Tighe&Bond

RFP #24-127T - TECHNICAL PROPOSAL FOR

Traffic Signal and Pedestrian Improvements - Saugatuck Center

SUBMITTED TO

Town of Westport, CT

09/24/24

September 26, 2024

Berit Watson
Town of Westport, Purchasing Officer
Finance Department
Town Hall, Room 313
110 Myrtle Avenue
Westport, CT 06880

Re: **RFP #25-127T – Traffic Signal and Pedestrian Improvements, Saugatuck Center**

Dear Selection Committee:

Tighe & Bond has prepared this proposal demonstrating our unique technical expertise, similar project experience, and sound technical approach to successfully deliver this multi-modal traffic and transportation safety improvement project in Saugatuck Center. Our Statement of Qualifications presents a Project Approach demonstrating our understanding of the Scope of Work and the engineering activities we will conduct to identify feasible and implementable solutions to improve traffic and pedestrian safety and mobility. We have reviewed the project site and developed an understanding of the technical challenges and regulatory approvals associated with the Town's project objectives. We have identified key staff familiar to Westport staff, with extensive traffic engineering, traffic control signal design, and complete streets design experience to conduct the requested design process to identify preferred improvements for the Town. We have extensive experience conducting public outreach and are committed to working with Town staff and project stakeholders to work towards a consensus solution that meets the Town's goals and objective.

We believe these factors set our team apart from the competition:

- **We have committed highly experienced, familiar staff to your project** – We have assembled our in-house traffic and transportation experts to complete your project. Our local staff, based out of our Connecticut offices, with similar experience in Westport will be assigned to your project. **Chris Granatini, PE** will serve as **Project Director**. Chris brings a wealth of experience in the design and management of traffic and transportation engineering projects in Westport, for other local municipal clients and collaborating with the Connecticut Department of Transportation. Chris's experience includes transportation planning and design providing a unique skill set to oversee the execution of this assignment. **Craig Yannes, PE, PTOE, RSP1** will lead our team as **Project Manager** and **Jonathan Bossi, PE** will serve as our **Assistant Project Manager/Design Lead.** As a career transportation/traffic engineer with over 13 years of experience, Craig is experienced in leading complex traffic, safety, and complete streets projects and has guided multiple projects through the OSTA, DOT-Traffic Division, and CTDOT procedures. Jon has designed similar infrastructure improvement projects in Westport, understands the CTDOT Encroachment Permit process, and has been working collaboratively with Chris and Craig on other similar projects within our project portfolio. Our project management team will be supported by our in-house experts in traffic engineering, roadway design, structural engineering, environmental permitting, all disciplines that are critical to the project development process.

  We have partnered with **Martin Surveying Associates, LLC (MSA)** and **CT Counts, LLC, both based in Berlin, CT,** for field survey and traffic data collection services, respectively. Both MSA and CT Counts have a continuing services agreement with Tighe & Bond, having developed a strong relationship with our firm by providing quality services on numerous projects.

- **Experience Performing the Requested Services in the RFP** – Tighe & Bond is a full-service firm and has committed discipline leads with the experience and technical capabilities necessary to solve the complex design issues associated with this project. We are recognized within our industry as traffic engineering and transportation experts and have extensive recent and similar project experience providing the expertise required to successfully execute this assignment. Our staff are leaders in their

fields, often giving presentations before professional organizations. Our committed project team is backed by over 100 local staff in Connecticut who can be made available to provide specialized expertise as project needs dictate.

- **We are the right size firm for the Town of Westport** – Tighe & Bond is a growing Northeast-based, mid-sized, employee-owned firm that focuses on delivering successful projects for our municipal clients. We have a proven record of providing responsive services to the Town of Westport, which makes Tighe & Bond a consultant of choice. We have the breadth of transportation-related services and staffing resources to address any project challenges. We are employee-owned, and our staff share in the success of the firm, which is only made possible by delivering multiple successful projects for our clients. Our staff embody our Core Values of **Integrity**, **Excellence**, **Reliability**, **Commitment**, **Respect** and **Safety**. These traits align with professional growth and success for our staff, our projects, and exceeding client's expectations. We are a known commodity to the Town of Westport staff and have successfully delivered assignments for the Town to improve your local transportation system for all users.

