE BLAZING. OTHER TRAILS ARE EITHER SO WIDE AND OPEN THAT TRAIL MARKING SERVES NO FUNCTION, OR OVERGROWN AND RUGGED TO THE POINT OF NEAR LOSS. THE ABSENCE OF CONSISTENT MARKINGS MAKES WAYFINDING DURING SNOWY MONTHS DIFFICULT OR IMPOSSIBLE ON SOME OF THE SMALLER ROUTES.

DIFFICULTY AND TRAIL LENGTH:
THERE IS A WIDE RANGE OF DIFFICULTY LEVELS AND USERS ARE STRONGLY ENCOURAGED TO REVIEW THE RATINGS DESCRIPTIONS PROVIDED ON THE MAP BEFORE PLOTTING A ROUTE. THERE IS CONSIDERABLE TOPOGRAPHY WITHIN THE RESERVATION WITH ROUGHLY 160 FEET TO ELEVATION GAIN FROM ROUTE 3A TO THE CAROLINA HILL CREST. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- NORTH TO SOUTH VIA EAMES WAY = 1.3 MILES OR APPROXIMATELY 30 MINUTES.
- WEST TO EAST VIA UTILITY COORIDOR = 1.4 MILES OR APPROXIMATELY 50 MINUTES.
- ADVENTUROUS/CIRCUITUOUS ACROSS RESERVATION VIA MORE DIFFICULT TRAILS = 2.5 MILES OR APPROXIMATELY 90 MINUTES.

TYPICAL CONSERVATION SIGNAGE.


TYPICAL VIEW ALONG UTILITY RIGHT OF WAY.

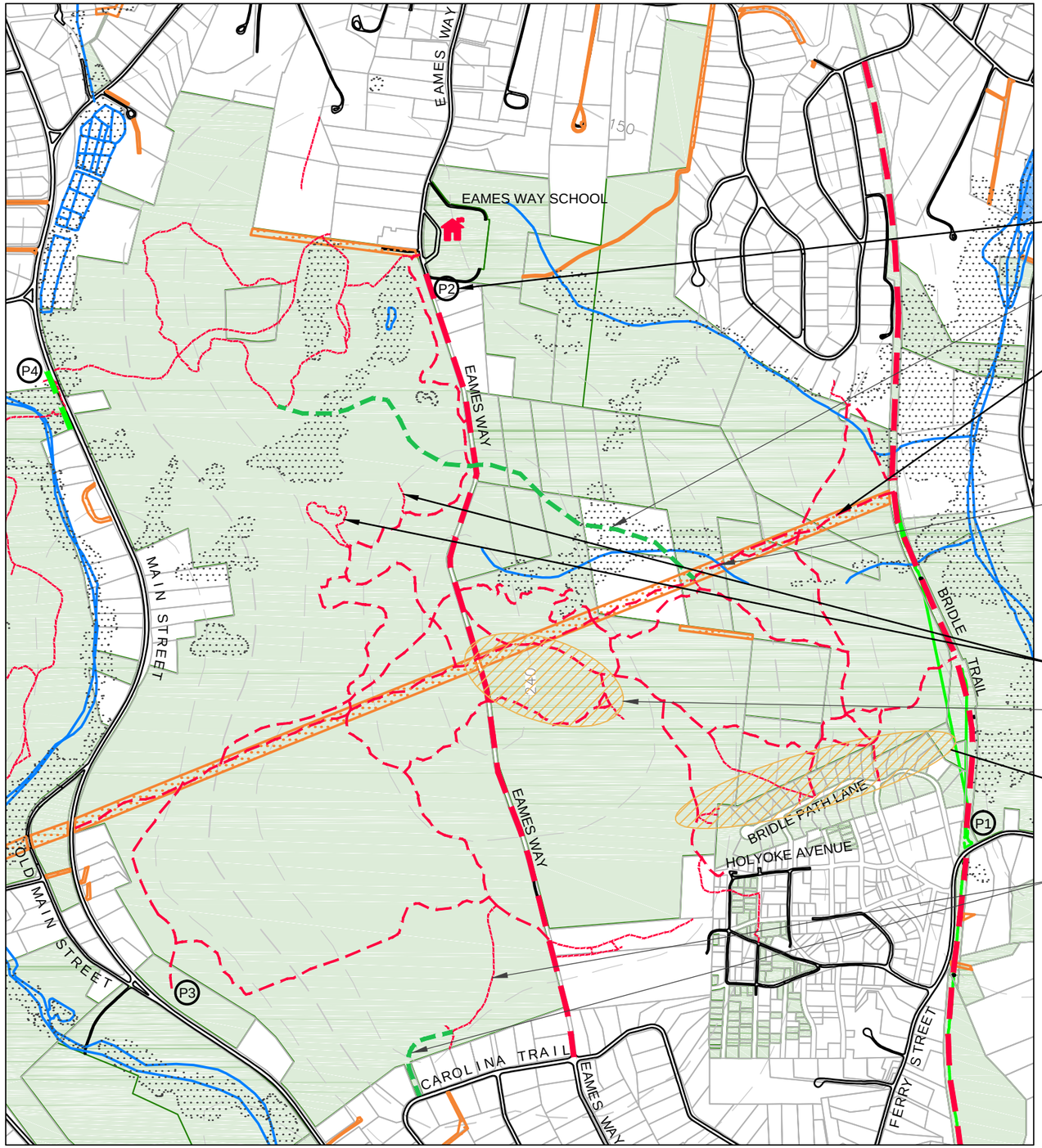

TYPICAL TRAIL AT NORTH SIDE OF RESERVATION, NARROW AND RUGGED.


TYPICAL TRAIL AT SOUTH SIDE OF RESERVATION, BROAD AND CLEAR.

MARSHFIELD RECREATIONAL TRAILS

CAROLINA HILL

AT MAIN STREET, EAMES WAY AND BRIDLE TRAIL



RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

PROVIDE SIGNAGE AND DEDICATED TRAIL PARKING ZONE AT EAMES WAY SCHOOL

DEVELOP NEW TRAIL TO STRENGTHEN CONNECTIONS BETWEEN NORTH AND SOUTH TRAIL SYSTEMS

PROVIDE PATH WITH CONSISTENT SURFACE ALONG ENTIRE UTILITY CORRIDOR.

REROUTE PATH TO CREATE ADA ACCESSIBLE SERPENTINE ROUTE TO THE TOP OF CAROLINA HILL.

PROVIDE PEDESTRIAN BRIDGE AT WATERCOURSE

ELIMINATE THESE CLASS I TRAILS, RETURN TO NATURAL STATE

DEVELOP LOOKOUT STRUCTURE AND PROVIDE ADA ACCESIBLE PATH AND PARKING LOT AT EAMES WAY.

EVALUATE CONNECTIONS ANNUALLY AND RELOCATE OR ELIMINATE AS RESIDENTIAL PARCELS ARE DEVELOPED.

RELOCATE ACCESS POINT AND IMPROVE THIS TRAIL SEGMENT TO CLASS II.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
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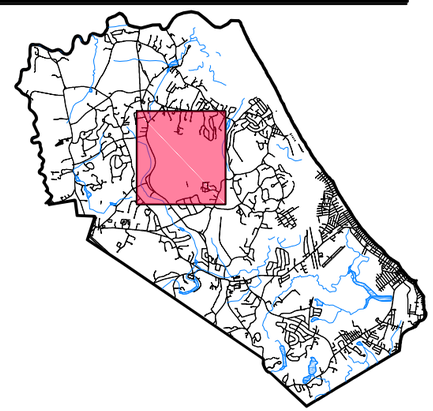
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)

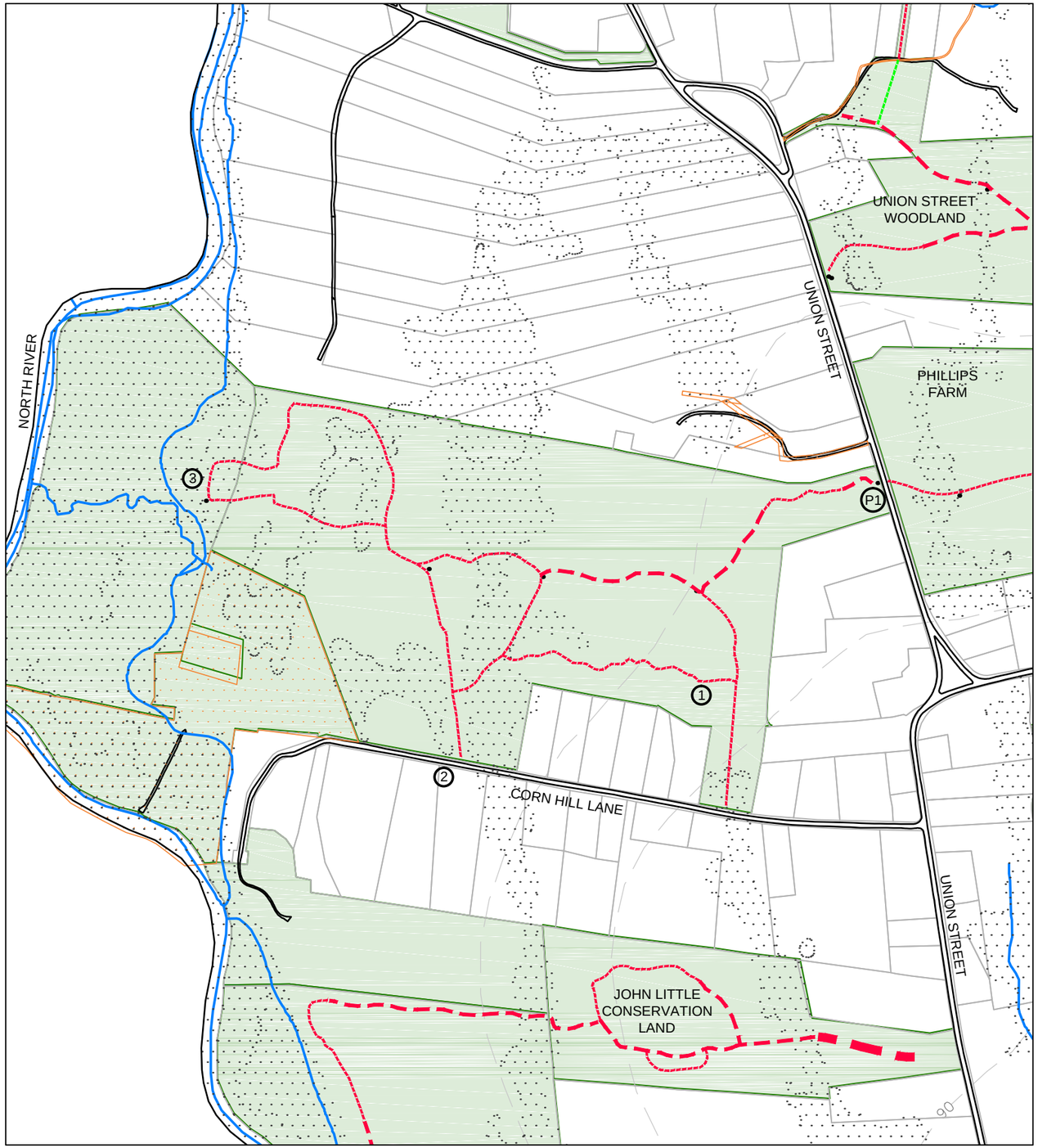


MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

CORN HILL WOODLANDS

AT UNION STREET AND CORN HILL LANE



MAP KEY

1. SPUR PATH LEADING TO PRIVATE PROPERTY WITH HORSE PADDOCK. ACCESS NOT PERMITTED.
2. TRAIL ACCESS FROM CORN HILL LANE. DESCRIPTIVE SIGNAGE PROVIDED. NO PARKING AVAILABLE.
3. TRAIL ACCESS TO NORTH RIVER TIDAL GRASSLAND.

P1 SOUTHERN PARKING OFF UNION STREET. GRAVEL LOT, INFORMATION KIOSK, NO SPACE MARKINGS, WITH ROOM FOR 12 VEHICLES.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
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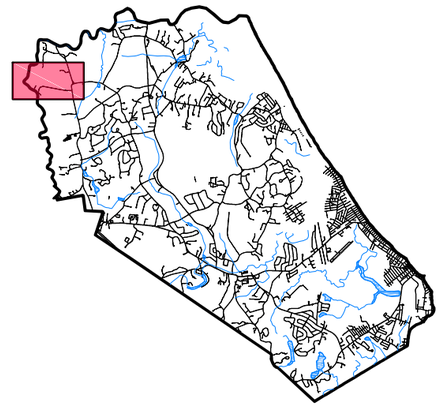
- OPEN SPACE
- SCHOOL FACILITY
- P# # TRAIL PARKING AND KEY MAP MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

600 300 0 600

SCALE IN FEET

MAP UPDATED: MAY, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

CORN HILL

AT UNION STREET AND CORN HILL LANE

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:

LOCATED ON AN APPROXIMATELY 123 ACRE PARCEL LOCATED AT THE NORTHEASTERN CORNER OF TOWN, THE CORN HILL WOODLAND FEATURES A RUSTIC TRAIL SYSTEM THREADING THROUGH A MATURE FOREST CRISSCROSSED BY GENERATIONS OF STONE WALLS. THE STONE WALLS AT THIS SITE AND MANY OTHERS REFERENCE AN AGRICULTURAL PAST HUNDREDS OF YEARS OLD. RECENT IMPROVEMENTS HAVE BEEN MADE TO UPGRADE BOARDWALKS, KIOSKS, AND PARKING AREAS FOLLOWING THE PARTICULARLY BRUTAL IMPACT OF HURRICANE IRENE.

THIS IS A PARTICULARLY QUIET TRAIL PARCEL, MOSTLY DUE TO ITS REMOTENESS AND PARTIALLY BECAUSE IT'S NOT WELL-MARKED FROM THE STREET. THE ENTIRE LOOP CAN BE HIKED IN ABOUT ONE HOUR, AND THERE ARE OPPORTUNITIES TO ENTER FROM BOTH UNION STREET AND CORN HILL LANE.

PARKING:

THERE IS ONE SMALL PARKING AREA OFF UNION STREET THAT IS SHARED BY THE TRAILS ACROSS THE STREET AT THE UNION STREET WOODLAND/PHILLIPS FARM PRESERVE. TWO TRAIL ENTRANCES WITH UNOFFICIAL SHOULDER PARKING OCCUR ALONG CORN HILL ROAD. SIGNAGE IS PRESENT BUT HARD TO LOCATE AT ALL OF THESE ENTRANCES.

MARKINGS AND WAYFINDING:

METAL TRAIL MARKERS CAN BE FOUND AT SOME, BUT NOT ALL TRAILS.

DIFFICULTY AND TRAIL LENGTH:

THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- TRIP STARTING AT UNION STREET PARKING AND ENDING AT WEST CORN HILL LANE ACCESS = .6 MILES OR ABOUT 20 MINUTES.
- LOOP ROUTE STARTING AT UNION STREET PARKING = 2.0 MILES OR ABOUT 60 MINUTES.

BOARDWALK SECTION OF TRAIL NETWORK.

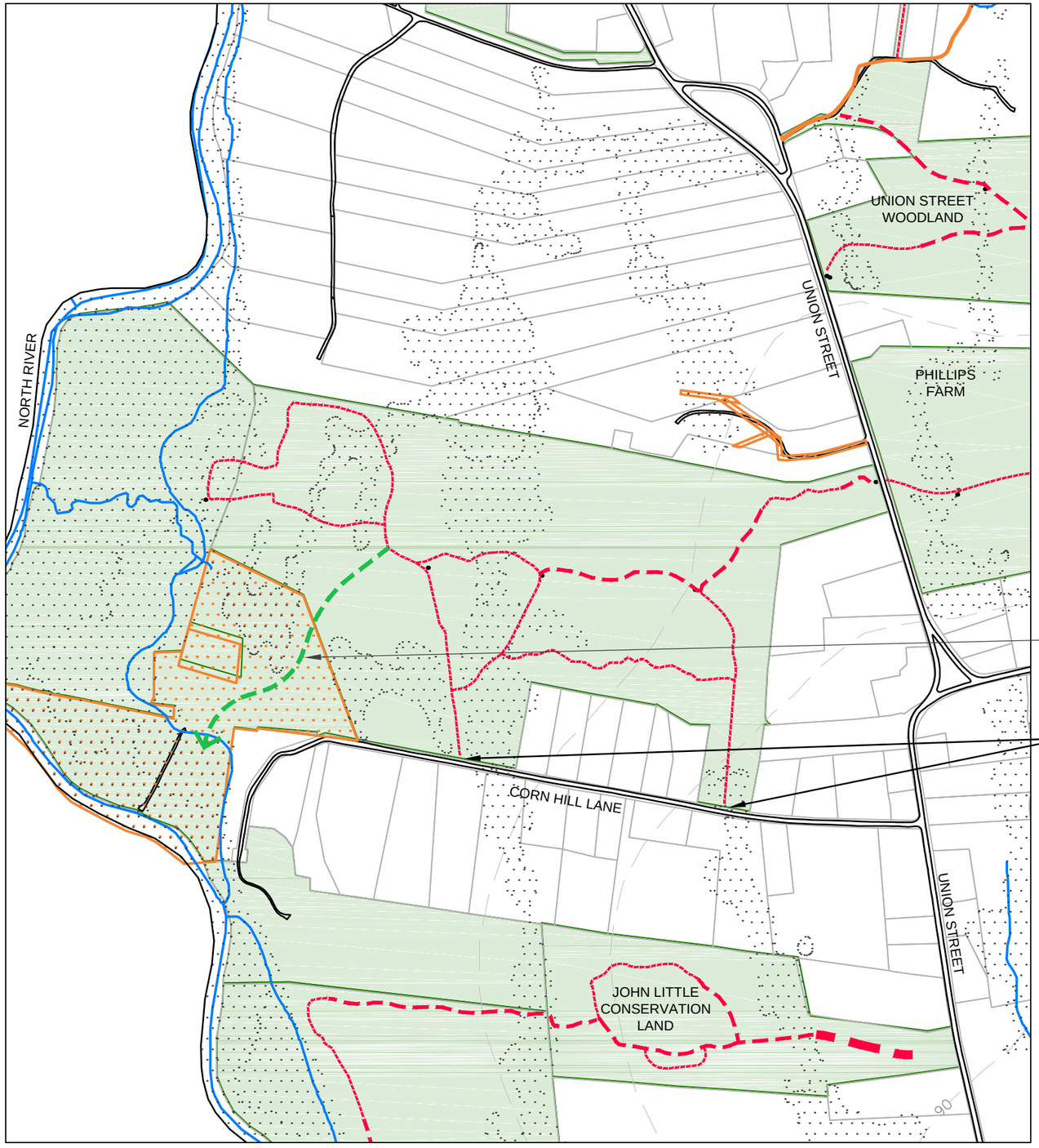
TRAIL MARKER AT UNION STREET

KIOSK AT UNION STREET PARKING

MARSHFIELD RECREATIONAL TRAILS

CORN HILL WOODLANDS

AT UNION STREET AND CORN HILL LANE



RECOMMENDATIONS

GENERAL

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2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

3. RESTORE EXISTING BOARDWALK STRUCTURES NOT YET REPAIRED.

GRAPHIC SCALE

600 300 0 600

SCALE IN FEET

LEGEND

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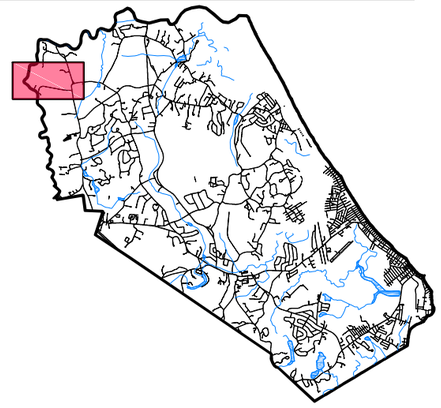
LOCATION PLAN (TOWN OF MARSHFIELD)

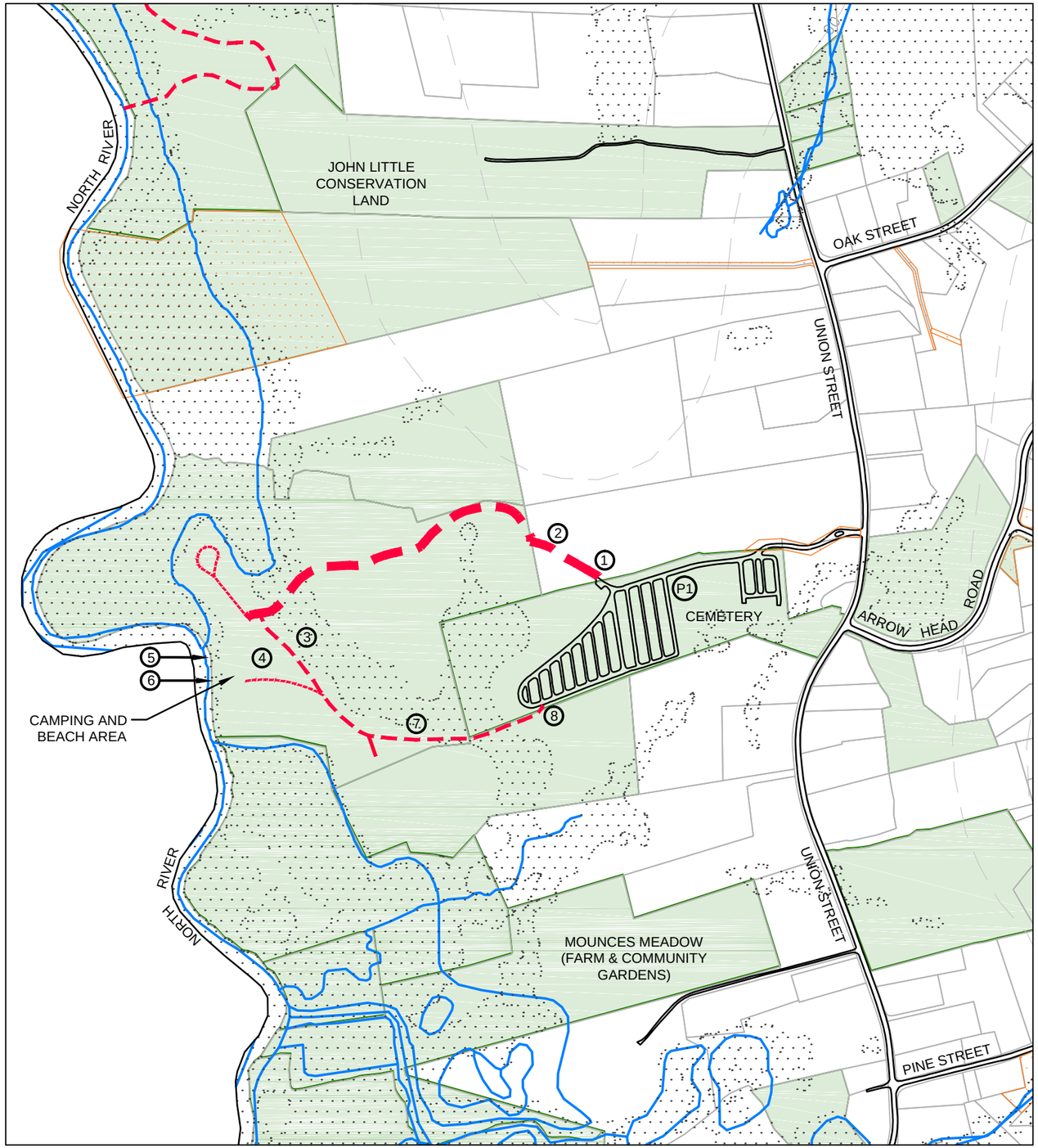


MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

COUCH BEACH

AT UNION STREET AND ARROW HEAD ROAD



MAP KEY

1. VEHICLE AND CEMETERY SERVICE ACCESS.
2. VEHICLE ACCESS TO BEACH/CAMPING AREA. AUTHORIZED VEHICLES ONLY.
3. VERNAL POOL - SENSITIVE AREA.
4. CAMPING AREA - CAMPING PERMITTED BY PERMISSION OF FIRE MARSHALL'S OFFICE ONLY.
5. NORTH BEACH WATER ACCESS.
6. SOUTH BEACH WATER ACCESS.
7. FOOT PATH TO COUCH BEACH, RUGGED IN PLACES.
8. ENTRANCE TO COUCH BEACH FOOT PATH - POORLY MARKED

P1 COUCH CEMETERY. PARKING AVAILABLE ALONG PAVED PATHWAYS.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
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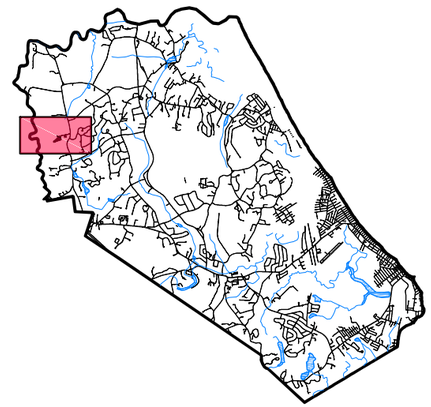
- P# # TRAIL PARKING AND TRAIL MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



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GRAPHIC SCALE

600 300 0 600

SCALE IN FEET

MAP UPDATED: MAY, 2016

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MARSHFIELD RECREATIONAL TRAILS

COUCH BEACH

AT UNION STREET AND ARROW HEAD ROAD

PERMITTED ACTIVITIES

CAMPING (WITH PERMISSION FROM FIRE MARSHALL'S OFFICE)
HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:

THESE TRAILS CONNECT THE COUCH CEMETERY WITH THE RECREATION AREA OF COUCH BEACH LOCATED ALONG THE NORTH RIVER. THIS LOCATION IS HEAVILY USED AND EXCEEDINGLY POPULAR FOR THE MARSHFIELD YOUTH. THE SITE IS PERHAPS THE ONLY TOWN-OWNED LAND WHERE CAMPING IS ALLOWED (BY PERMISSION ONLY). IN FACT, NUMEROUS FIRE PITS AND SEATING PROVISIONS SPECKLE THE PINE FOREST FLOOR, WHICH HAS LONG BEEN DENUDED OF UNDERSTORY GROWTH.

PARKING:

PARKING IS PERMITTED ON THE PAVED PATHWAYS OF COUCH CEMETERY.

MARKINGS AND WAYFINDING:

THERE IS NO SIGNAGE IDENTIFYING THE TRAIL ENTRANCE AT THE SOUTHWEST CORNER OF THE CEMETERY AND NO SIGNS DIRECTING CEMETERY VISITORS TO COUCH BEACH. ONCE AT THE BEACH/CAMPING AREAS, LITTLE WAYFINDING IS NECESSARY, AS CLEAR LINE OF SITE MAKES VISIBLE ALL OF THE AREA FEATURES.

DIFFICULTY AND TRAIL LENGTH:

DIFFICULTY AND TRAIL LENGTH:

THE SOUTH TRAIL LEADING TO THE BEACH IS MORE NARROW AND RUGGED THAN THE NORTH TRAIL WHICH IS HEAVILY ERODED, BUT STILL CAPABLE OF ACCOMMODATING A VEHICLE. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- SOUTH TRAIL ENTRANCE AT SOUTHWEST CEMETERY CORNER = .25 MILES OR 10 MILES.
- NORTH TRAIL ENTRANCE AT NORTH CEMETERY CORNER = .3 MILES OR 12 MINUTES.

TRAIL ENTRANCE AT SOUTH SIDE OF CEMETERY

VIEW ALONG COUCH BEACH

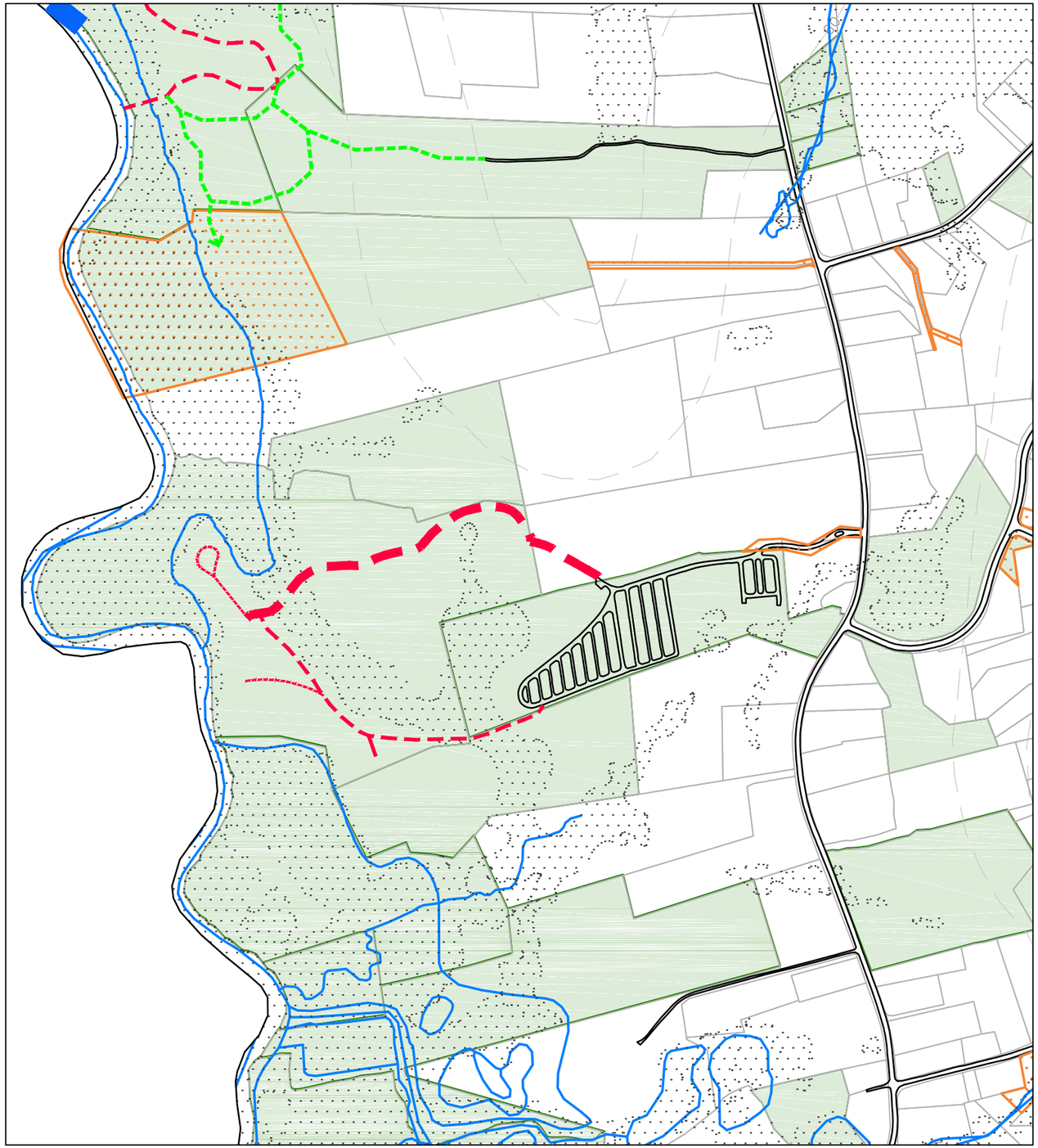
CONIFEROUS TREE CANOPY

CAMP FIRE PROVISIONS

MARSHFIELD RECREATIONAL TRAILS

COUCH BEACH

AT UNION STREET AND ARROW HEAD ROAD



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GENERAL

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LEGEND

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- PROPOSED TRAIL

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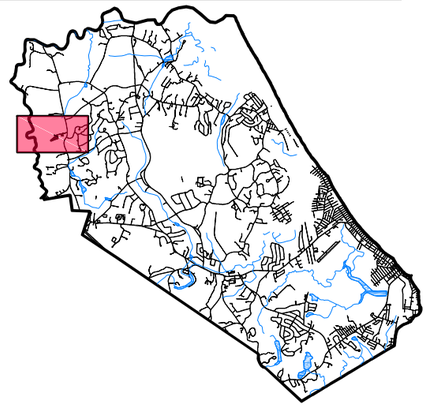

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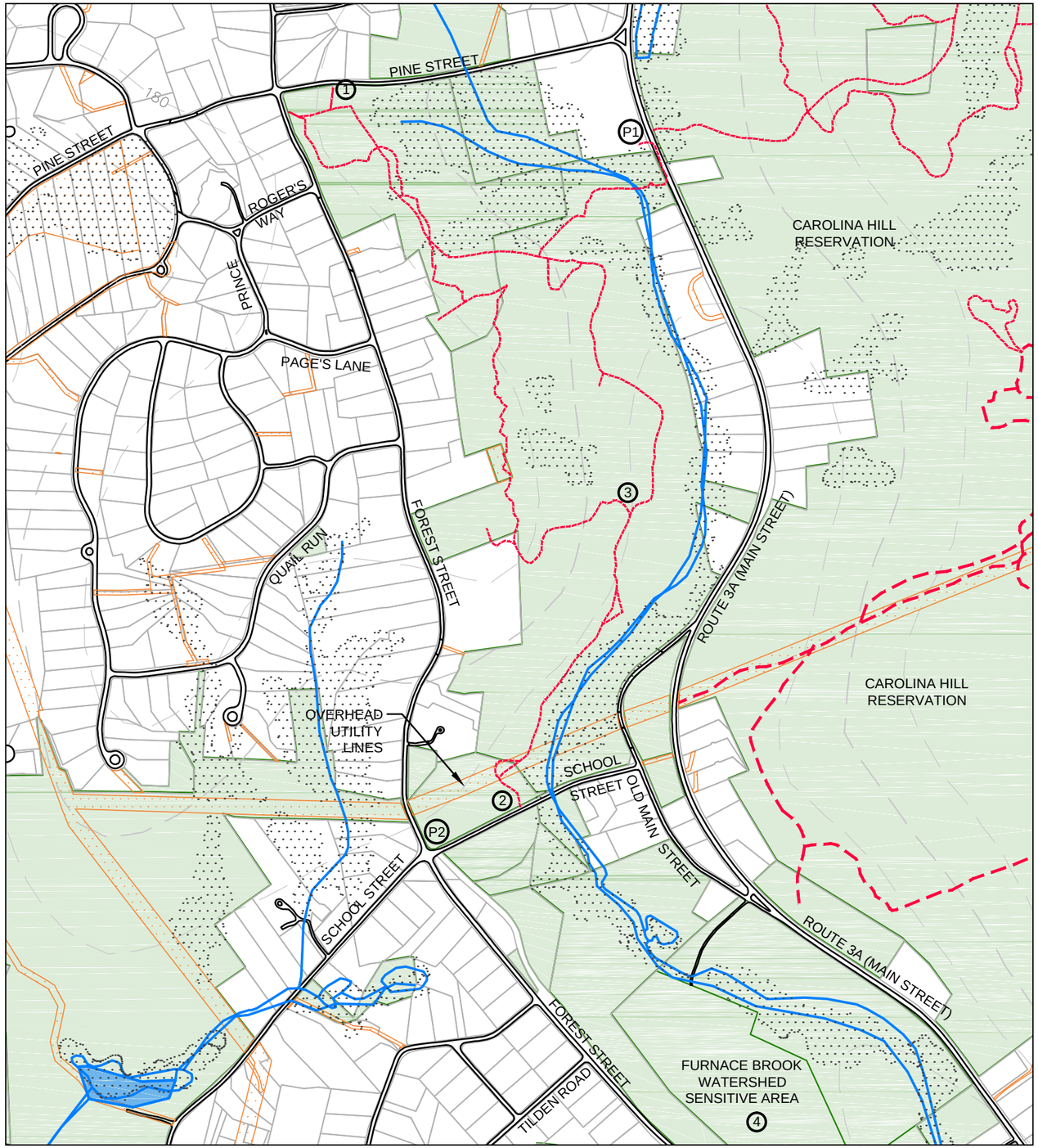
MARSHFIELD RECREATIONAL TRAILS

FURNACE BROOK

BETWEEN MAIN STREET AND FOREST STREET



MAP KEY

1. TRAIL ACCESS FROM FOREST STREET AND PINE STREET. NO SIGNAGE AVAILABLE.
2. TRAIL ACCESS FROM SCHOOL STREET LOCATED 300 EAST OF TOWN WATER FACILITY. NO OFF STREET PARKING AVAILABLE.
3. BENCH AT TRAIL INTERSECTION.
4. FURNACE BROOK WATERSHED SENSITIVE AREA. USE OF EXISTING TRAILS SOUTH OF SCHOOL STREET PROHIBITED.

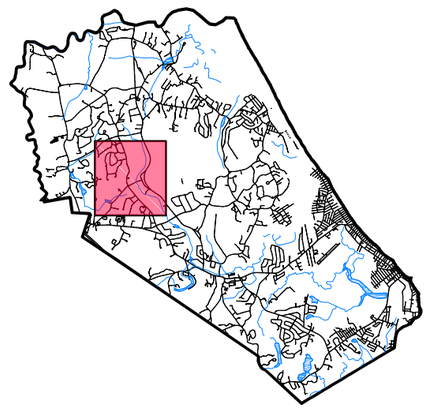
P1. PARKING AT SAINT CHRISTINE'S PARISH. TRAIL ACCESS600 FEET SOUTH OF SOUTHEAST CORNER OF PARKING LOT. PROCEED WITH CAUTION ALONG MAIN STREET.

P2. UNOFFICIAL PARKING AT EAST CORNER OF SCHOOL STREET AND FOREST STREET INTERSECTION. SPACE FOR 6 VEHICLES. PARKING AREA IS 800 FEET WEST OF TRAIL ACCESS FROM SCHOOL STREET.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# # — TRAIL PARKING AND MAP KEY MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

800 400 0 800

SCALE IN FEET

MAP UPDATED: MAY, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

FURNACE BROOK

BETWEEN MAIN STREET AND FOREST STREET

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:
THIS CONSERVATION LAND STRETCHES FROM THE WEST SIDE OF CAROLINA HILL, SOUTH TO OCEAN STREET WHERE THE WATERWAY FROM WHICH IT TAKES IT'S NAME JOINS THE SOUTH RIVER. THERE IS A FORMAL BUT RUGGED TRAIL NETWORK THROUGHOUT THE AREA.

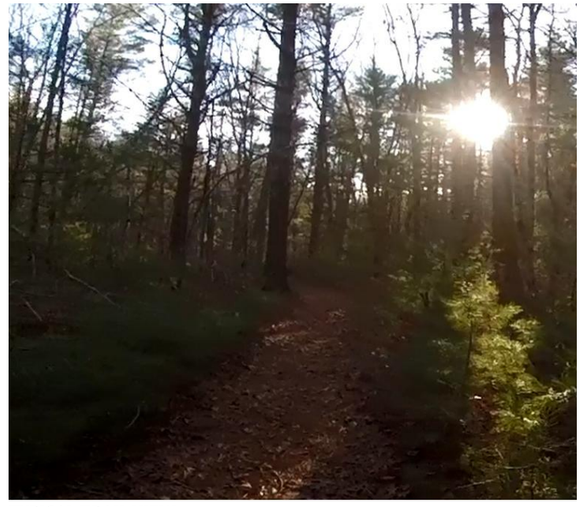
PARKING:
ST. CHRISTINE'S CHURCH PROVIDES PARKING, FROM WHICH A WALK ALONG THE NARROW ROUTE 3A SHOULDER IS REQUIRED FOR TRAIL ACCESS. PARKING AT THE SCHOOL STREET PUMP STATION IS PROHIBITED.

MARKINGS AND WAYFINDING:
THERE IS CLEAR AND DESCRIPTIVE SIGNAGE AT THE ROUTE 3A AND SCHOOL STREET ACCESS, THOUGH NO SIGNAGE EXISTS TO GUIDE USERS FROM THE NEAREST PARKING AREAS.

DIFFICULTY AND TRAIL LENGTH:
TRAIL OF GENERALLY EASY TO HIKE ALONG. TRIPPING HAZARDS MAY MAKE TRAILS DIFFICULT FOR MOST BIKERS AND SOME WALKERS WITH MOBILITY ISSUES. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- CROSSING EAST TO WEST FROM SAINT CHRISTINE'S CHURCH PARKING TO FOREST STREET = .8 MILES OR APPROXIMATELY 30 MINUTES.
- CROSSING NORTH TO SOUTH FROM SAINT CHRISTINE'S CHURCH PARKING TO SCHOOL STREET = 1.2 MILES OR APPROXIMATELY 50 MINUTES.

STREAM CROSSING NEAR ST. CHRISTINE'S PARISH.