- **We are experienced delivering projects coordinated through CTDOT** – Our team is prequalified by CTDOT in several categories, including, **Highway Design**, **Traffic and Safety Engineering**, **Construction Engineering & Inspection,** and **Bridge and Structure Design**. Our key personnel have completed numerous projects under the Local Transportation Capital Improvement Program (LOTCIP), Small Town Economic Assistance Program (STEAP), and Transportation Alternatives Program (TAP), among others. We have established a record of successfully interfacing and coordinating with CTDOT staff through previous project work, from funding applications through project design, permitting, and construction. This experience and relationships with CTDOT will benefit the Town throughout the study, design and construction process when seeking funding support for your transportation improvements.

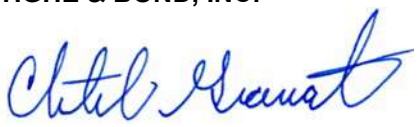
We are excited about the prospect of providing engineering services to the Town of Westport for this project. Our team has the expertise to efficiently complete this assignment in a timely manner, with recent experience delivering similar projects, allowing us to efficiently study, design and permit this project.

Tighe & Bond has reviewed the insurance requirements in the RFP. Our firm maintains industry standard insurance policies for the services we provide. If selected, Tighe & Bond, Inc., would like the opportunity to present an agreement utilizing similar terms as previously agreed to between our firm and the Town, modified as necessary to align with the on-call nature of this RFP.

If you have any questions about the enclosed information, please contact us at the information below. We welcome the opportunity to interview with the Town to discuss our qualifications and project approach in person.

Sincerely,

TIGHE & BOND, INC.



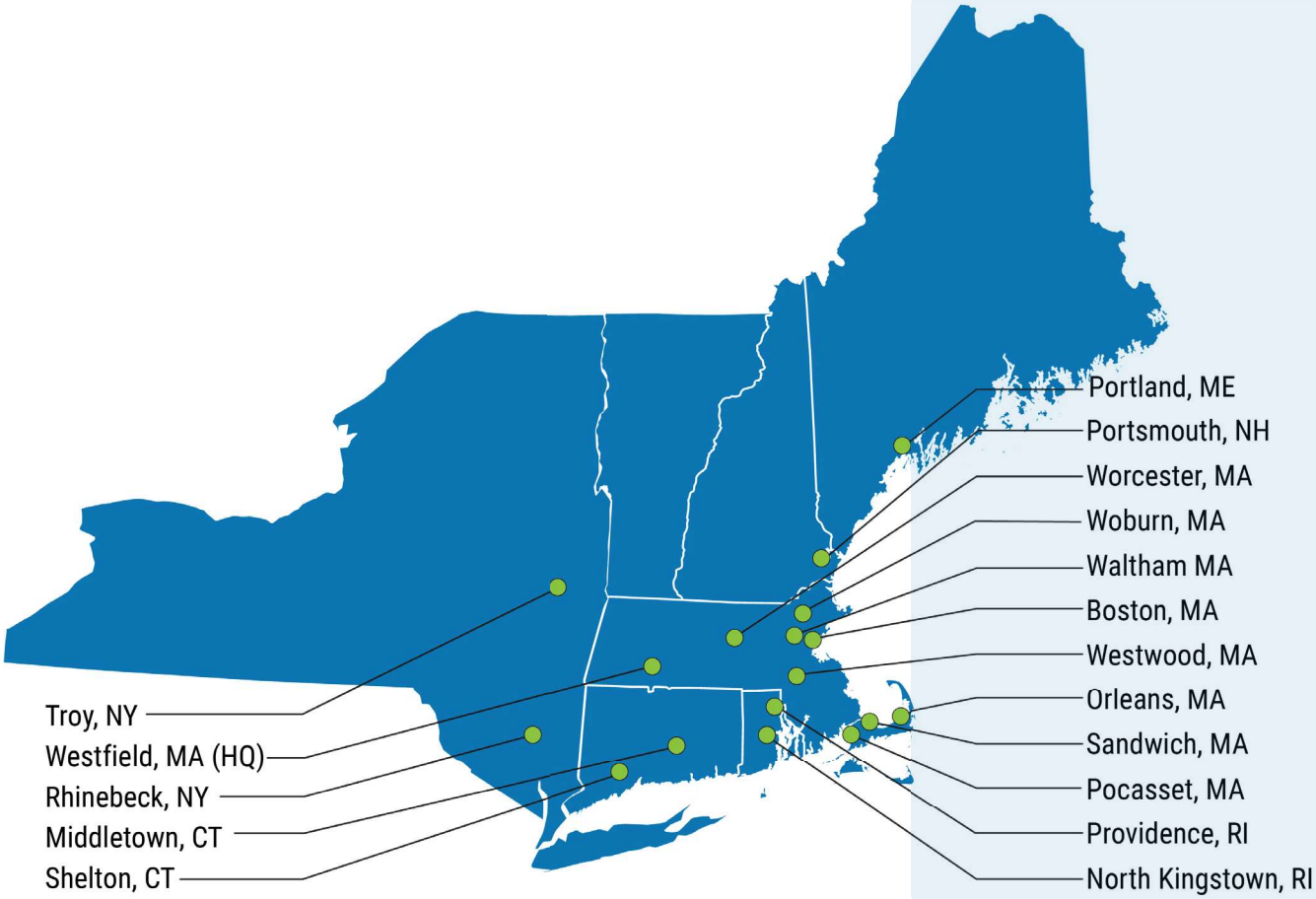
Christopher O. Granatini, PE
Vice President
(860) 704-4771
cogranatini@tighebond.com