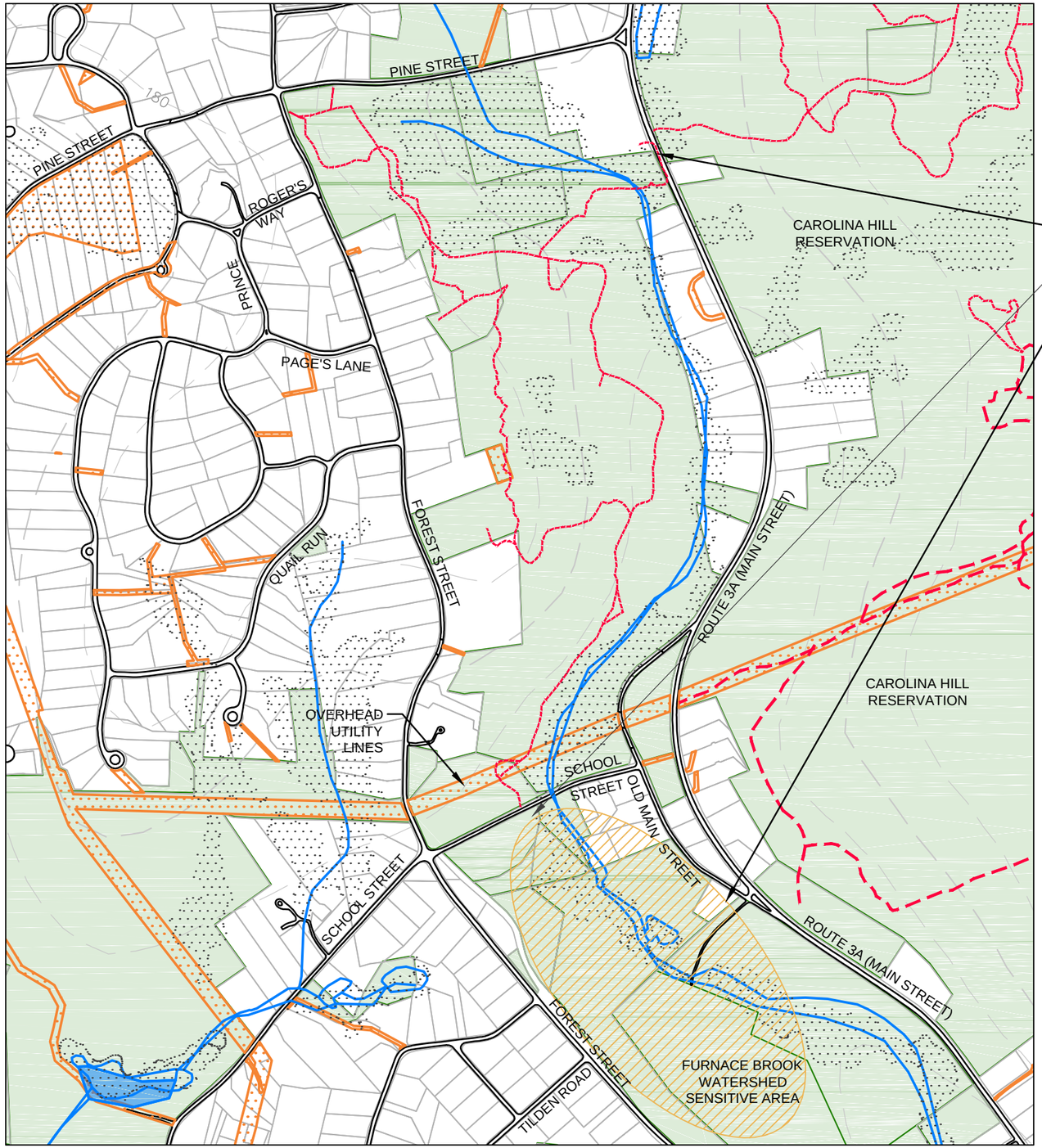
TYPICAL TRAIL VIEW.

LOOK FOR BOY SCOUT SIGN WHEN ACCESSING TRAIL FROM SCHOOL STREET.

MARSHFIELD RECREATIONAL TRAILS

FURNACE BROOK

BETWEEN MAIN STREET AND FOREST STREET



RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

IMPROVE WAYFINDING AND GRAVEL PATH ALONG ROUTE 3 A SHOULDER

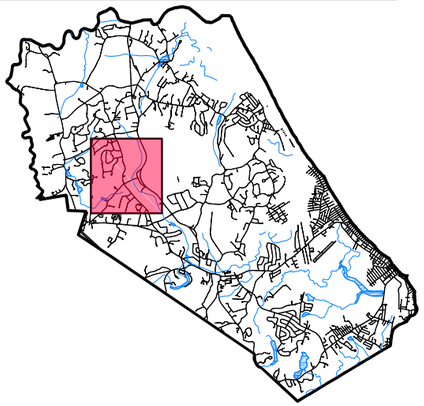
IMPROVE TRAIL PARKING AT THIS LOCATION. ADD SHOULDER PATH CONNECTING PARKING WITH TRAIL ENTRANCE

RESTORE TRAILS AND TRAIL ENTRANCES WITH VEGETATION AND CLOSE TRAIL SYSTEM

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED TRAIL CLASS 3
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

800 400 0 800

SCALE IN FEET

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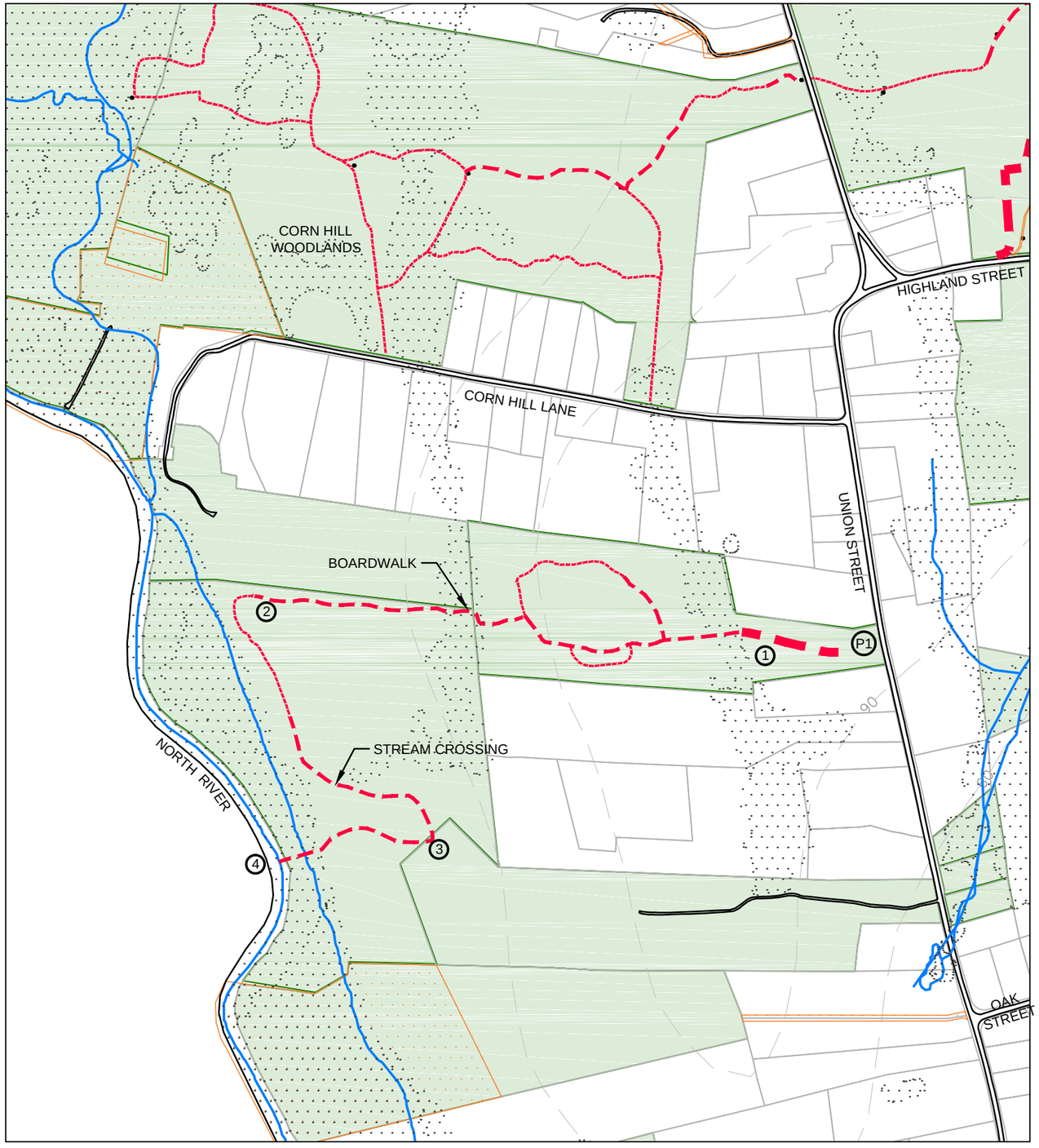
MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

JOHN LITTLE CONSERVATION LAND

AT UNION STREET SOUTH OF CORN HILL LANE



MAP KEY

1. GRASS FIELD AT CONSERVATION AREA ENTRANCE. PICNIC TABLE AT STONE WALL.
2. STEEP AND RUGGED SECTION OF TRAIL. PROCEED WITH CAUTION
3. GATE ENTRANCE.
4. PIER ACCESS TO NORTH RIVER. BENCH AND PICNIC TABLE PROVIDED AT SHORE. CAMPING AND FIRE PROHIBITED.

P1 GRAVEL PARKING AREA ¼ MILE SOUTH OF CORN HILL LANE. PARKING FOR 10-12 VEHICLES. INFORMATIONAL SIGNAGE.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
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- ROADWAY
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- OPEN SPACE
- SCHOOL FACILITY
- P# # — TRAIL PARKING AND TRAIL MARKER

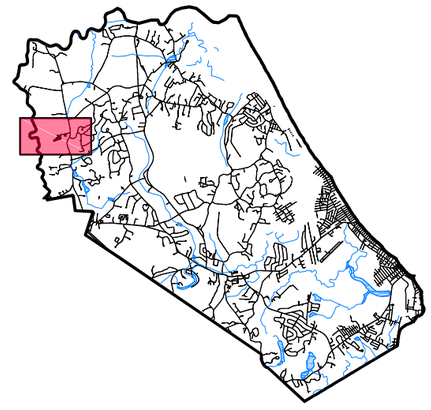
GRAPHIC SCALE

600 300 0 600

SCALE IN FEET

MAP UPDATED: MAY, 2016

LOCATION PLAN (TOWN OF MARSHFIELD)



MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

JOHN LITTLE CONSERVATION LAND

AT UNION STREET SOUTH OF CORN HILL LANE

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:
JOHN LITTLE CONSERVATION AREA IS A RELATIVELY NEW ADDITION TO THE TOWN CONSERVATION LANDS. NAMED FOR A PREVIOUS OWNER, IT IS A 25 ACRE PLOT, CONTAINING STONE WALL BORDERED FIELDS ON THE EAST, AND TRAILS IN THE FOREST THAT EXTEND TO A DOCK OVERLOOKING THE NORTH RIVER ON THE WEST. THE LAND HAS BEEN DESIGNATED AS PRIORITY HABITAT FOR ENDANGERED SPECIES BY THE STATE. A MIX OF OPEN FIELD, FOREST, AND RIVERINE HABITAT MAKE THESE LANDS A UNIQUE EXPERIENCE FOR VISITORS. THERE IS A MAGNIFICENT PIER FROM WHICH SWEEPING NORTH RIVER VIEWS CAN BE ENJOYED.

PARKING:
PARKING IS AVAILABLE FOR ABOUT 12 IN A SINGLE LOT OFF UNION STREET.

MARKINGS AND WAYFINDING:
METAL ARROW DISK TRAIL MARKERS CAN BE FOUND ALONG THE TRAIL ROUTE.

DIFFICULTY AND TRAIL LENGTH:
THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- TRIP FROM PARKING AREA TO DOCK OVERLOOK NORTH RIVER = 1.1 MILES OR APPROXIMATELY 35 MINUTES.

DOCK OVERLOOKING THE NORTH RIVER, LOOKING WEST.

PIER AT NORTH RIVER TRAIL TERMINUS, LOOKING EAST TOWARDS CONSERVATION LANDS.

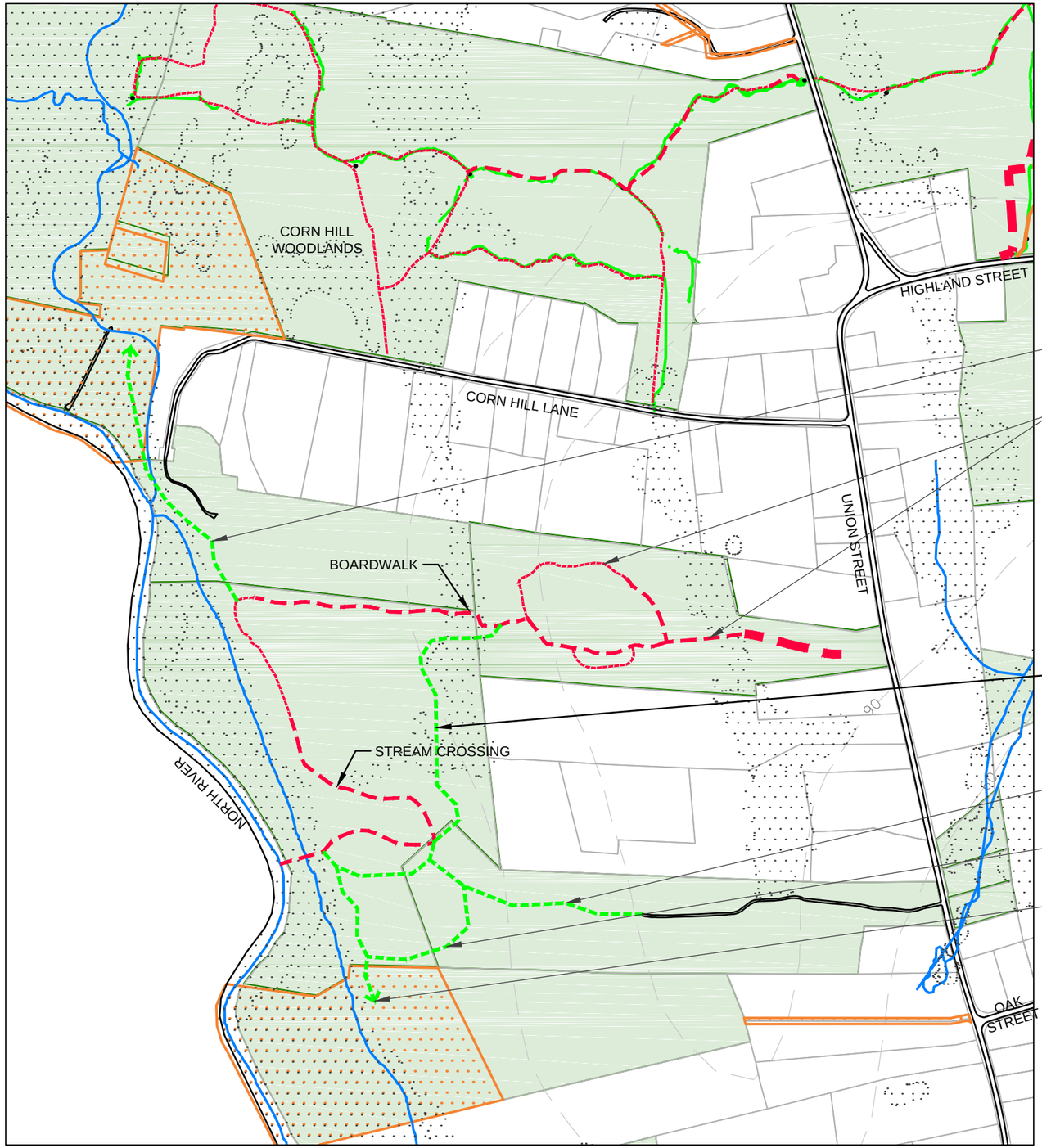
VIEW OF NORTH RIVER.

TRAIL SECTION AT OPEN FIELD AREA.

MARSHFIELD RECREATIONAL TRAILS

JOHN LITTLE CONSERVATION LAND

AT UNION STREET SOUTH OF CORN HILL LANE



RECOMMENDATIONS

GENERAL

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2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

GRAPHIC SCALE

600 300 0 600

SCALE IN FEET

LEGEND

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- ROADWAY
- 30 FT ELEVATION CONTOUR
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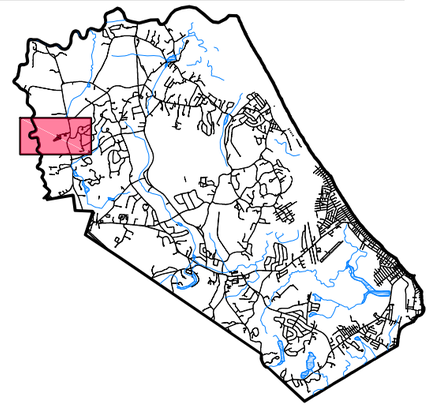
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

JOSE CARREIRO AND TWO MILE FARM

AT UNION STREET AND MARYLAND STREET

MAP KEY

1. BENCH AT TRAIL INTERSECTION
2. STEEP AND ERODED TRAIL SEGMENT. PROCEED WITH CAUTION.
3. INFORMATIVE SIGNAGE AT BOUNDARY LINE BETWEEN JOSE CARREIRO AND TWO MILE FARM LANDS.
4. SCENIC VIEW WITH WOOD BENCH.
5. SCENIC VIEW WITH GRANITE HONOR BENCH.
6. STONEWALL MARKS END OF TRAIL.

P1. PARKING LOT OFF UNION STREET. PAVED AT ENTRANCE, GRAVEL AT STALLS. SPACE FOR 15 VEHICLES. INFORMATION KIOSK AT TRAIL ENTRANCE.

P2. PARKING AVAILABLE AT CUL-DE-SAC AT END OF MARYLAND STREET. SPACE FOR 7 VEHICLES. GATED TRAIL ENTRANCE IS 100 FEET EAT OF CUL-DE-SAC.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED
- ROADWAY
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- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# # — TRAIL PARKING AND TRAIL MARKER

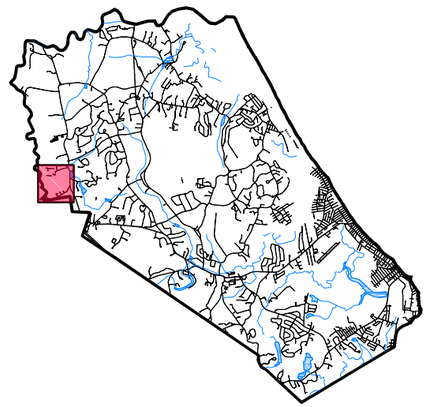
GRAPHIC SCALE

400 200 0 400

SCALE IN FEET

MAP UPDATED: MAY, 2016

LOCATION PLAN (TOWN OF MARSHFIELD)



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MARSHFIELD RECREATIONAL TRAILS MAP

JOSE CARREIRO AND TWO MILE FARM

AT UNION STREET AND MARYLAND STREET

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:
THESE ADJOINING LAND PARCELS MAKE UP A COMBINED TRAIL SYSTEM TOTALING ABOUT 3 MILES OF NATURAL SURFACE TRAIL. THE CARREIRO PARCEL IS NAMED FOR JOSE CARREIRO, THE FORMER PARCEL OWNER. THE TWO MILE FARM PORTION GETS ITS NAME FROM THE RIGHTS AFFORDED THE TOWN OF SCITUATE MANY CENTURIES AGO TO FARM HAY "TWO MILES" INLAND ALONG THE NORTH RIVER SHORES. THE TWO MILE SPOT WAS ROUGHLY LOCATED AT THE FARM ON THE SITE WHICH BORE THIS NAME.

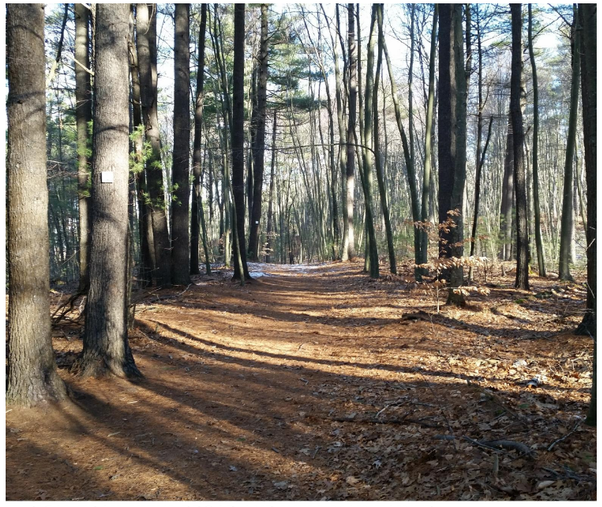
WHILE RELATIVELY NEW TO THE TOWN'S OPEN SPACE ROSTER, THESE PARCELS SHARE A REMARKABLY WELL DEVELOPED TRAIL NETWORK WHO'S ROUTING, WAYFINDING, AND FURNISHINGS DEMONSTRATE A LEVEL OF COMMITMENT MATCHED BY FEW OTHER PARCELS. THE TRAILS ARE BROAD AND MODERATELY GRADED WITH BENCHES AT KEY LOCATIONS ALLOWING FOR PASSIVE ENJOYMENT. WONDERFUL STONE WALLS CRISS CROSS THESE PROPERTIES, EVOKING THE TIMELESS AGRICULTURAL TRADITION OF NOT ONLY THE EARLY COLONISTS, BUT FOR THE NATIVE INHABITANTS' CENTURIES OLDER.

PARKING:
THERE IS A DEDICATED GRAVEL PARKING LOT AND UN-UTILIZED KIOSK OFF UNION STREET WITH SPACE FOR ABOUT 12 VEHICLES. PARKING IS ALSO AVAILABLE AT THE MARYLAND STREET CUL DE SAC.

MARKINGS AND WAYFINDING:
TRAIL MARKERS ARE MADE OF WOOD ARROWS AND ARE EASY TO FOLLOW. UNOFFICIAL SPUR PATHS ARE UNMARKED AND SHOULD BE AVOIDED.

DIFFICULTY AND TRAIL LENGTH:
THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- TRIP STARTING AT MARYLAND STREET AND ENDING AT UNION STREET PARKING = .7 MILES OR ABOUT 20 MINUTES.
- LOOP ROUTE OF TWO MILE FARM LAND STARTING AT UNION STREET PARKING = 1.1 MILES OR ABOUT 35 MINUTES.
- LOOP ROUTE OF JOSE CARREIRO LAND STARTING AT MARYLAND STREET = .6 MILES OR ABOUT 20 MINUTES.


TYPICAL TRAIL VIEW, BROAD AND WELL MAINTAINED.


SCENIC OVERLOOK OF CONSERVATION LANDS.

GRANITE BENCH MEMORIAL TO JOSE CARREIRO.

TWO MILE FARM TRAIL ENTRANCE SIGN.

MARSHFIELD RECREATIONAL TRAILS

JOSE CARREIRO AND TWO MILE FARM

AT UNION STREET AND MARYLAND STREET

RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

PROVIDE ADDITIONAL BENCH AT SCENIC OVERLOOK.

EXPLORE TRAIL CONNECTION NORTH TO COUCH BEACH.

IMPROVE TRAILS TO CLASS III, STABILIZE.

ABANDON TRAIL SEGMENTS.

IMPROVE PARKING AT MARYLAND STREET CUL-DE-SAC.

GRAPHIC SCALE

400 200 0 400

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
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- ROADWAY
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- #. PRIMARY RECOMMENDATIONS
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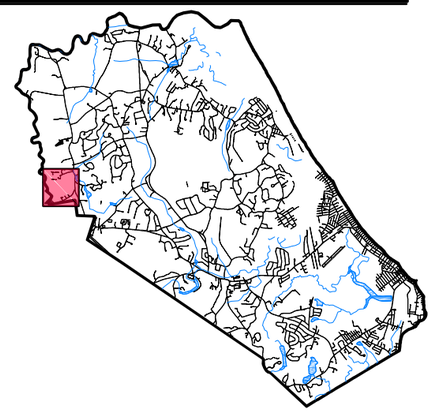
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



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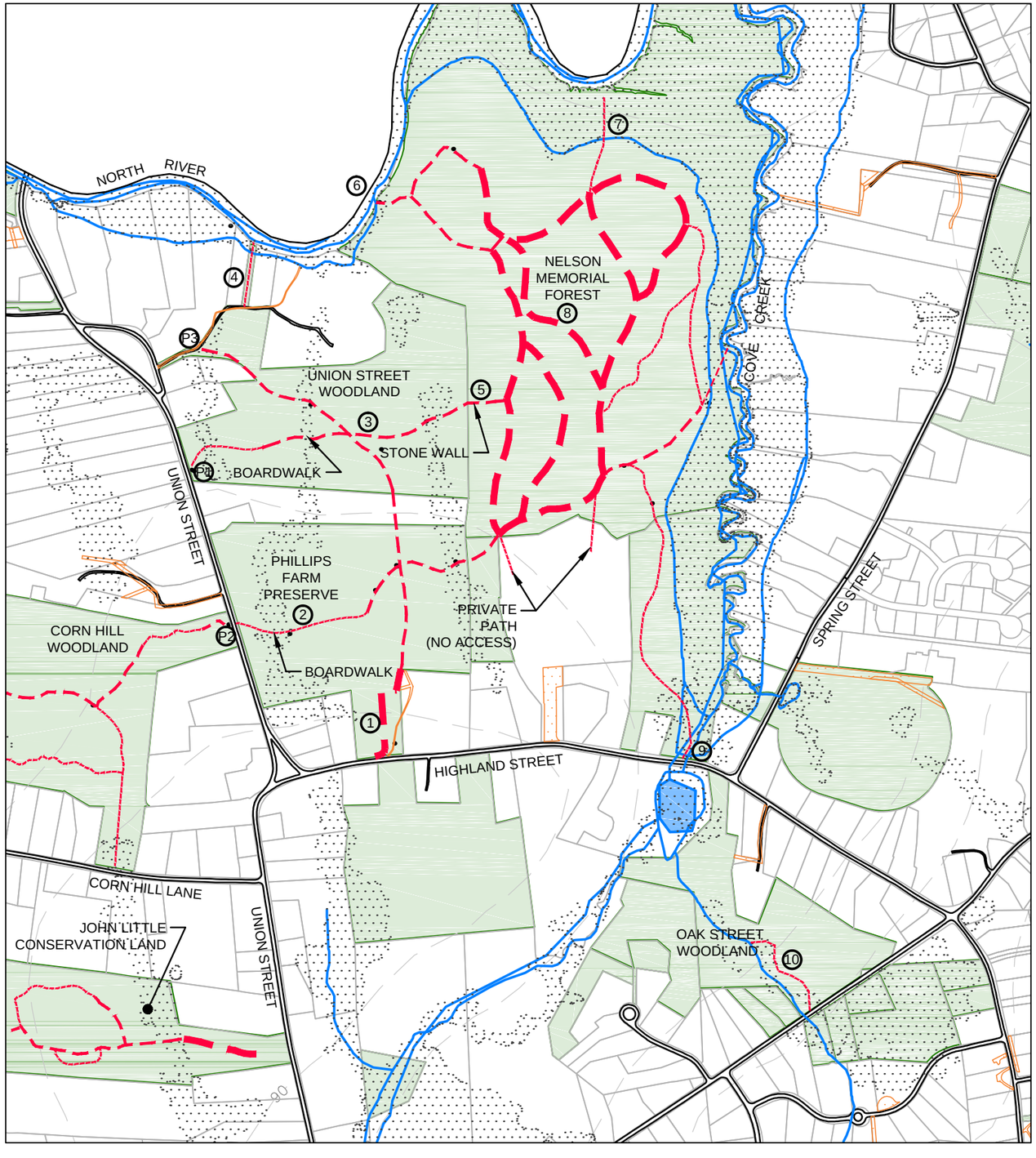
MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

NORTH RIVER TOWN LANDS

AT HIGHLAND STREET AND UNION STREET



MAP KEY

1. TRAIL ACCESS AT PHILLIPS FARM OFF HIGHLAND STREET. MOWN PATH WINDS THROUGH GRASS FIELD BEFORE ENTERING FOREST. SEATING AVAILABLE. NO PARKING AT THIS ACCESS.
2. PHILLIPS FARM WETLANDS. TRAILS ARE RUGGED AT WETLAND CROSSINGS WITH BOARDWALK STRUCTURES IN NEED OF REPAIR. PROCEED WITH CAUTION.
3. UNION STREET WOODLAND. TRAILS ARE BROAD AND WELL-TRODDED. NUMEROUS SPUR PATHS LEAD TO PRIVATE PROPERTIES. TRAIL USERS URGED TO FOLLOW WAYFINDING.
4. NORTH RIVER SCENIC OVERLOOK. PATH LEADS TO WOODLAND CLEARING WITH WATER ACCESS VIA PIER. NO CAMPING OR FIRES PERMITTED.
5. NELSON MEMORIAL FOREST ENTRANCE. KIOSK AT STONEWALL WITH INFORMATIVE CONTENT.
6. NORTH RIVER ACCESS A. CLEARING AT RIVERS EDGE WITH BENCH. NO CAMPING OR FIRES PERMITTED.
7. NORTH RIVER ACCESS B. PATH DISAPPEARS INTO TIDAL GRASSLAND AT RIVERS EDGE.
8. NELSON MEMORIAL FOREST. TRAILS GENERALLY BROAD WITH COLOR CODED BLAZING.
9. TRAIL ACCESS AT SPRING STREET OFF HIGHLAND. TRAIL IS RUGGED. VEHICLE PULL OFF AVAILABLE. PARKING NOT PERMITTED.
10. OAK STREET TRAIL. TRAIL IN HEAVY DISREPAIR

P1 NORTHERN PARKING OFF UNION STREET. GRAVEL LOT, NO SPACE MARKINGS, WITH ROOM FOR 10 VEHICLES.

P2 SOUTHERN PARKING OFF UNION STREET. GRAVEL LOT, NO SPACE MARKINGS, WITH ROOM FOR 12 VEHICLES.

P3 PARKING OFF HUNTER DRIVE. GRASS SHOULDER WITH ROOM FOR 4 PARALLEL PARKED VEHICLES.

LEGEND

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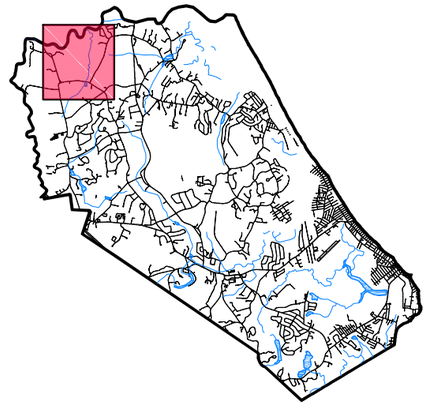
- P# # — TRAIL PARKING & MAP KEY MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

800 400 0 800

SCALE IN FEET

MAP UPDATED: MAY, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

NORTH RIVER TOWN LANDS

AT HIGHLAND STREET AND UNION STREET

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

NOTE: Exclusion of an activity from these lists does not imply its prohibition. Activities not on the prohibited list and not permitted under Massachusetts or Federal law are also prohibited. Refer to Town of Marshfield Conservation Commission list of Rules and Regulation for up to date information.

DESCRIPTION

LAND DESCRIPTION:
THE THREE AREAS THAT COMPRISE THE NORTH RIVER TOWN LANDS ARE UNION STREET WOODLAND, PHILLIPS FARM PRESERVE, AND NELSON MEMORIAL FOREST. THESE LANDS SHARE AN EXTENSIVE TRAIL NETWORK IN WHICH VISITORS CAN WANDER FOR HOURS. THERE ARE SEVERAL TRAIL CONNECTIONS TO THE NORTH RIVER WHICH OFFER BEAUTIFUL VISTAS AND OPPORTUNITIES FOR CONNECTIVITY TO THE NORTH RIVER WATERWAY TRAIL.

PARKING:
TWO PARKING AREAS ALONG UNION STREET PROVIDE SPACE FOR 10-15 VEHICLES EACH.

MARKINGS AND WAYFINDING:
A COLLECTION OF PARKING, WAYFINDING AND KIOSK SIGNAGE HELP VISITORS LOCATE THE UNION STREET PARKING AREAS AND ADJOINING TRAILS, THOUGH MOST OF THESE PROVISIONS HAVE FALLEN INTO DISREPAIR. THERE IS ALSO AN EXISTING NAMING SYSTEM USED THROUGHOUT THE NELSON MEMORIAL FOREST THAT RECALLS AN OLD STREET NETWORK THAT FOLLOWED A SIMILAR ROUTING.

DIFFICULTY AND TRAIL LENGTH:
A WIDE RANGE OF DIFFICULTY LEVELS CAN BE FOUND AS INDICATED BY THE VARYING TRAIL CLASSIFICATIONS. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.0 AND 2.0 MPH:

- CROSSING EAST TO WEST FROM THE NORTHERN UNION STREET PARKING LOT TO COVE CREEK = 1.0 MILES OR APPROXIMATELY 40 MINUTES.
- CROSSING NORTH TO SOUTH FROM HIGHLAND STREET TO THE NORTH RIVER AT ACCESS B = 1.0 MILES OR APPROXIMATELY 40 MINUTES.

VIEW OF NORTH RIVER.

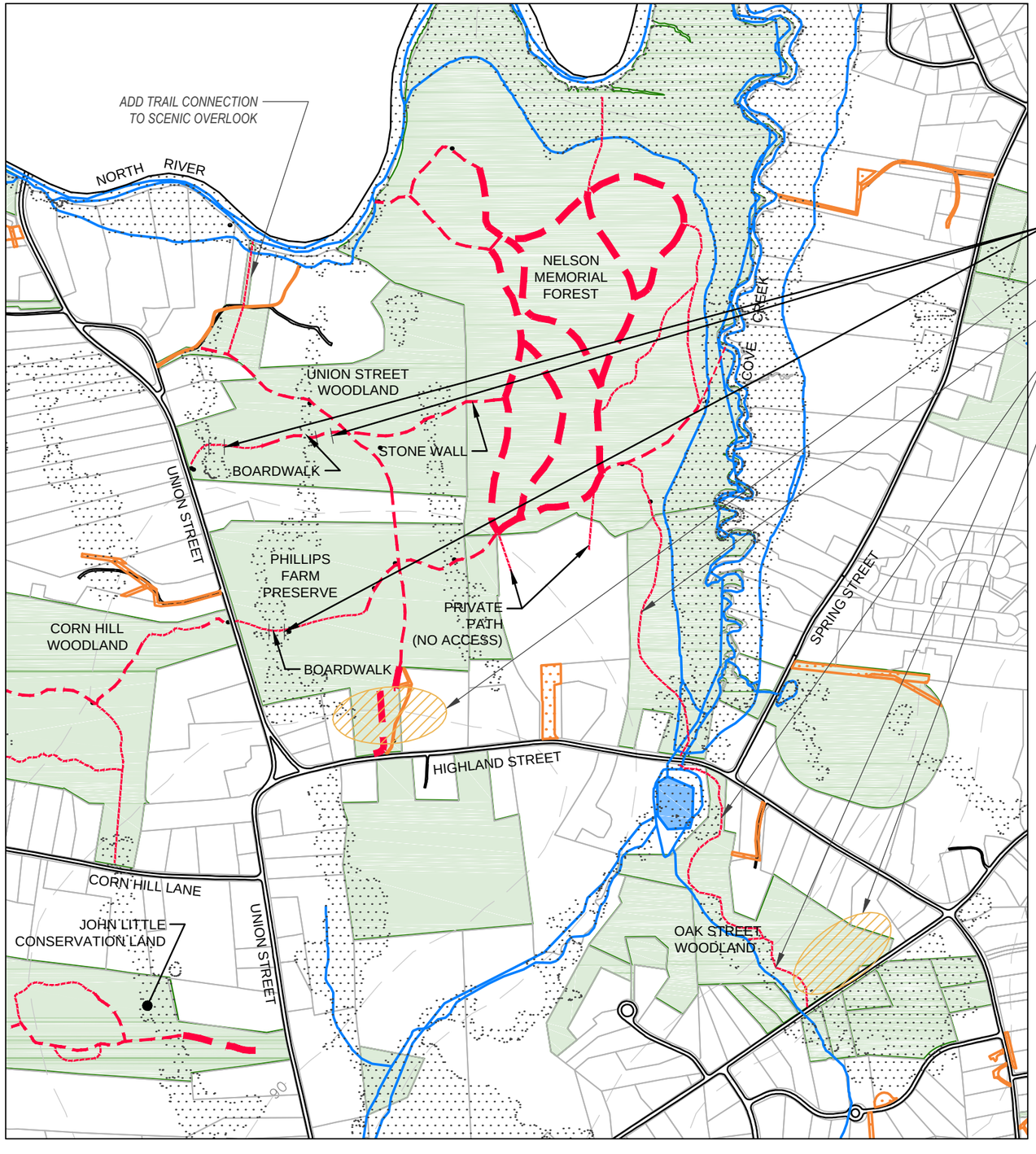
BROAD CLASS III TRAILS AT NELSON MEMORIAL FOREST.

BENCH NEAR HIGHLAND STREET ENTRANCE.

MARSHFIELD RECREATIONAL TRAILS

NORTH RIVER TOWN LANDS

AT HIGHLAND STREET AND UNION STREET



RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

RENOVATE OR RECONSTRUCT BOARDWALK TRAIL AT WET AREAS

PROVIDE OFF-STREET PARKING LOT

UPGRADE TRAIL TO CLASS II RATING LEVEL

IMPROVE TRAIL AND EXTEND TO HIGHLAND STREET

PROVIDE SHOULDER PARKING

GRAPHIC SCALE

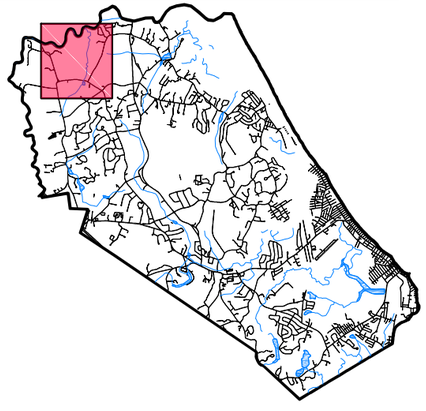
800 400 0 800

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED TRAIL CLASS 3
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



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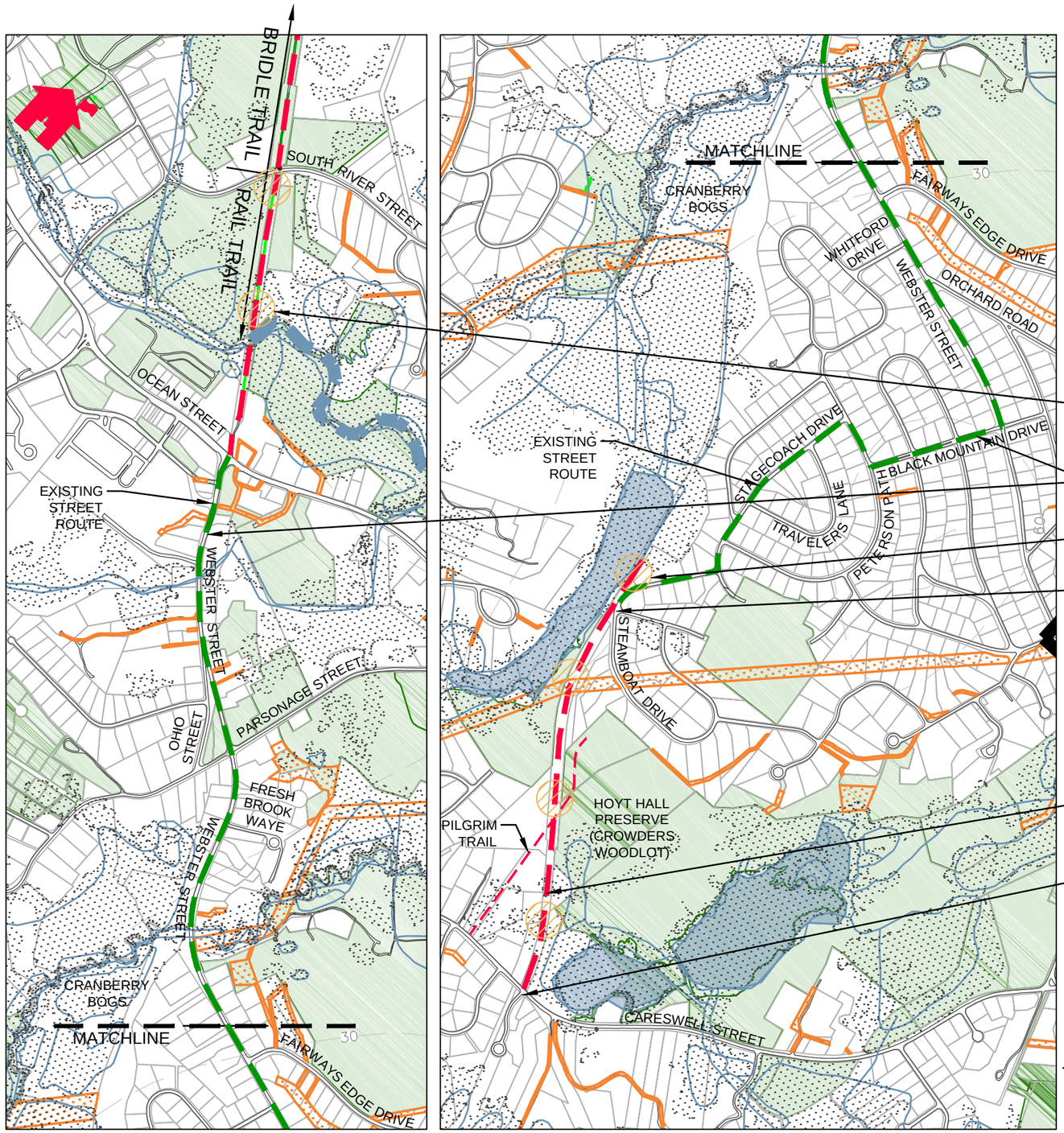
MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