Craig D. Yannes, PE, PTOE, RSP1
Project Manager
(203) 712-1114
cdyannes@tighebond.com

Enclosures

Table of Contents

OUR LOCATIONS



With offices across the Northeast, we are ready to provide responsive, high-quality professional services to efficiently meet your project goals, schedule, and budget.

Tighe&Bond

Firm Overview

FOUNDED

1911

TEAM MEMBERS

550+

ZWEIG GROUP

BEST FIRMS TO WORK FOR

BANKER & TRADESMAN'S BEST OF 2022

#1 IN ENGINEERING & ENVIRONMENTAL SERVICES

ENR NEW ENGLAND TOP DESIGN FIRMS

#8

SMPS BOSTON

2023 EMPLOYER OF THE YEAR

For over a century, Tighe & Bond has been a leading multi-disciplinary consulting firm in the Northeast, manifesting its clients' vision for a better-built environment by providing full-service engineering, landscape design, site planning, and environmental services. Innovative thinking and exceptional service have always been at the core of our work.

In addition to our engineering and environmental expertise, Tighe & Bond's landscape design studio (Halvorson | Tighe & Bond Studio) offers a unique perspective, creating more holistic solutions to unlock each site's potential.

Our experienced professionals provide concept-to-completion expertise to address our public and private clients' needs comprehensively. The Tighe & Bond team develops creative, collaborative responses to complex challenges by focusing on bright ideas, green strategies, and clear solutions. We always continue evolving to keep pace with our ever-changing industry because moving forward is what we do.




SERVICES

Building Services: MEP, Structural & Geotechnical Engineering

Coastal & Waterfront Solutions

Environmental Consulting

GIS/Asset Management

Landscape Architecture & Urban Design

Site Planning & Design

Transportation Engineering

Water & Wastewater Engineering

Traffic Engineering

Tighe & Bond provides complete traffic engineering services to our clients. Our traffic engineers typically have dual responsibilities to both understand the art of traffic engineering along with the physical design that accompanies traffic operations solutions. Our traffic studies include data collection, traffic projections, traffic generation estimates and distribution, site access/egress analysis, multi-modal accessibility, and traffic operations analyses and simulations. We study the need for additional traffic controls including stop signs, roundabouts and signals through preparation of warrant analyses under the Manual of Uniform Traffic Control Devices (MUTCD) and industry standard best practices. One of Tighe & Bond's core services involves the preparation of traffic engineering and planning studies for communities and developers to facilitate local and State approvals. Through these studies, we prepare off-site improvement plans including traffic signal designs for new installations and equipment upgrades, and review safety issues to determine appropriate mitigation.

Tighe & Bond's staff includes Professional Traffic Operations Engineers (PTOE) and Registered Safety Professionals (RSP) with broad experience in providing proven traffic safety analysis and design. During the data collection phase, our team obtains collision reports that provide a statistical representative sample of the frequency and type of collisions that occur. A detailed review of the data categorizes patterns, types, and number of collisions through collision diagrams and crash rate calculations. The collision data is analyzed and our team identifies the safety issues that warrant further investigation or remedial action to correct deficiencies. The goal of the safety analysis is to use the data to identify the key contributing factors and physical conditions that are the root cause for any patterns of crashes that are occurring. With this knowledge, the team identifies measures to mitigate the deficiencies or operating conditions through the implementation of tested improvements that have been deployed nationally under similar operating conditions. Ultimately, the goal is to eliminate fatalities and major injuries as well as reduce all other types of crashes throughout the study area.

Our accurate project simulations facilitate the communication process among the public and key project stakeholders.

Traffic Signal Design

Another one of Tighe & Bond's core services is the development of traffic control signal designs. We have developed several recent projects that included isolated and coordinated traffic control signals and traffic signal systems that incorporate the latest technologies, including ITS elements for detection and monitoring intersections. Our approach to the development of traffic signal design includes an assessment of each location to identify the most appropriate signal support method, span wire or mast arm. We also incorporate our client's preferences into each design, including support method, aesthetics, and equipment specifications. We support the design with detailed traffic analyses and modeling to identify appropriate signal timings and if necessary, signal patterns within a signal system. Our relevant experience includes a multitude of systems from isolated locations to sophisticated signal systems involving fiber optic, wireless, time-clock, and fixed wire communications, as well as microwave, radar, video and loop detection methods. We have completed signal warrant studies for communities to determine the necessity, safety benefits and viability of upgrading intersections with traffic signals per MUTCD and CTDOT requirements.

Completed signal design, part of the Route 111 Traffic Signal and Roadway Improvements for the Town of Trumbull, CT

In support of our traffic signal design, Tighe & Bond has the in-house capacity to analyze complex intersection operations using Synchro, SimTraffic and VISSIM software, as needed. We have found that the development of accurate simulations provides significant benefits during project presentations to the public and provides a visual representation that can easily be understood. We use the results of these applications to advise the design of our traffic control signal settings and timings to develop corridor timing plans and time of day patterns to provide the most efficient traffic operations.

COMPLETE STREETS

Prospect Street Complete Streets Improvements, New Haven, CT

Kings Highway Pedestrian Improvements, Fairfield, CT

Oaklawn Avenue Improvements, Stamford, CT

Main Street and Boulder Driveway Two-Way Conversion, Fitchburg, MA

DEDICATED BICYCLE & PEDESTRIAN FACILITIES

Route 111 Pequonnock River Trail Crossing Improvements, Trumbull, CT

Edgewood Avenue Cycle Track Planning, New Haven, CT

North Central Pathway, Winchendon, MA

Westfield River Levee Trail, Westfield, MA

MULTIMODAL PLANNING

Route 2 Bicycle and Pedestrian Corridor Plan, Stonington, CT

Black Rock Turnpike Corridor Study, Fairfield, CT

Subbase New London Joint Land Use Implementation Study, Groton & New London, CT

Route 4 Study, Farmington, CT

Route 25/111 Corridor Study, Monroe & Trumbull, CT

Central Street Study, Winchendon, MA

Fitchburg Downtown Circulation Study, Fitchburg, MA

Multimodal Mobility Services

Tighe & Bond's staff is experienced in planning and designing transportation facilities that accommodate all users as well as dedicated bicycle and pedestrian facilities. We have provided a variety of services related to multimodal mobility and safety on projects that include on-road bicycle networks in both urban and rural settings, greenways and river walks, and rails-to-trails. Our diverse expertise, as shown by the projects listed to the left, allows us to envision inclusive transportation facilities desirable for all users during planning stages, translate that planning concept into an implementable design, and ensure proper construction through administration and observation. In addition, our full suite of in-house engineering and environmental services allows us to provide necessary support services to efficiently and comprehensively plan and design transportation system enhancements to safely and efficiently move all user modes. We recognize that "one size does not ft all" with respect to the wide range of project types and clients we serve.