RAIL TRAIL

SOUTH OF SOUTH RIVER ROAD



RECOMMENDATIONS

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2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

SECONDARY RECOMMENDATIONS

- REFER TO RECOMMENDATIONS SECTION OF REPORT FOR TRAIL IMPROVEMENT OPTIONS A, B, AND C

GRAPHIC SCALE

1000 500 0 1000

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
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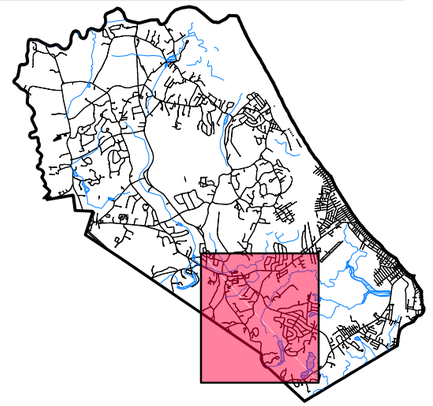

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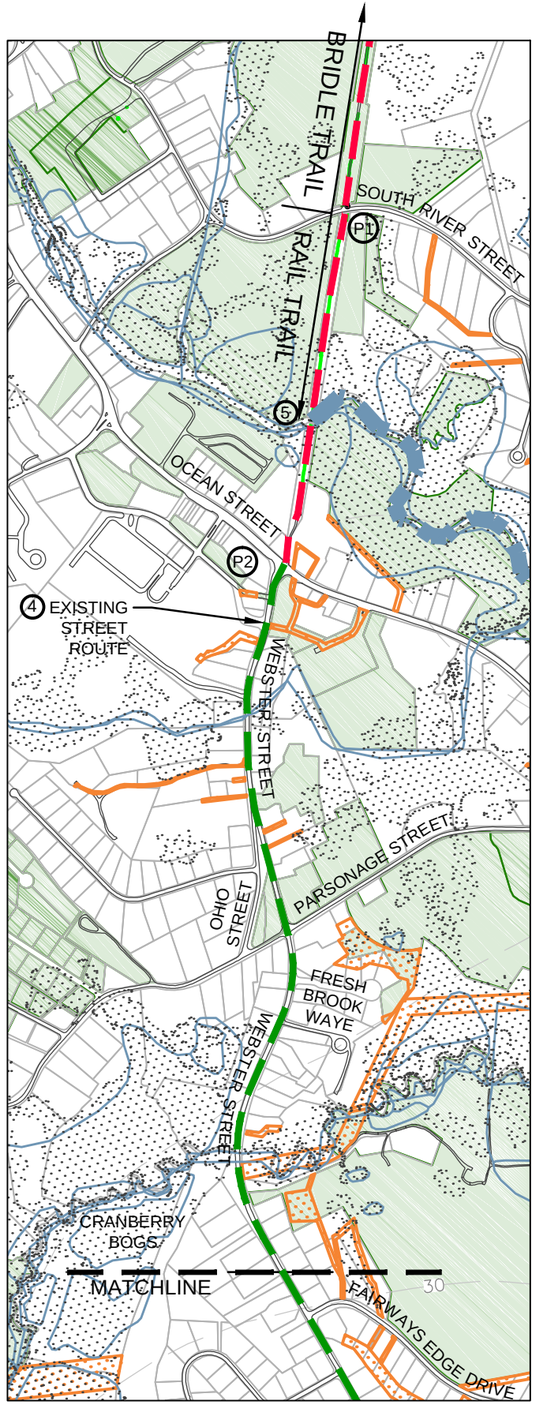
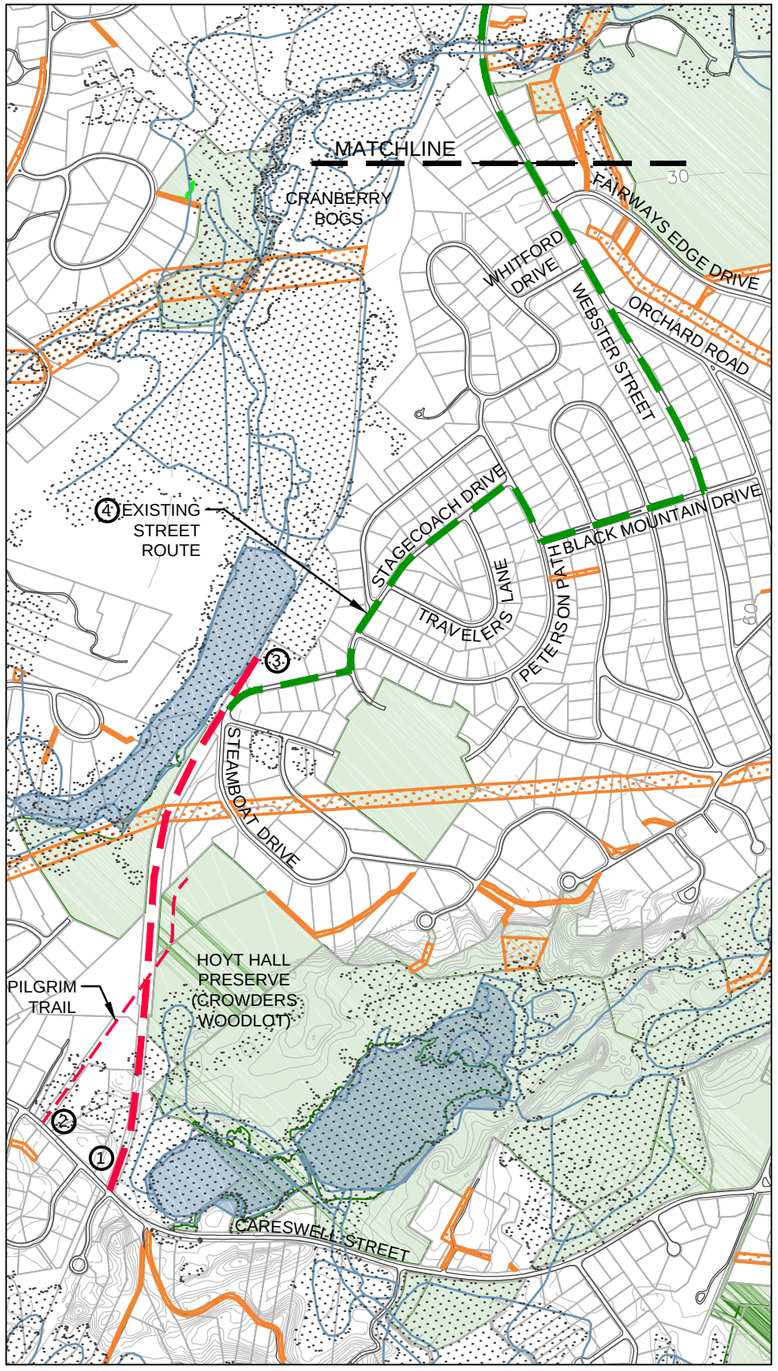
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

RAIL TRAIL

SOUTH OF SOUTH RIVER STREET





MAP KEY

1. TRAIL TERMINUS AT CARESWELL STREET, NO AVAILABLE PARKING
2. OLD PILGRIM TRAIL TERMINUS, NO AVAILABLE PARKING.
3. TRAIL TERMINUS AT MARSH.
4. CONNECTION BETWEEN TRAIL SEGMENTS TO OCCUR ALONG EXISTING STREET SIDEWALK NETWORK.
5. FRANCIS M. KEVILLE BRIDGE. SOUTH RIVER BOAT LAUNCH AT THIS LOCATION.

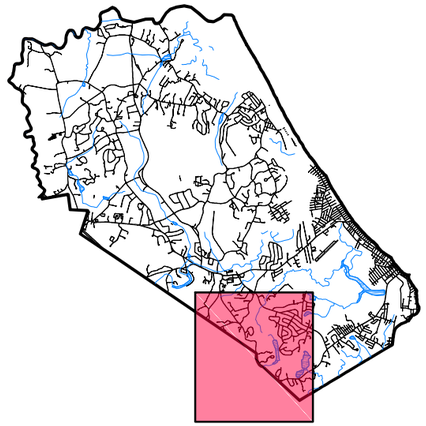
P1. TRAIL TERMINUS AT SOUTH RIVER STREET. PARKING AVAILABLE NEXT TO SUBSTATION, DO NOT BLOCK SUBSTATION ACCESS.

P2. TRAIL TERMINUS AT OCEAN STREET. PARKING AVAILABLE AT ADJACENT BUSINESSES.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED
- RECOMMENDED TRAIL CONNECTION ROUTE
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# # — TRAIL PARKING AND TRAIL MARKER

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

1000 500 0 1000

SCALE IN FEET

MAP UPDATED: APRIL, 2016

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS
DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

RAIL TRAIL

SOUTH OF SOUTH RIVER ROAD

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

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DESCRIPTION

LAND DESCRIPTION:
THE RAIL TRAIL EXISTS IN TWO PARTS. PART 1, THE NORTHERN SEGMENT EXTENDS FROM ITS INTERSECTION WITH SOUTH RIVER STREET AND THE BRIDLE TRAIL SOUTH TO ITS INTERSECTION WITH OCEAN STREET, A DISTANCE OF ROUGHLY 2,400 FEET. ITS ENTIRE LENGTH FOLLOWS A FORMER RAIL GRADE, IS LEVEL, AND WELL-GRADED. A WIDE RANGE OF USES CAN BE ACCOMMODATED ALONG THIS LENGTH AND THE PAVED SECTION EXTENDING FROM OCEAN STREET TO THE FRANCIS M. KEVILLE FOOTBRIDGE IS ADA ACCESSIBLE WITH THE EXCEPTION TO AN AREA OF ASPHALT HEAVED BY A LARGE TREE AT THE EDGE OF DANDELION PARK.

PART 2, THE SOUTHERN SEGMENT OF TRAIL STARTS AT THE INTERSECTION OF CARESWELL ROAD AND SOUTH POINT LANE, AND CONTINUES NORTH APPROXIMATELY 3,200 FEET TO ITS CURRENT TERMINUS AT STAGECOACH DRIVE WITHIN THE PILGRIM TRAIL HOUSING DEVELOPMENT. A SMALL NETWORK OF WELL GRADED TRAILS AT CROWDER'S WOODLOT MEANDER EAST OF THE MAIN TRAIL. THE HISTORIC PILGRIM TRAIL ONCE SNAKED THROUGH THIS AREA AND OPPORTUNITIES EXIST TO CONNECT TO THE EXISTING TRAIL REMNANTS. THIS SEGMENT CONTAINS NUMEROUS SPUR TRAILS, BUT THE MAIN ACCESS IS EASY TO FOLLOW.

PARKING:
AT OCEAN STREET, THERE EXISTS NUMEROUS COMMERCIAL ESTABLISHMENTS WHICH PROVIDE NEARBY PARKING. UNOFFICIAL PARKING AT THE SOUTH RIVER STREET SUBSTATION LOT PROVIDES ADDITIONAL PARKING ACCESS.

MARKINGS AND WAYFINDING:
THIS TRAIL LACKS BLAZING AND SIGNAGE, THOUGH ITS WIDTH AND WEAR MAKE THE EXISTING TRACK DIFFICULT TO LOSE EVEN IN SNOWY CONDITIONS.

DIFFICULTY AND TRAIL LENGTH:
THE NORTH SEGMENT IS EASY TO LOCATE AND FOLLOW WHILE THE SOUTH SEGMENT IS POORLY MARKED, BUT ONCE NO THE TRAIL, EASY TO FOLLOW. THE SEGMENTS ARE WELL-GRADED, THOUGH THE SOUTHERN SEGMENT IS SLIGHTLY ROUGHER THAN THE NORTH. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.5 AND 2.5 MPH:

- SOUTH RIVER STREET TO OCEAN STREET = .5 MILES OR APPROXIMATELY 30 MINUTES.
- STREET CONNECTION FROM OCEAN STREET TO SOUTHERN TRAIL SEGMENT AT STEAMBOAT DRIVE = 2.0 MILES OR APPROXIMATELY 60 MINUTES.
- STEAMBOAT DRIVE TO CARESWELL STREET = .6 MILES OR APPROXIMATELY 35 MINUTES.

TYPICAL TRAIL SECTION, BROAD AND EASILY NAVIGABLE.

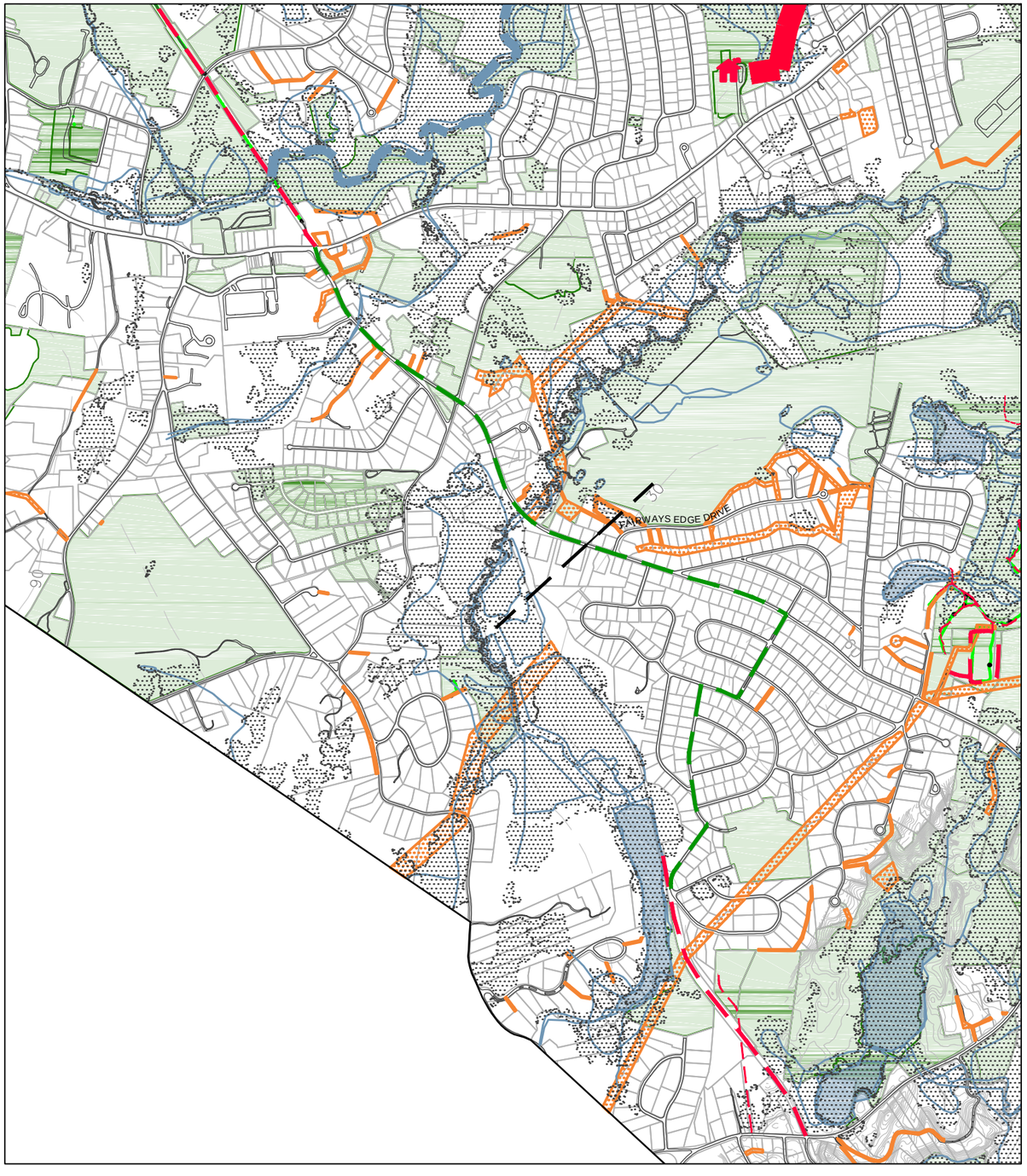
VIEW SOUTH TOWARDS DUXBURY.

PAVED TRAIL JUNCTION AT OCEAN STREET.

MARSHFIELD RECREATIONAL TRAILS

RAIL TRAIL

SOUTH OF SOUTH RIVER ROAD



RECOMMENDATIONS

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
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- ROADWAY
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- STREAM/WATERWAY
- WATERBODY
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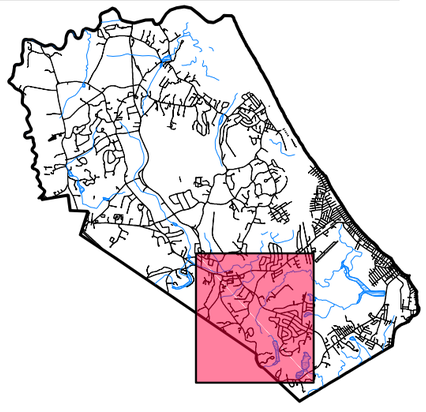
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



GRAPHIC SCALE

1500 750 0 1500

SCALE IN FEET

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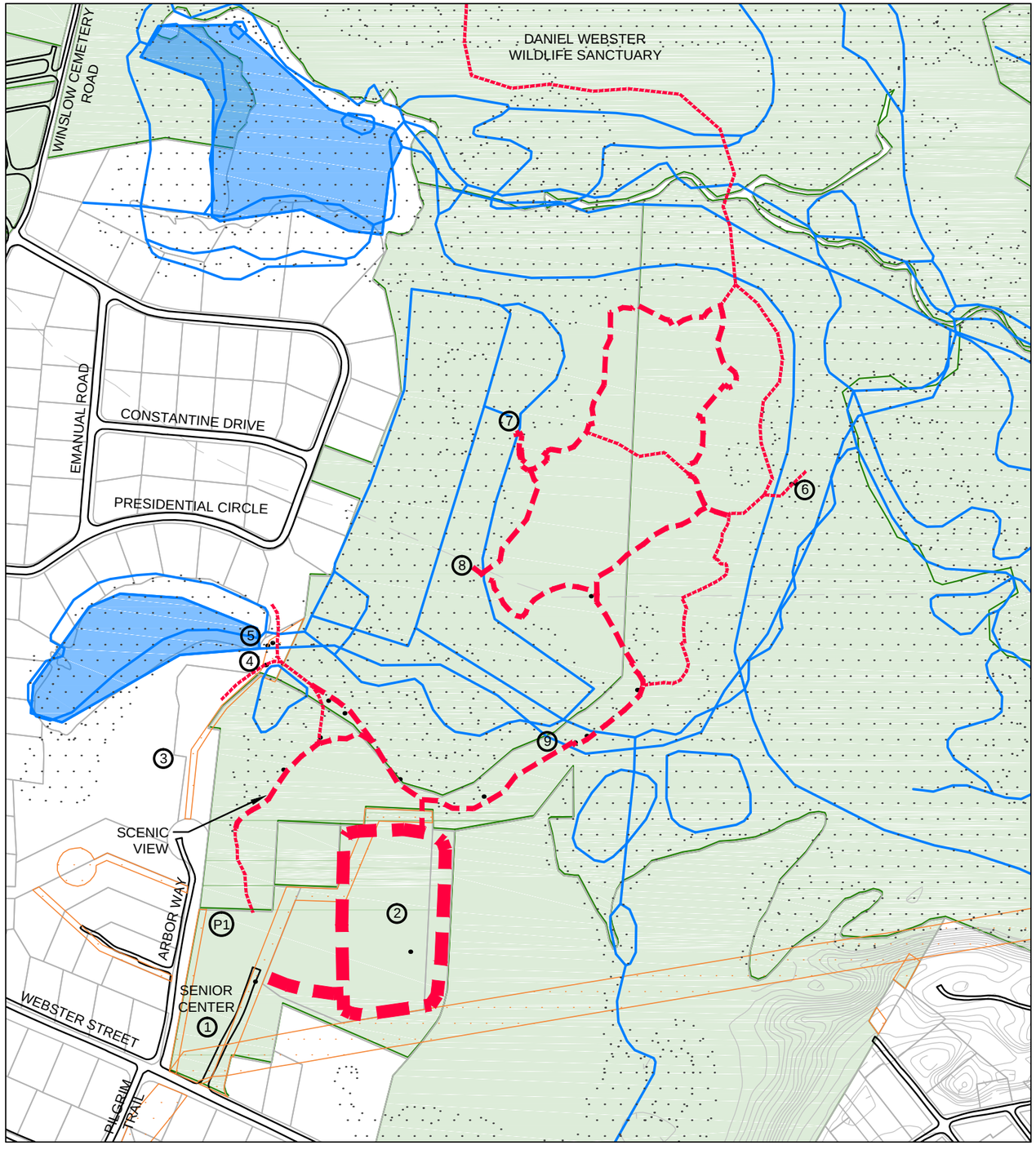
MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS

WEBSTER'S WILDERNESS

NORTH OF SENIOR CENTER



MAP KEY

1. MARSHFIELD SENIOR CENTER.
2. WHEELER BASEBALL COMPLEX.
3. DANIEL WEBSTER HISTORIC SITE.
4. SPUR PATH TO DANIEL WEBSTER HOUSE PROPERTY.
5. SPUR PATHS TO PRIVATE PROPERTIES. TRAILS ARE RUGGED AND MAINTENANCE UNRELIABLE. TRAVEL NOT RECOMMENDED.
6. TRAIL ENDS AT POTENTIAL VERNAL POOL SITE.
7. SCENIC POND VIEW.
8. SCENIC POND VIEW.
9. SCENIC POND VIEW.