Our design approach strikes a balance between community needs, aesthetics, funding, and schedule considerations, while at the same time adhering to critical elements of accepted design standards for public safety. Our dedicated team of transportation professionals stay on top of developments in bicycle and pedestrian mobility and bring the most current, creative, and fiscally responsible solutions to our clients. Our in-house staff of engineers, planners and environmental scientists embrace the challenges of accommodating the multitude of users of our transportation facilities and work together to determine the most cost-effective use of limited transportation funding resources, and design environmentally sensitive and sustainable projects. Furthermore, we understand the importance of building consensus amongst stakeholders, and therefore we work with the decision makers early on in the process to identify key stakeholders and work closely with them when shaping a project for the benefit of
the community

PUBLIC ENGAGEMENT TOOLBOX

- Design
- Public Hearings
- Public Information Meetings
- Town Council Presentations
- Town Board and Commission Presentations
- Technical Advisory Committee Meetings
- Community Advisory Committee Meetings
- Community Workshops
- Mobile Pop-Up Meetings at Community Events
- Focus Groups Stakeholder Meetings
- Local Chamber of Commerce Meetings
- Project Newsletters
- Online Surveys and Polls
- Social Media
- Drone Videos and Imagery
- Innovative Drone Data Analysis
- Photorealistic Renderings
- Infraworks
- 3D Fly-throughs
- Traffic Modeling
- Synchro 3-D & VISSIM Simulations
- ArcGIS Geodatabases
- ArcGIS Story Maps

Community Outreach & Engagement

Tighe & Bond has considerable experience facilitating public engagement programs in support of our transportation, infrastructure, and other community projects. Our outreach techniques seek to bring citizen groups, stakeholders, policy steering committees, governing bodies, etc. to the table to help gather ideas and information that guide the project development process. This engagement with each community ensures that through a comprehensive outreach program, our projects obtain broad support which is the key to ultimate project success.

Our approach to public engagement begins by working with each client and community to understand project goals and objectives. These guiding factors support the development of a public engagement approach that addresses the project's needs, budget, and level of engagement required to ensure a successful project. We work with each town to identify diverse stakeholders for each project and develop and implement a communication plan to maintain consistent communication throughout the project development process.

The execution of effective public engagement relies on several critical success factors. Tighe & Bond brings together expertise in our areas of practice, engaged staff that understand the project objectives and communities that we work in, and tools and technologies supporting engaging presentations and meetings that foster an environment of communication between our team and the public. These skills are essential during the public outreach phases of a project, as most of our only a requirement but a benefit to ultimate project success.

Tighe & Bond utilizes various techniques to reach project stakeholders. We have developed and conducted online surveys to readily reach broad interested populations with focused questions to support the development of both existing conditions plus a community's vision for the future. We have utilized social media to provide a consistent platform to inform the public and to gather feedback. We have conducted pop-up meetings at community events allowing our team to go to stakeholders rather than congregating in meetings. Finally, we are highly experienced developing and delivering engaging presentations in formal meeting settings where we conduct open two-way communication with the public.

Tighe & Bond's team, led by Chris Granatini and Collene Byrne, conduct a public meeting for the Safe Streets for All Safety Action Plan in Westport, CT

Our experienced construction administration staff play an active role throughout design, construction, and project close-out. Pictured above: Tighe & Bond providing construction observation services for drainage improvements at Bridgeport Hospital.

When necessary during the construction phase, we coordinate design adjustments with office staff and clients to be responsive to changes in the field to ensure that work can continue without interruption.

Construction Phase Services

As our engineering projects transition to the construction phase, we provide the administrative services to carry the design through construction to substantial completion. We have provided these services on a variety of municipal projects of all sizes. Our construction phase administrators understand the reporting requirements for LOTCIP projects, as exhibited by our services provided to the Town of New Milford in support of the Still River Drive Modern Roundabout. On this project, Tighe & Bond's engineers provided part-time construction observation, prepared daily work reports, and coordinated design adjustments with office staff to be responsive to changes in the field to ensure that work continued without interruption. Internally, our design project manager remained fully engaged in the construction phase of the project to provide continuity for the municipality and ensure that design decisions were translated into field decisions.

On other municipal transportation projects, Tighe & Bond staff have worked cooperatively with both municipal project managers and construction administrators and CTDOT Municipal Services Action Team (MSAT) members to administer projects with federal funding which required full-time construction engineering and inspection services to comply with funding requirements. We provided these services to the City of Stamford for both the Oaklawn Avenue Roadway Improvements, a project designed by Tighe & Bond, and for the Atlantic Street at Henry Street Intersection Improvements, which was a project that was designed by another firm. On both of these assignments the CTDOT Four Book System was followed for all construction record keeping.

Our construction phase services include bidding and contract award assistance, construction administration, and construction observation. These services are described in more detail in the following sections.

Bidding and Contract Award Assistance

During the bidding process, Tighe & Bond provides assistance to the Client from the preparation of contract documents to advertising and bid result analysis.

Our bidding services typically include:

- Preparation and compilation of municipal front end contract documents such as bid forms, specifications, and plan sets
- Bid advertisement and distribution of contract documents including utilization of our internal project bidding website to facilitate electronic tracking of contractors, electronic communications with prospective bidders, and cohesive issuance of contract changes
- Attendance at pre-bid meetings

- Preparation and issuance of addenda responding to questions and comments during the bidding period on our design deliverables
- Opening and review of bids; contacting references when appropriate; developing bid tabulations and analyses to verify that bids are compliant with requirements
- Investigating and evaluating the qualifications of the low bidders and providing recommendations to the Client as to the "lowest qualified bidder"

Construction Administration

Tighe & Bond provides construction administration support services throughout the entirety of the construction phase and project close-out. At the beginning of the construction phase, our staff reviews shop drawings for conformance with project plans and specifications, and evaluates material substitutions proposed by the contractor. During construction, Tighe & Bond maintains open communication between field personnel, the client, and contractors to relay information and answer any questions or RFI's. If necessary, additional sketches or plan revisions can be provided for clarification or field changes.

Regularly scheduled construction meetings are coordinated to review construction progress and project updates. Our project coordinators interface with our clients and field staff to develop construction meeting agendas and developing meeting summaries documenting the meeting discussions for all parties involved. With support from the field personnel, Tighe & Bond reviews contractor pay requisitions and proposed contract change orders, including reviewing both the requested changes and associated costs to ensure proper value is assigned to the changes.

During close-out of the construction phase, Tighe & Bond prepares recommendations for final acceptance of the project including conducting a final site walkthrough and preparing the punch list to identify any incomplete items or corrective action items. Our construction administrators review project records to document item changes and reconcile quantities and project costs. We track materials testing results and provide guidance to the contractor with respect to non-conforming materials that were identified through the materials testing process. This process ensures the project is in conformance with the contract documents and standards.

Construction Observation

Tighe & Bond provides on-site construction observation services, both part-time or full-time based on project requirements, budgets and required level of oversight of the work to meet the construction reporting requirements. During the construction phase, Tighe & Bond field personnel document the contractor's activities with well-organized field reports and photographs. The information collected typically includes a daily summary of the work completed, contractor's staff and equipment, measurement and calculation of payment, and a summary of general site conditions and key activities.

Field staff work closely alongside the contractor to ensure the construction and materials are in compliance with the contract documentation. Under the scenario when unanticipated conditions are encountered our observers provide the experience to work cooperatively with the contractor to identify the proper course of action to address issues and if needed document the extra work as cost plus or direct changes in quantities. Working in concert with office support staff, our observers understand when additional design support is needed to ensure the correct course of action is taken. If required for the project, field sampling and materials testing are coordinated with the office staff and testing agencies. Tasks performed by office and field staff provide effective and efficient support of the project through the construction phase.