P1. MARSHFIELD SENIOR CENTER PARKING. PAVED, HANDICAP ACCESSIBLE.

LEGEND

- TRAIL CLASS I
  NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II
  MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III
  BROAD WIDTH, EASY GRADE, WELL-MARKED
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- P# # TRAIL PARKING AND MAP KEY MARKER

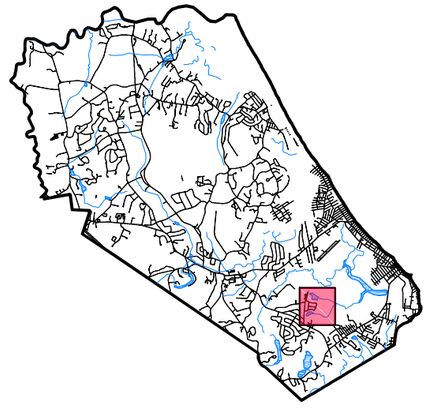
GRAPHIC SCALE

400 200 0 400

SCALE IN FEET

MAP UPDATED: MAY, 2016

LOCATION PLAN (TOWN OF MARSHFIELD)



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MARSHFIELD RECREATIONAL TRAILS MAP

WEBSTER'S WILDERNESS

NORTH OF SENIOR CENTER

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
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CONSUMPTION OF ALCOHOL
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DESCRIPTION

LAND DESCRIPTION:
THIS 130 ACRE CONSERVATION PARCEL CONTAINS A DYNAMIC NETWORK OF TRAILS FEEDING FROM THE MARSHFIELD SENIOR CENTER AND WHEELER ATHLETIC COMPLEX TO A LOWLAND FOREST AND WETLAND. AS WITH SO MANY OF MARSHFIELD'S CONSERVATION PARCELS, ONE DOES NOT NEED TO VENTURE FAR INTO THESE TRAILS TO FEEL SECLUDED AND APART FROM THE TOWN BUSTLE.

IN ADDITIONAL TO THE NATURAL BEAUTY, THERE EXISTS A RICH BUT UNEXPRESSED HISTORY WITHIN AND ADJACENT TO THIS SITE. THE DANIEL WEBSTER HOUSE LIES JUST TO THE WEST AND A COLLECTION OF 19TH AND EARLY 20TH CENTURY ARTIFACTS LIE MAROONED IN THE NOW OVERGROWING THICKETS OF THIS FOREST.

PARKING:
PARKING IS AVAILABLE AT TRAIL ENTRANCES LOCATED AT MARSHFIELD SENIOR CENTER AND WHEELER ATHLETIC COMPLEX.

MARKINGS AND WAYFINDING:
THROUGHOUT THIS TRAIL SYSTEM ARE ROUND METAL DISC TRAIL MARKERS, FIXED FIRMLY TO EXISTING LARGE TREES.

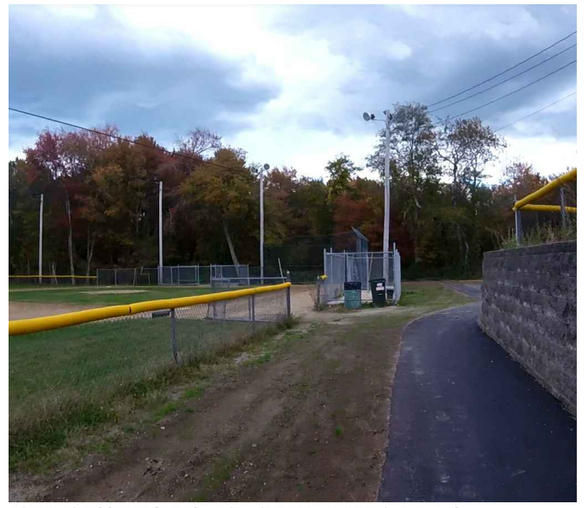
DIFFICULTY AND TRAIL LENGTH:
THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.0 AND 2.0 MPH:

- ROUND TRIP STARTING AT SENIOR CENTER = 1.5 MILES OR APPROXIMATELY 45 MINUTES.
- TRAVERSING ENTIRE TRAIL NETWORK = 3.5 MILES OR APPROXIMATELY 9.0 MINUTES.

TYPICAL TRAIL MARKER.

SCENIC VIEW OF POND.

VIEW OF DANIEL WEBSTER'S HOUSE FROM TRAIL ACCESS.

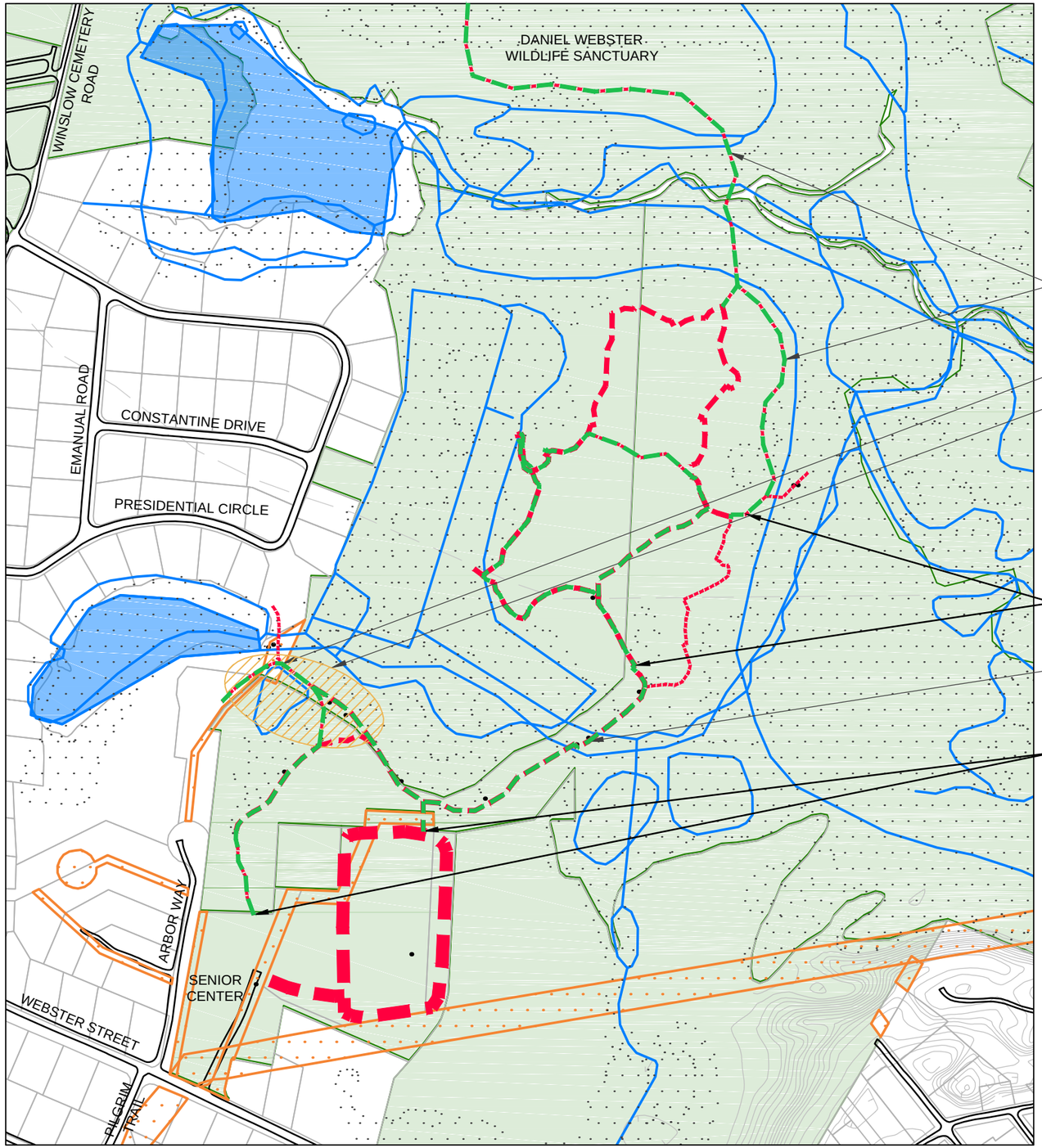


PATHWAY CONNECTING TRAIL AND WHEELER ATHLETIC FACILITY.

MARSHFIELD RECREATIONAL TRAILS

WEBSTER'S WILDERNESS

NORTH OF SENIOR CENTER



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GRAPHIC SCALE

400 200 0 400

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
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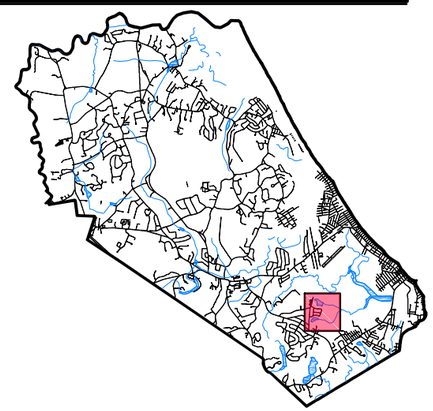

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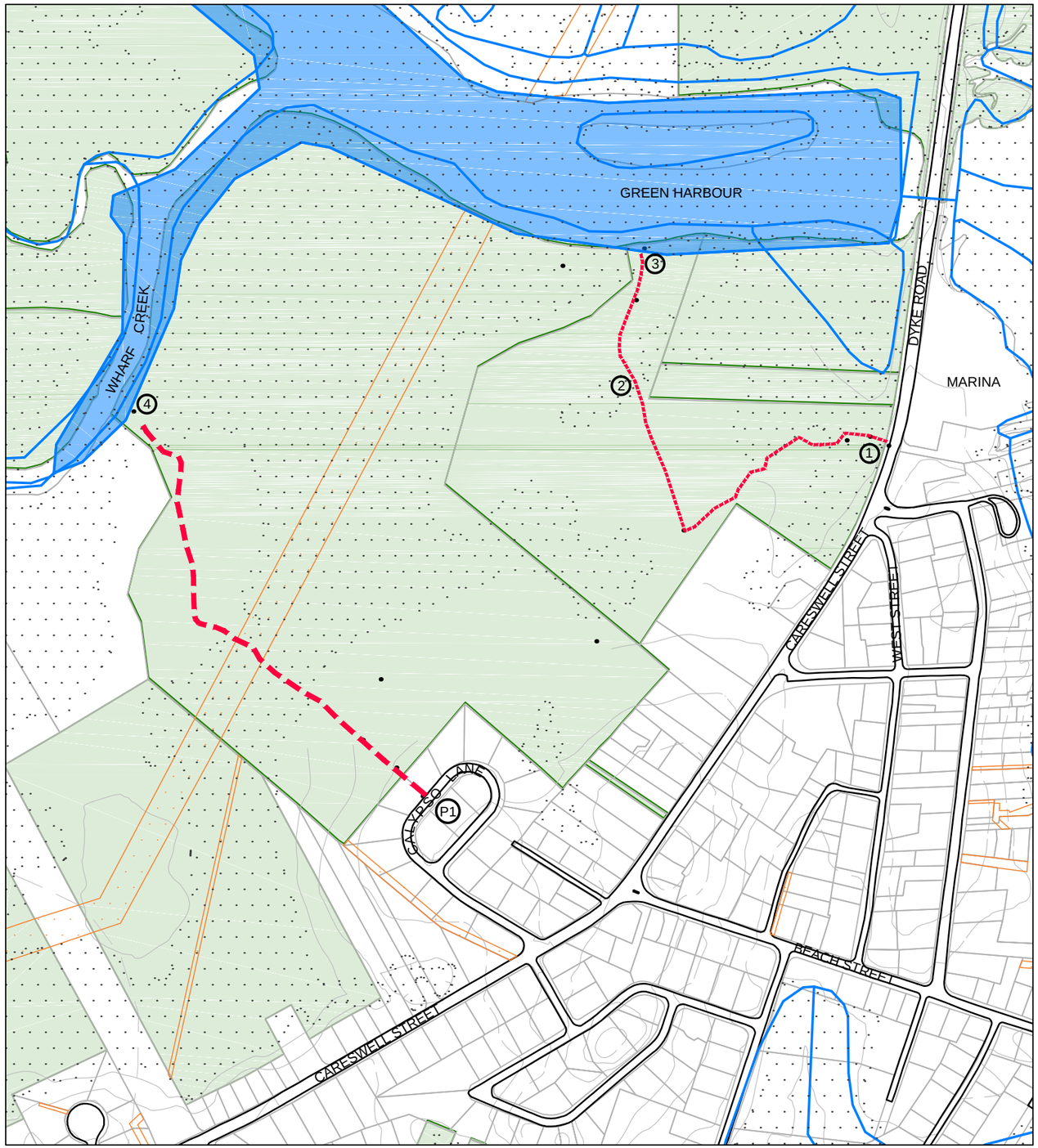
MARSHFIELD RECREATIONAL TRAILS

WHARF CREEK

AT CALYPSO LANE AND DYKE ROAD



MAP KEY

1. TRAIL ACCESS OFF DYKE ROAD. NO TRAIL PARKING PERMITTED ACROSS THE STREET.
2. TRAIL PASSES THROUGH THICKET.
3. SCENIC VIEW TO GREEN HARBOUR.
4. SCENIC VIEW TO WHARF CREEK.

P1 SHOULDER PARKING AT CALYPSO LANE ENTRANCE. DO NOT BLOCK DRIVEWAYS.

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
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- OPEN SPACE
- SCHOOL FACILITY
- P# # — TRAIL PARKING & MAP KEY MARKER

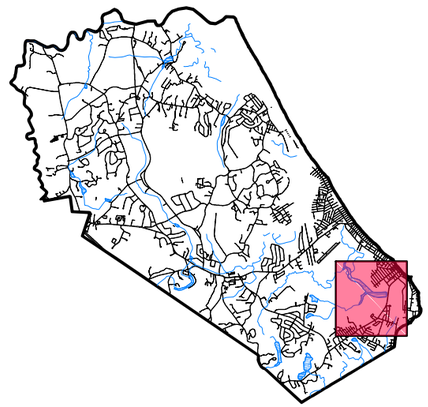
GRAPHIC SCALE

400 200 0 400

SCALE IN FEET

MAP UPDATED: MAY, 2016

LOCATION PLAN (TOWN OF MARSHFIELD)



MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

MARSHFIELD RECREATIONAL TRAILS MAP

WHARF CREEK

AT CALYPSO LANE AND DYKE ROAD

PERMITTED ACTIVITIES

HIKING
DOG WALKING
BIKING
HORSEBACK RIDING
NORDIC SKIING

PROHIBITED ACTIVITIES

CAMPING
FIRE
SMOKING
CONSUMPTION OF ALCOHOL
USE OF FIREARMS AND TRAPPING
USE OF PAINTBALL GUNS
MOTOR VEHICLES (EXCEPT FOR EMERGENCY OR SERVICE)

NOTE: Exclusion of an activity from these lists does not imply its prohibition. Activities not on the prohibited list and not permitted under Massachusetts or Federal law are also prohibited. Refer to Town of Marshfield Conservation Commission list of Rules and Regulation for up to date information.

DESCRIPTION

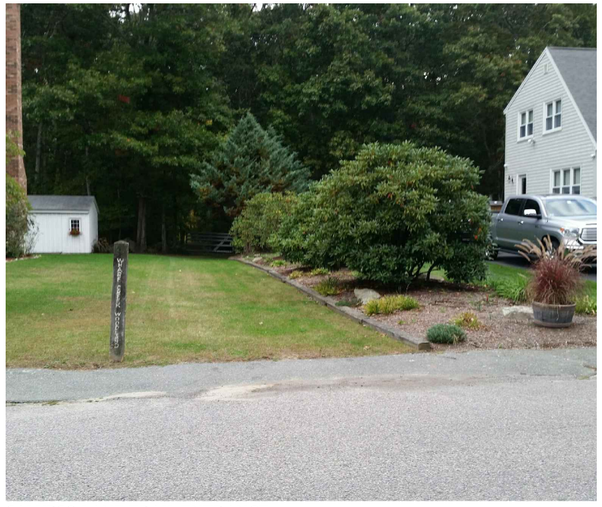
LAND DESCRIPTION:
THIS WAS ONCE A SINGLE LOOP TRAIL THAT HAS FALLEN INTO DISREPAIR AND NO LONGER HAS A NAVIGABLE CONNECTION. THE TRAIL IS VERY QUIET, AND LIES ON A PERCHED WOODLAND AT OR JUST ABOVE THE GREEN HARBOR FLOODPLAIN. THERE IS A DENSE UNDERSTORY OF NATIVE CHOKEBERRY THAT CREATES BOTH AN ATTRACTIVE FALL DISPLAY OF ORANGE AND RED, AND AN IMPENETRABLE THICKET. DESPITE BEING A SMALL CONSERVATION PARCEL IN CLOSE PROXIMITY TO TOWN DEVELOPMENT, THERE IS A DISTINCT SENSE OF SOLITUDE AT THIS WOODLAND THAT SOME OF THE MORE THOROUGHLY DEVELOPED AND POPULAR AREAS DO NOT POSSESS. A SEEMINGLY ANCIENT NETWORK STONE WALLS THREAD THEIR WAY THROUGH THE WOODS RECALLING AN AGRICULTURAL HISTORY AT THIS LOCATION.

PARKING:
STREET PARKING ON CALYPSO LANE IS PERMITTED. PARKING AT DYKE ROAD AND GREEN HARBOR MARINA IS NOT PERMITTED.

MARKINGS AND WAYFINDING:
INTERMITTENT METALLIC TRAIL MARKERS CAN BE FOUND ALONG THE TRAIL

DIFFICULTY AND TRAIL LENGTH:
THESE TRAILS ARE EXTREMELY RUGGED AND ONLY VERY ABLE BODIED AND SKILLED NAVIGATORS ARE RECOMMENDED TO USE THEM. USERS ARE STRONGLY ENCOURAGED TO TURN AROUND IF THE TRAIL BECOMES TOO DIFFICULT TO FOLLOW. THE FOLLOWING TRIP TIMES ARE BASED ON AN EASY HIKING SPEED OF BETWEEN 1.0 AND 2.0 MPH:

- TRIP FROM DYKE ROAD TO GREEN HARBOR VIEWING = .3 MILES OR APPROXIMATELY 12 MINUTES.
- TRIP FROM CALYPSO LANE TO WHARF CREEK VIEWING = .3 MILES OR APPROXIMATELY 12 MINUTES.