Riverside Avenue sidewalks improvement project, Westport, CT

Project Approach

Project Understanding

Saugatuck Center is an integral part of Westport offering housing, shopping, restaurants, and waterfront amenities. Saugatuck Center is situated along I-95 and is home to the Saugatuck railroad station, making it a hub for the Town's commuters, residents, and visitors. The area is congested with vehicles, pedestrians, and bicyclists traveling to and from the train station's commuter lots and the many amenities in Saugatuck Center. The amount of activity, particularly on Riverside Avenue, warrants an evaluation of the corridor and immediate upgrades to traffic signals, regulatory signing, and pavement markings to improve safety for pedestrians.

The Town of Westport is proposing to replace the existing Saugatuck Firehouse traffic signal and install a new mid-block crossing with a Rapid Rectangular Flashing Beacon (RRFB) between I-95 and Ketchum Street. There are existing signalized crossings about 350 feet north (Bridge Street), and 375 feet south (Charles Street) of the proposed mid-block crossing location. There is also an uncontrolled painted crosswalk at Ketchum Street where the firehouse's traffic signal is located. The location of this new crossing is immediately adjacent to commuter lots on each side of the street and would provide more visibility to pedestrians, who commonly cross Riverside Avenue in unmarked locations.

RRFB Installation, Route 44, Salisbury, CT

The section of Riverside Avenue between Bridge Street and Charles Street is state-owned (Route 136). The roadway has 5-foot-wide sidewalks with on-street parking along much of the corridor. Beyond the limits of the existing roadway and sidewalks are adjacent parking lots and building frontages. Due to these site constraints, we expect that most of the proposed construction will have to occur within the existing right-of-way while limiting the amount of lost on-street parking spaces. Additionally, all work will need to confirm to CTDOT standards and specifications and obtain approval for a CTDOT District 3 Encroachment Permit.

Tighe & Bond's committed project team is familiar to Town staff and has extensive experience in Westport and the project area, having recently completed the Riverside Avenue Roadway and Sidewalk Improvements project. We supported the Town throughout the funding application process, design, and construction phases. The enhancements made during this project included pedestrian improvements similar to those proposed for the Saugatuck Center project. Tighe & Bond also coordinated with CTDOT District 3 and the Division of Traffic Engineering offices to facilitate the design approvals. Our familiarity with the project area, coupled with our expertise in pedestrian improvements and collaboration with CTDOT, uniquely positions Tighe & Bond as the consultant of choice for the Saugatuck project. Moreover, several team members that will work on this project contributed to the Riverside Avenue project, ensuring continuity and a deep understanding of the corridor's needs.

Saugatuck Center, Riverside Avenue, Westport, CT

Scope of Work

We have prepared the following detailed scope of work based on knowledge of the corridor, experience on similar efforts, and the project needs as presented by the Town in the Request for Proposals. Please note that we have endeavored to provide a scope of services that is aligned with the tasks identified by the Town in the RFP. We have supplemented the Town's scope of work with additional detail as presented below in *blue italics*:

Task 1 - Preliminary Design

The Preliminary Design tasks below will result in a Preliminary Design submission. The submission will include drawings and an opinion of probable construction costs that correlate to a 30% design completion. Tighe & Bond will also prepare limited supportive documentation associated with the preliminary design that will be required by CTDOT during their review process.