CALYPSO LANE TRAIL ENTRANCE.

TYPICAL TRAIL CONDITIONS.

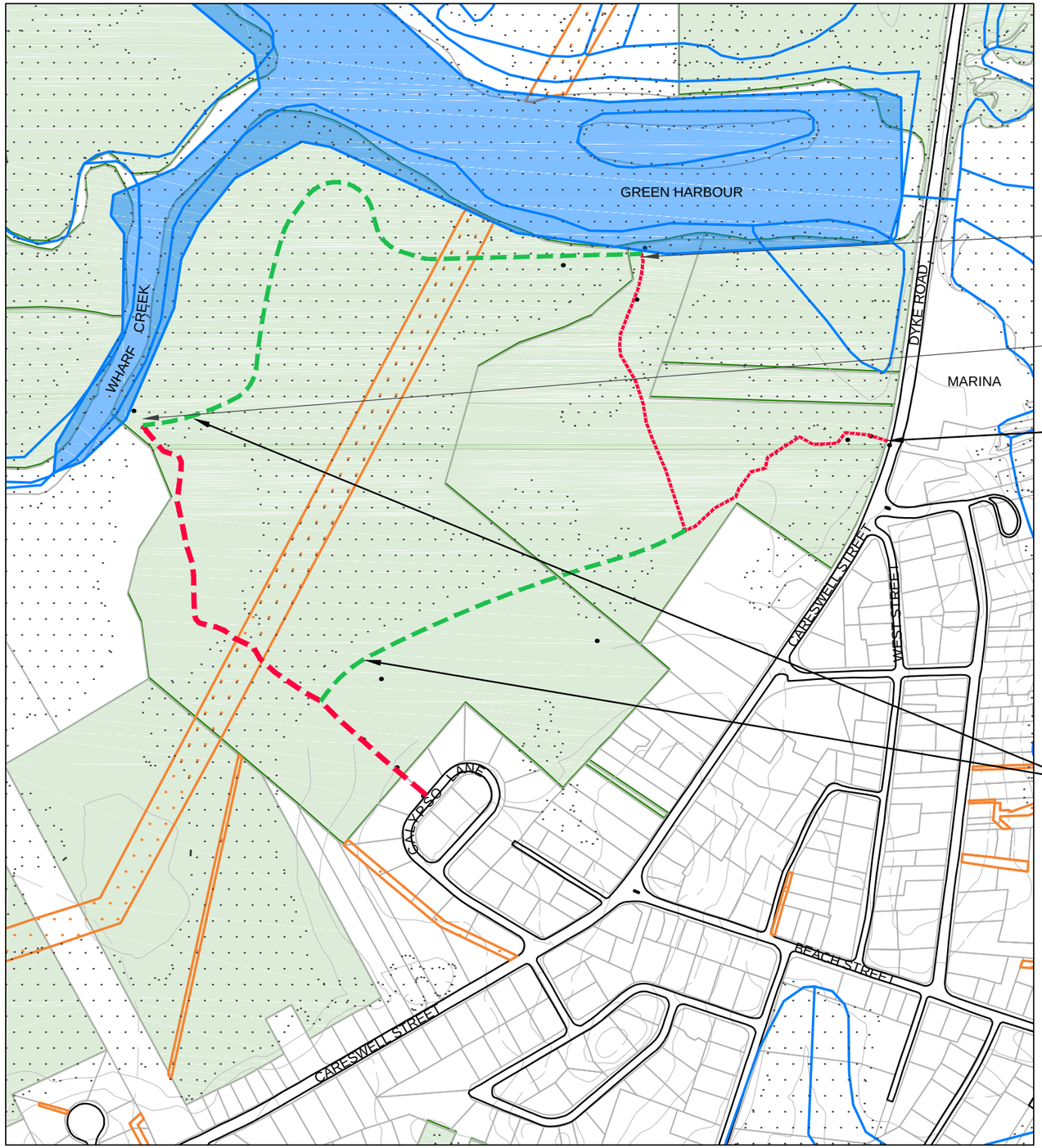
SCENIC VIEW OF WHARF CREEK.

REMNANTS OF STONE WALL.

MARSHFIELD RECREATIONAL TRAILS

WHARF CREEK

AT CALYPSO LANE AND DYKE ROAD



RECOMMENDATIONS

GENERAL

1. PROVIDE ROUTINE TRAIL MAINTENANCE IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE MAINTENANCE SECTION OF THIS REPORT.

2. INCORPORATE TRAIL MARKERS AND WAYFINDING AT TRAIL INTERSECTIONS AND ACCESS POINTS IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE WAYFINDING AND SIGNAGE SECTION OF THIS REPORT.

GRAPHIC SCALE

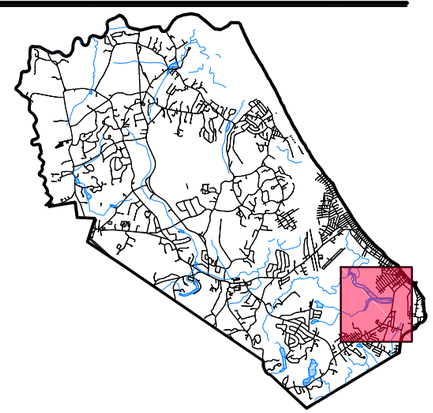
400 200 0 400

SCALE IN FEET

LEGEND

- TRAIL CLASS I — NARROW WIDTH, POTENTIAL STEEP AND RUGGED TERRAIN, NONE OR FEW SIGNS
- TRAIL CLASS II — MEDIUM WIDTH, MODERATE GRADE, LIMITED TRAIL MARKING
- TRAIL CLASS III — BROAD WIDTH, EASY GRADE, WELL-MARKED TRAIL CLASS 3
- ROADWAY
- 30 FT ELEVATION CONTOUR
- PARCEL BOUNDARY
- STREAM/WATERWAY
- WATERBODY
- EASEMENT
- WETLANDS
- OPEN SPACE
- SCHOOL FACILITY
- #. PRIMARY RECOMMENDATIONS
- #. *SECONDARY RECOMMENDATIONS*
- DEVELOPMENT AREAS
- PROPOSED TRAIL

LOCATION PLAN (TOWN OF MARSHFIELD)



BOUNDARY LINES, WETLAND/WATERBODY LIMITS, AND OTHER INFORMATION PROVIDED ON THESE MAPS ARE APPROXIMATE AND SUBJECT TO CHANGE. WHILE EVERY EFFORT HAS BEEN MADE TO ACCURATELY INVENTORY THE TRAIL SYSTEM AND EXISTING CONDITIONS, ACTUAL CONDITIONS MAY VARY FROM THOSE PRESENTED ON THIS MAP. THE TOWN OF MARSHFIELD AND THE CONTRIBUTORS TO THE CREATION OF THIS MAP TAKE NO RESPONSIBILITY FOR ANY LOSS, DAMAGE, OR INJURY ARISING FROM ANY INACCURACIES IN THIS MAP.

MAP CREATED BY BL COMPANIES, INC.
BASE INFORMATION PROVIDED BY TOWN OF MARSHFIELD GIS DATA RESOURCES AND OLIVER: MASS GIS ONLINE MAPPING TOOL.

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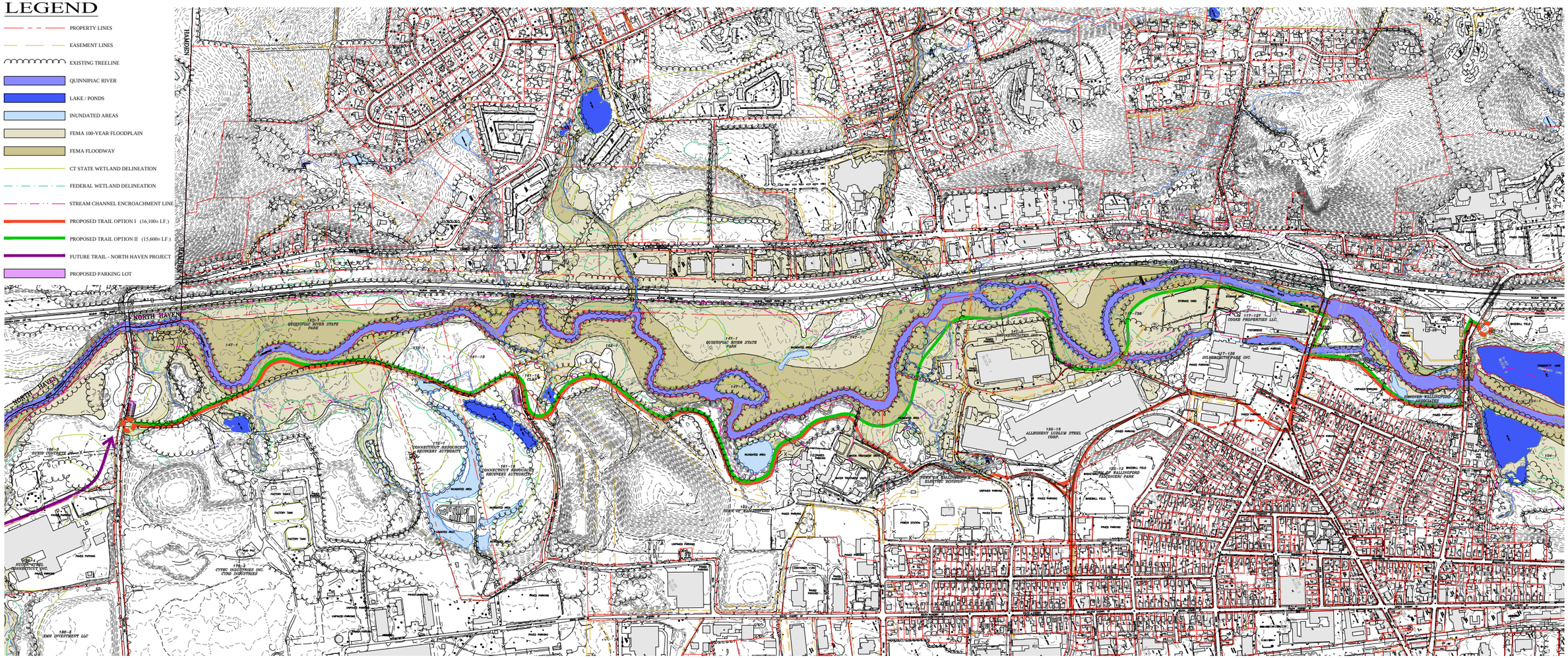
LEGEND

- PROPERTY LINES
- EASEMENT LINES
- EXISTING TREELINE
- QUINNIPIAC RIVER
- LAKE / PONDS
- INUNDATED AREAS
- FEMA 100-YEAR FLOODPLAIN
- FEMA FLOODWAY
- CT STATE WETLAND DELINEATION
- FEDERAL WETLAND DELINEATION
- STREAM CHANNEL ENCROACHMENT LINE
- PROPOSED TRAIL OPTION I (16,100± LF.)
- PROPOSED TRAIL OPTION II (15,600± LF.)
- FUTURE TRAIL - NORTH HAVEN PROJECT
- PROPOSED PARKING LOT



0 300 450 600

NORTH

QUINNIPIAC RIVER LINEAR TRAIL - PHASE IV

Community Lake Park (Hall Ave) to the North Haven Trail (Toelles Road) - Wallingford, Connecticut

TRAIL ROUTING MASTER PLAN

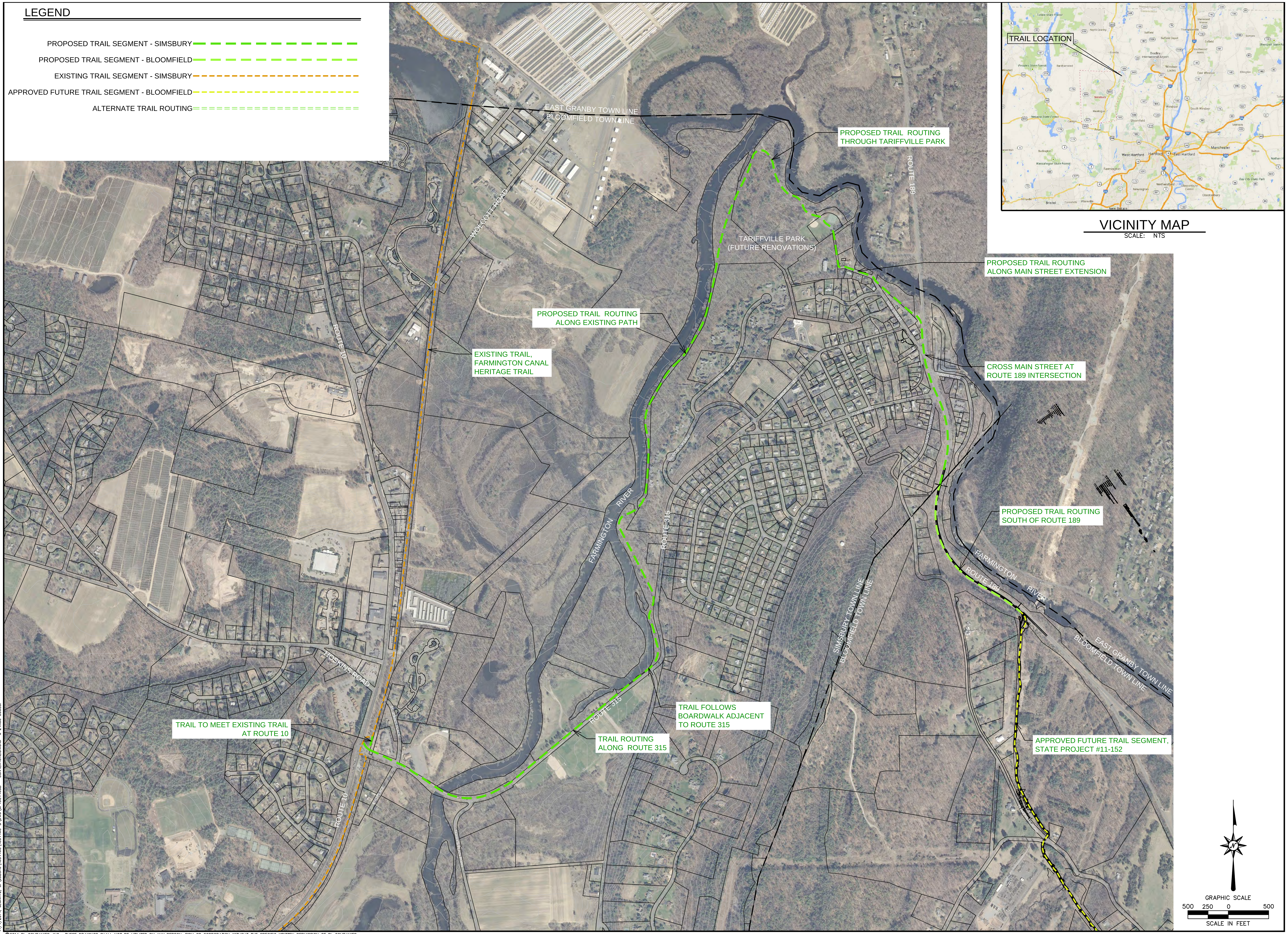
DATE: 5/3/12 REVISED: 9/7/12

PROJECT #: 11C3973 DWG: CP11C397301

ARCHITECTURE
ENGINEERING
PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING
ENVIRONMENTAL SCIENCES

355 Research Parkway
Meriden, CT 06450
(203) 630-1406
(203) 630-2615 Fax

BL Companies



11/4/2014, JEGNATZ, G:\JOBS13\13C4463\13C4463-B\DWG\CP13C4463B – CONTEXTUAL.DWG.CP-0 24X36 500SC.

Xref (s): ; Blm_Floodzone ; Blm_Index Contour ; Blm_Interval Contour ; Blm_Parcels ; Blm_Road Centerline ; Blm_SurfaceWater ; Blm_Topo Features ; XC13C446301 ; XY13C446301 ; BD13C446301 ; Blm_Town Bound ; BD13C446301 ; XY13C446301 ; XZ13C4463B02 ; CP13C446301E ; XZ13C4463B_Aerial ; XZ13C4463B_GISFiles

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150 Trumbull Street, 6th Floor
Hartford, CT 06103
(203) 630-1406
(860) 249-2400 Fax

CONCEPTUAL DESIGN
SUBMISSION
NOT FOR
CONSTRUCTION

TARIFFVILLE GREENWAY MULTI-USE TRAIL

SIMSBURY, CT

REVISIONS

No.	Date	Desc.

Designed	BL COMPANIES
Drawn	J.P.E.
Checked	
Approved	
Scale	1" = 500'
Project No.	13C4463–B
Date	11/4/2014
CAD File:	CP13C4463B – CONTEXTUAL

Title

CONTEXT PLAN

Sheet No.

CP–0

11/4/2014, JEGNATZ, G:\JOBS13\13C4463\13C4463-B\DWG\CP13C4463B01.DWG.CP-1 24X36 100SC.

Xref (s): ; BD13C446301 ; CP13C446301E ; XZ13C4463B_GISFiles_Reduced ; Blm_Parcels ; XZ13C4463B_Concept Aerial ; CP13C4463B – Contextual

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ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

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Hartford, CT 06103
(203) 630-1406
(860) 249-2400 Fax

CONCEPTUAL DESIGN SUBMISSION NOT FOR CONSTRUCTION

TARIFFVILLE GREENWAY MULTI-USE TRAIL

SIMSBURY, CT

REVISIONS

No.	Date	Desc.

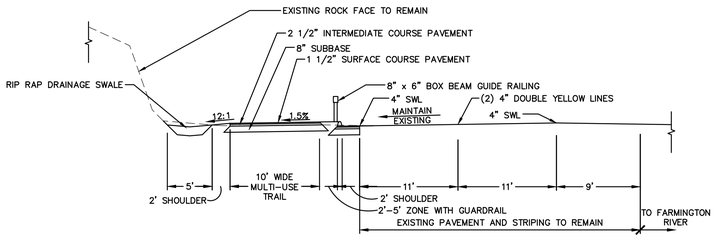
Designed	BL COMPANIES
Drawn	J.P.E.
Checked	
Approved	
Scale	AS SHOWN
Project No.	13C4463-B
Date	11/4/2014
CAD File:	CP13C4463B01

Title

CONCEPT PLAN - SECTION 1A & 1B

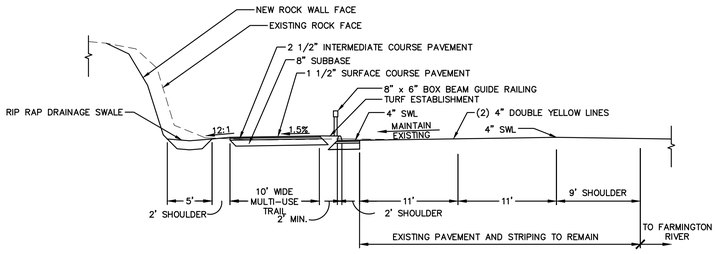
Sheet No.

CP-1



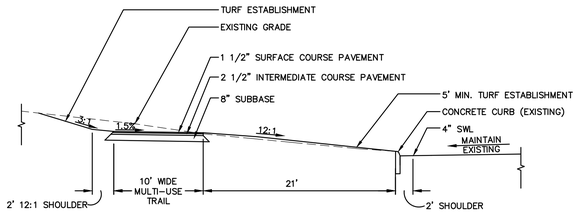
TYPICAL TRAIL SECTION A
ALIGNMENT AT ROUTE 189 NEAR TOWN LINE

SCALE: NTS



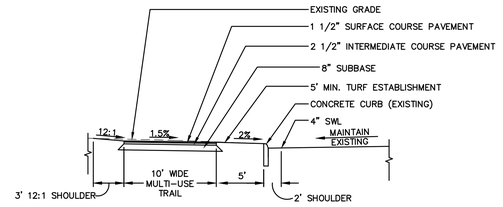
TYPICAL TRAIL SECTION B
ALIGNMENT AT ROUTE 189 NEAR ELM STREET

SCALE: NTS



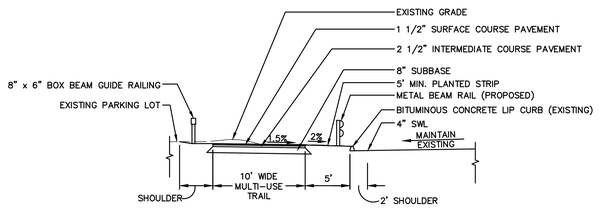
TYPICAL TRAIL SECTION C
ALIGNMENT AT ROUTE 189 NEAR TUNXIS ROAD

SCALE: NTS



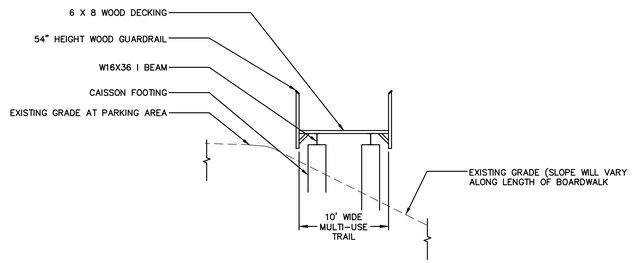
TYPICAL TRAIL SECTION D
ALIGNMENT AT ROUTE 189 NEAR MAIN STREET

SCALE: NTS



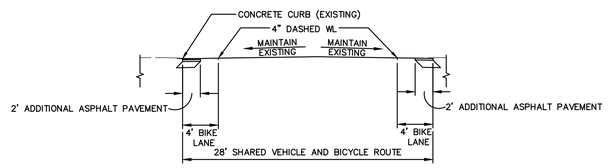
TYPICAL TRAIL SECTION E
ALIGNMENT AT DIVERGENCE FROM ROUTE 189

SCALE: NTS



TYPICAL TRAIL SECTION F
ALIGNMENT AT BOARDWALK STRUCTURE

SCALE: NTS



TYPICAL TRAIL SECTION G
ALIGNMENT AT MAIN STREET EXTENSION

SCALE: NTS

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Hartford, CT 06103
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(860) 249-2400 Fax

CONCEPTUAL DESIGN SUBMISSION NOT FOR CONSTRUCTION

TARIFFVILLE GREENWAY MULTI-USE TRAIL

SIMSBURY, CT

REVISIONS
No. Date Desc.

Designed	BL COMPANIES
Drawn	J.P.E.
Checked	
Approved	
Scale	NTS
Project No.	13C4463-B
Date	11/4/2014
CAD File:	CP13C4463B01

Title

CONCEPT PLAN - SECTION 1A & 1B

Sheet No.

CP-2

11/4/2014, JDONATZ, G:\JOBS\13\13C4463\13C4463-B\DWG\CP13C4463B01.DWG,CP-2 24X36, NTS.

Xref (s): ; B013C4463O1 ; CP13C4463O1E ; X213C4463B_GISFiles_Reduced ; Bim_Parcels ; X213C4463B_Concept Aerial ; CP13C4463B - Contextual

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
CONCEPTUAL DESIGN PHASE

BL Proj. #: **13C4463B** DATE: 11/04/14
SECTION 1A - TARIFFVILLE GREENWAY MULTI-USE TRAIL PREPARED BY: J. Egnatz
SIMSBURY, CONNECTICUT CHECKED BY: N. Giardina
PHASE: CONCEPT DESIGN
LIMITS OF OPINION: **PHASE 1A (Station 20+89 to 37+61)**

Item No.	Items	Unit	Qty.	Unit Price	Total
CONTRACT ITEMS					
0202000	EARTH EXCAVATION	CY	1240	$ 14.00	$ 17,360.00
0202100	ROCK EXCAVATION (BLASTING)	CY	500	$ 63.80	$ 31,900.00
0202482	REMOVAL AND DISPOSAL OF CONCRETE SLABS	SY	100	$ 54.40	$ 5,440.00
0209001	FORMATION OF SUBGRADE	SY	2050	$ 2.60	$ 5,330.00
0212000	SUBBASE	CY	460	$ 37.60	$ 17,296.00
0406170	HMA S1.0 (INTERMEDIATE COURSE)	TON	300	$ 90.80	$ 27,240.00
0406171	HMA S0.5 (SURFACE COURSE)	TON	180	$ 88.40	$ 15,912.00
0406236	MATERIAL FOR TACK COAT	GAL	210	$ 1.60	$ 336.00
0703010	STANDARD RIP RAP	CY	150	$ 67.40	$ 10,110.00
0811001	CONCRETE CURBING	LF	224	$ 25.40	$ 5,689.60
0815001	BITUMINOUS CONCRETE LIP CURBING	LF	1450	$ 4.80	$ 6,960.00
0815091	REMOVAL OF BITUMINOUS CONCRETE LIP CURBING	LF	1500	$ 1.20	$ 1,800.00
0910600	8" X 6" BOX BEAM GUIDE RAILING	LF	1050	$ 52.20	$ 54,810.00
0944000	FURNISHING AND PLACING TOPSOIL	SY	170	$ 6.60	$ 1,122.00
0950005	TURF ESTABLISHMENT	SY	170	$ 1.60	$ 272.00
0992087	KIOSK	LS	1	$ 3,000.00	$ 3,000.00
0992090	BENCH	EA	2	$ 1,500.00	$ 3,000.00
1206090	SIGN RELOCATION	EA	6	$ 1,000.00	$ 6,000.00
1209007	PAINTED PAVEMENT MARKINGS (ROAD AND TRAIL STRIPING)	LF	1120	$ 0.20	$ 224.00
1209050	PAINTED PAVEMENT MARKINGS (CROSSWALK)	SF	335	$ 1.60	$ 536.00
	SUBTOTAL CONTRACT ITEMS:				$ 214,337.60
	LUMP SUM ITEMS				
0201001	CLEARING AND GRUBBING (3%)	LS	1	$ 6,430.13	$ 6,430.13
0971001	MAINTENANCE AND PROTECTION OF TRAFFIC (4%)	LS	1	$ 8,573.50	$ 8,573.50
0975002	MOBILIZATION (7%)	LS	1	$ 15,003.63	$ 15,003.63
0980001	CONSTRUCTION STAKING (1%)	LS	1	$ 2,143.38	$ 2,143.38
	ADDITIONAL ITEMS				
	DRAINAGE AND UTILTIIES (5%)	LS	1	$ 10,716.88	$ 10,716.88
	MINOR ITEMS (15%)	LS	1	$ 32,150.64	$ 32,150.64
	BASE COST:				$ 289,355.76
	CONTINGENCY (15%)				$ 43,403.36
	INFLATION 4% 2 YEARS				$ 23,611.43
	TOTAL COST				$ 356,370.55
	TOTAL ROUNDED COST				$ 357,000.00

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
CONCEPTUAL DESIGN PHASE

BL Proj. #: **13C4463B** DATE: 11/04/14
SECTION 1B - TARIFFVILLE GREENWAY MULTI-USE TRAIL PREPARED BY: J. Egnatz
SIMSBURY, CONNECTICUT CHECKED BY: N. Giardina
PHASE: CONCEPT DESIGN
LIMITS OF OPINION: **PHASE 1B (Station 37+61 to 54+60)**

Item No.	Items	Unit	Qty.	Unit Price	Total
CONTRACT ITEMS					
0202000	EARTH EXCAVATION	CY	610	$ 14.00	$ 8,540.00
0202482	REMOVAL AND DISPOSAL OF CONCRETE SLABS	SY	110	$ 54.40	$ 5,984.00
0209001	FORMATION OF SUBGRADE	SY	1000	$ 2.60	$ 2,600.00
0212000	SUBBASE	CY	230	$ 37.60	$ 8,648.00
0406170	HMA S1.0 (INTERMEDIATE COURSE)	TON	150	$ 90.80	$ 13,620.00
0406171	HMA S0.5 (SURFACE COURSE)	TON	90	$ 88.40	$ 7,956.00
0406236	MATERIAL FOR TACK COAT	GAL	100	$ 1.60	$ 160.00
0811001	CONCRETE CURBING	LF	224	$ 25.40	$ 5,689.60
0815001	BITUMINOUS CONCRETE LIP CURBING	LF	175	$ 4.80	$ 840.00
0815091	REMOVAL OF BITUMINOUS CONCRETE LIP CURBING	LF	460	$ 1.20	$ 552.00
0910170	METAL BEAM RAIL (TYPE R-B 350)	LF	395	$ 21.60	$ 8,532.00
0910600	8" X 6" BOX BEAM GUIDE RAILING	LF	320	$ 52.20	$ 16,704.00
0944000	FURNISHING AND PLACING TOPSOIL	SY	170	$ 6.60	$ 1,122.00
0950005	TURF ESTABLISHMENT	SY	170	$ 1.60	$ 272.00
0992087	KIOSK	LS	1	$ 3,000.00	$ 3,000.00
0992090	BENCH	EA	3	$ 1,500.00	$ 4,500.00
1206090	SIGN RELOCATION	EA	15	$ 1,000.00	$ 15,000.00
1209007	PAINTED PAVEMENT MARKINGS (ROAD AND TRAIL STRIPING)	LF	1500	$ 0.20	$ 300.00
1209050	PAINTED PAVEMENT MARKINGS (CROSSWALK)	SF	470	$ 1.60	$ 752.00
-	BOARDWALK STRUCTURE	SF	3970	$ 105.00	$ 416,850.00
	SUBTOTAL CONTRACT ITEMS (WITH BASE):				$ 521,621.60
	LUMP SUM ITEMS (BASE)				
0201001	CLEARING AND GRUBBING (3%)	LS	1	$ 15,648.65	$ 15,648.65
0971001	MAINTENANCE AND PROTECTION OF TRAFFIC (4%)	LS	1	$ 20,864.86	$ 20,864.86
0975002	MOBILIZATION (7%)	LS	1	$ 36,513.51	$ 36,513.51
0980001	CONSTRUCTION STAKING (1%)	LS	1	$ 5,216.22	$ 5,216.22
	ADDITIONAL ITEMS (BASE)				
	DRAINAGE AND UTILTIIES (5%)	LS	1	$ 26,081.08	$ 26,081.08
	MINOR ITEMS (15%)	LS	1	$ 78,243.24	$ 78,243.24
	BASE COST:				$ 704,189.16
	CONTINGENCY (15%)				$ 105,628.37
	INFLATION 4% 2 YEARS				$ 57,461.84
	TOTAL COST				$ 867,279.37
	TOTAL ROUNDED COST WITH BASE				**$ 868,000.00**

7 - DISCLOSURE

BL Companies

DISCLOSURE

BL Companies has not conducted any municipal projects in Massachusetts in the past five (5) years for which we designed, engineered, created bid specifications, proposed a budget and/or otherwise assisted in the development of a project that subsequently required rebidding, was significantly delayed and/or redesigned due to receiving bids higher than the project budget.

This statement also applies to our State projects conducted for the University of Massachusetts at Amherst.

8 - REFERENCES

References for BL Companies

Project: Bloomfield Multi-Use Trail, Bloomfield, CT
Mr. Jonathan Thiesse, PE
Town Engineer
Town of Bloomfield
800 Bloomfield Avenue
Bloomfield, CT 06002-0337
(860) 769-3587
jthiesse@bloomfieldct.org

Project: Marshfield Comprehensive Trails Plan, Marshfield, MA
Mr. Michael Bilas of the Recreational Trails Committee:
mjbilas@msn.com
781-837-8860
Ms. Michele Campion of the Community Preservation Committee:
lrisheyes1002@aol.com
949-632-4326

Project: Hammonasset Beach State Park Utility Replacement and Trail, Madison, CT
Mr. Lee Rowley, PE, QBS Unit Supervisor
Connecticut Department of Administrative Services/ Division of Construction Services
165 Capital Avenue
Room 460
Hartford, CT 06106
(860) 713-5828
lee.rowley@ct.gov

Project: Silas Deane Highway (Route 99) Streetscape, Rocky Hill, CT
Mr. Raymond Carpentino
Economic Development Director
Town of Rocky Hill
761 Old Main Street
Rocky Hill, CT 06067
(860) 258-7717
rcarpentino@rockyhillct.gov

Project: Wareham Playground and Open Space Recreation Assessment and Plan, Wareham, MA
Ms. Sandy Slavin, Chairwoman
Town of Wareham Open Space Committee
Wareham, MA
(508) 291-1643
asslavin@aim.com

Projects: Replacement of Snow's Creek Culvert, Hyannis, MA, and
Bumps River Bridge Rehabilitation, Osterville, MA
Mr. Roger Parsons, PE
Town Engineer
Town of Barnstable Department of Public Works
382 Falmouth Road
Hyannis, MA 02601
508.790.6302
roger.parsons@town.barnstable.ma.us

References for Matthew Hayes, PE, Project Manager (Pre-BL Companies)

Project: Cape Cod Rail Trail Extension, Phases 1 & 2, Dennis & Yarmouth, MA
Mr. Thomas Andrade
Engineering Department
Town of Dennis
120 Theophilus F. Smith Road
South Dennis, MA 02660
(508) 760-6166
tandrade@town.dennis.ma.us

Project: Cape Cod Rail Trail Extension, Phases 1 & 2, Dennis & Yarmouth, MA
Ms. Kathy Williams
Town Planner
Town of Yarmouth
1146 Route 28
South Yarmouth, MA 02664
(508) 398-2231, ext. 1276
kwilliams@yarmouth.ma.us

References for Nitsch Engineering

Project: Riverfront Road
Mr. Kevin Dumas
Mayor
City of Attleboro
77 Park Street
Attleboro, MA 02703
508-223-2222
mayor@cityofattleboro.us

Project: City of Boston On-Call Contract
Mr. Para Jayasinghe, PE
City Engineer
City of Boston Public Works Department (also on board of PIC)
Boston City Hall, Room 714
1 City Hall Plaza
Boston, MA 02201
617-635-4968
para.jayasinghe@cityofboston.gov

References for John Michalak, PE, Trail Alignment and Public Outreach (Pre-Nitsch Engineering)

Project: The Northern Strand Community Trail – Malden, MA
Ms. Elizabeth Debski (former Project Manager, Malden Redevelopment Authority)
Executive Director, The Salem Partnership
8 Central Street
Salem, MA 01970
978-741-8100
bdebski@salempartnership.org

Project: Mystic River Reservation Trail Boardwalk – Somerville, MA
Mr. Dan Driscoll
Director of Recreational Facilities Planning
Department of Conservation and Recreation
251 Causeway Street, 7th Floor
Boston, MA 02114-2119
617-626-1438
dan.driscoll@state.ma.us

CAPACITY

The project team will be available to start work under this contract immediately upon contract signing. BL Companies has ample staffing to accommodate the Belmont Community Path Feasibility Study project. In addition to the commitment of the key personnel shown herein, BL Companies coordinates weekly company-wide scheduling to maintain the ability to staff assignments on an "as needed" basis and stands ready to commit the required resources to provide an exceptional level of service through to the completion of all contract requirements.

10 - FINANCIAL STATEMENTS

BL Companies

BL COMPANIES, INC.

FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION

YEARS ENDED DECEMBER 31, 2015 AND 2014

BL COMPANIES, INC.

FINANCIAL STATEMENTS

CONTENTS

friedman kannenberg
and company pc

Certified Public Accountants

17 Talcott Notch Road
Farmington, CT 06032
Tel: 860.677.9191
Fax: 860.674.9602
info@fkco.com
www.fkco.com

INDEPENDENT ACCOUNTANTS' REVIEW REPORT

To the Board of Directors and Members of
BL Companies, Inc.
Meriden, Connecticut

We have reviewed the accompanying financial statements of BL Companies, Inc. (an S Corporation), which comprise the balance sheets as of December 31, 2015 and 2014, and the related statements of income and retained earnings and cash flows for the years then ended, and the related notes to the financial statements. A review includes primarily applying analytical procedures to management's financial data and making inquires of Company management. A review is substantially less in scope than an audit, the objective of which is the expression of an opinion regarding the financials statements as a whole. Accordingly, we do not express such an opinion.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement whether due to fraud or error.

Accountants' Responsibility

Our responsibility is to conduct the review engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the AICPA. Those standards require us to perform procedures to obtain limited assurance as a basis for reporting whether we are aware of any material modifications that should be made to the financial statements for them to be in accordance with accounting principles generally accepted in the United States of America. We believe that the results of our procedures provide a reasonable basis for our conclusion.

Accountants' Conclusion

Based on our review, we are not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in accordance with accounting principles generally accepted in the United States of America.

Friedman, Kannenberg & Company, P.C.

Farmington, Connecticut
March 7, 2016

BL COMPANIES, INC.
BALANCE SHEETS
DECEMBER 31, 2015 AND 2014

	2015	2014
ASSETS		
CURRENT ASSETS		
Cash	$ (627,083)	$ (539,581)
Bank credit line - investing position	3,406,947	1,113,105
Net cash	2,779,864	573,524
Accounts receivable, net	10,924,346	9,451,852
Prepaid expenses	63,439	128,342
Work in process	400,900	69,500
Miscellenaous receivable	15,404	-
TOTAL CURRENT ASSETS	14,183,953	10,223,218
PROPERTY AND EQUIPMENT, net	1,100,249	1,254,098
ASSETS UNDER CAPITAL LEASE, net	-	-
OTHER ASSETS		
Deposits and retainage	762,165	727,424
	762,165	727,424
	$ 16,046,367	$ 12,204,740
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Current maturities of long-term debt	$ 521,210	$ 616,066
Accounts payable	1,005,017	1,097,075
Accrued expenses	8,147,772	6,369,872
TOTAL CURRENT LIABILITIES	9,673,999	8,083,013
LONG-TERM DEBT, less current maturities included above	8,876	503,457
STOCKHOLDERS' EQUITY		
Common stock, no par value, 100,000 shares authorized,		
11,400 shares issued, 6,751 shares outstanding	1,000	1,000
Additional paid-in capital	2,029,462	2,029,462
Retained earnings	7,006,294	4,261,072
	9,036,756	6,291,534
Less treasury stock, 4,649 shares	(2,673,264)	(2,673,264)
	6,363,492	3,618,270
	$ 16,046,367	$ 12,204,740

See accompanying notes and independent accountants' review report.

BL COMPANIES, INC.
STATEMENTS OF INCOME AND RETAINED EARNINGS
YEARS ENDED DECEMBER 31, 2015 AND 2014

	2015		2014	
	$	%	$	%
FEE REVENUE	$ 47,957,127	100.0	$ 42,897,965	100.0
DIRECT COSTS	24,317,545	50.6	22,567,365	52.7
GROSS PROFIT	23,639,582	49.4	20,330,600	47.3
GENERAL AND ADMINISTRATIVE EXPENSES	20,847,124	43.7	18,332,134	42.4
INCOME FROM OPERATIONS	2,792,458	5.7	1,998,466	4.9
OTHER INCOME (EXPENSES)				
Gain (loss) on sale of assets	(5,213)	-	507	-
Interest expense	(42,023)	(0.1)	(72,863)	(0.2)
	(47,236)	(0.1)	(72,356)	(0.2)
NET INCOME	2,745,222	5.6	1,926,110	4.7
BEGINNING RETAINED EARNINGS	4,261,072		2,334,962	
ENDING RETAINED EARNINGS	$ 7,006,294		$ 4,261,072	

See accompanying notes and independent accountants' review report.

11 - CONFLICT OF INTEREST

BL Companies

POTENTIAL CONFLICTS OF INTEREST

BL Companies anticipates no potential conflicts of interest of affiliations with groups or persons that have an interest in the Belmont Community Path Feasibility Study project.

APPENDIX D

REQUEST FOR PROPOSALS

BELMONT COMMUNITY PATH FEASIBILITY STUDY

CERTIFICATION OF NON-COLLUSION

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

April 20, 2016
Date

BL Companies New England, Inc.
Name of Entity submitting bid, whether individual, partnership, corporation, joint venture or other business or legal entity.

Corporation
Type of Entity

355 Research Parkway
Address

Meriden, CT 06450

203-630-1406
Telephone

By 
Authorized signature of entity submitting proposal

Vice President, Director of Engineering
Signer's duly authorized position, office or title

APPENDIX E

REQUEST FOR PROPOSALS

BELMONT COMMUNITY PATH FEASIBILITY STUDY

STATEMENT OF TAX COMPLIANCE

Pursuant to M.G.L. Chapter 62c, Section 49A, I certify under the penalties of perjury that this firm, to the best knowledge and belief, has filed all State Tax returns and paid all State Taxes required under law.

20-1986330
Federal Identification Tax Number

BL Companies New England, Inc.
Name of Entity submitting bid, whether individual, partnership, corporation, joint venture or other business or legal entity.

Corporation
Type of Entity

355 Research Parkway
Address

Meriden, CT 06450

203-630-1406
Telephone

By 
Authorized signature of entity submitting proposal

Vice President, Director of Engineering
Signer's duly authorized position, office or title