1. Complete an engineering reconnaissance of the corridor features and traffic control devices (signals, signs, and pavement markings) for the purpose of identifying potential ADA ramps and crosswalk improvements and traffic control signal installations and modifications within the project limits.
2. Prepare topographic survey plans and base mapping for corridor improvement design and have sufficient detail (200 feet beyond the limits of work) to prepare the corridor improvement plans. Tighe & Bond will retain the services of a State of Connecticut licensed land surveyor that has worked with us on other recent Westport projects to support this task. The survey will include surface improvements, utilities, and elevations necessary to support the design.
3. Develop the preliminary traffic control signal plan for the Firehouse signal in accordance with the guidelines contained in the CTDOT Division of Traffic Engineering "Traffic Control Signal Manual" standards and requirements. The plan will show the location of traffic signal equipment, phasing diagram, sequence and timing, special notes, lane-use signing, pavement markings, signal faces, construction notes, details, and pertinent roadside features. Analyze existing traffic signal phasing and sequence timing plan and propose any modifications necessary to prepare new traffic control signal plan. *Traffic turning movement counts at the intersection will be collected for a 13-hour period and place an automatic traffic recorder (ATR) on Riverside Avenue for a 96-hour period to facilitate the phasing and timing assessment.*
4. Develop a signal plan for a mid-block crosswalk (decorative hot-applied thermoplastic) and Rapid Rectangular Flashing Beacon, (RRFB), located between 575 and 580 Riverside Avenue, in accordance with the Division of Traffic Engineering's "Rapid Rectangular Flashing Beacon" guidelines, and the Manual of Uniform Traffic Control Devices, (MUTCD).

5. Analyze and develop a preliminary plan for the installation of an additional pedestrian crossing just North of the I-95 Bridge on Riverside Avenue, between the two existing commuter parking lots.
6. Identify any easements or property acquisitions necessary to perform the work and prepare easement maps as needed. *The preparation of up to 2 property acquisition maps along with up to two revisions each is included.*
7. Prepare a preliminary cost estimate for the proposed work as detailed on the Engineering Design Plans. The cost estimate will be prepared in a tabular format and present an order of magnitude cost for the proposed work.
8. Submit the preliminary engineering design plans to the Town and Connecticut Department of Transportation for review and approval.
9. *Prepare and present the preliminary design at a public information meeting to obtain feedback from project stakeholders.*
10. *Hold a meeting with the Town to discuss preliminary design comments.*

Deliverables

- Preliminary Design Plans
- Easement Plans (up to 2)
- Preliminary Design Cost Estimate
- Public Information Meeting Presentation
- Meeting Summaries (2)

Task 2 - Final Design

The tasks below will result in the delivery of a Final Design submission representing the bid-ready project documents. The submission will include drawings, special provisions, a bid form, and associated opinion of probable construction costs based on CTDOT published bid items from the Master Bid Item list. Tighe & Bond will provide the Final Design to the Town for review and also coordinate the CTDOT Encroachment Permit review process.

1. Incorporate the comments from the Preliminary Design submission review into final design plans. Prepare a complete signal design including electrical cable design, signal cabinet and equipment tie-downs, signals and supports and prepare standard detail sheets and miscellaneous details necessary to construct the signal portion of the project.
2. Prepare a complete corridor plan with mid-block crosswalk details, signage, pavement markings, and RRFB standard detail sheets.

3. Prepare project specifications and special provisions to the Connecticut Department of Transportation Standard Specifications (Form 819). The project specification will include standard details for Maintenance and Protection of Traffic. A detailed estimate sheet will be prepared for the project construction.
4. Finalize Construction Plans, Specifications and Estimates for submission to the Town of Westport and Connecticut Department of Transportation. *Respond to one round of design review comments from the Town and CTDOT and provide the complete bid documents to the Town to facilitate the bidding process.*
5. Provide bid assistance to answer bidder inquiries (up to 2 assumed to take approximately 4 hours each), analyze bids, and make recommendations to the Town for the most responsive bid.

Deliverables

- Preliminary Design Comment Responses
- Final Design Plans
- Final Design Cost Estimate
- Project Special Provisions
- Bid Responses (up to 2)

Task 3 - Construction Administration, Final Submission to ConnDOT (Hourly)

1. Review shop drawings *(up to 10)*, project inspection during construction *(up to 20 days of field observation)*, keep records of any significant deviations from project drawings, and review/preparation of pay requisitions *(up to 4)*.
2. *Conduct a semi-final inspection of the project area, coordinate the signal inspection and activation with CTDOT Division of Traffic Engineering and CTDOT District 3, as necessary. Document the findings in a punch list and provide to the Contractor. Conduct one final review of the project area once notified by the Contractor that punch list items have been addressed.*
3. *Coordinate with the contractor to p*rovide as-built record plans as necessary for final submission to the Town of Westport and the ConnDOT Traffic Division.

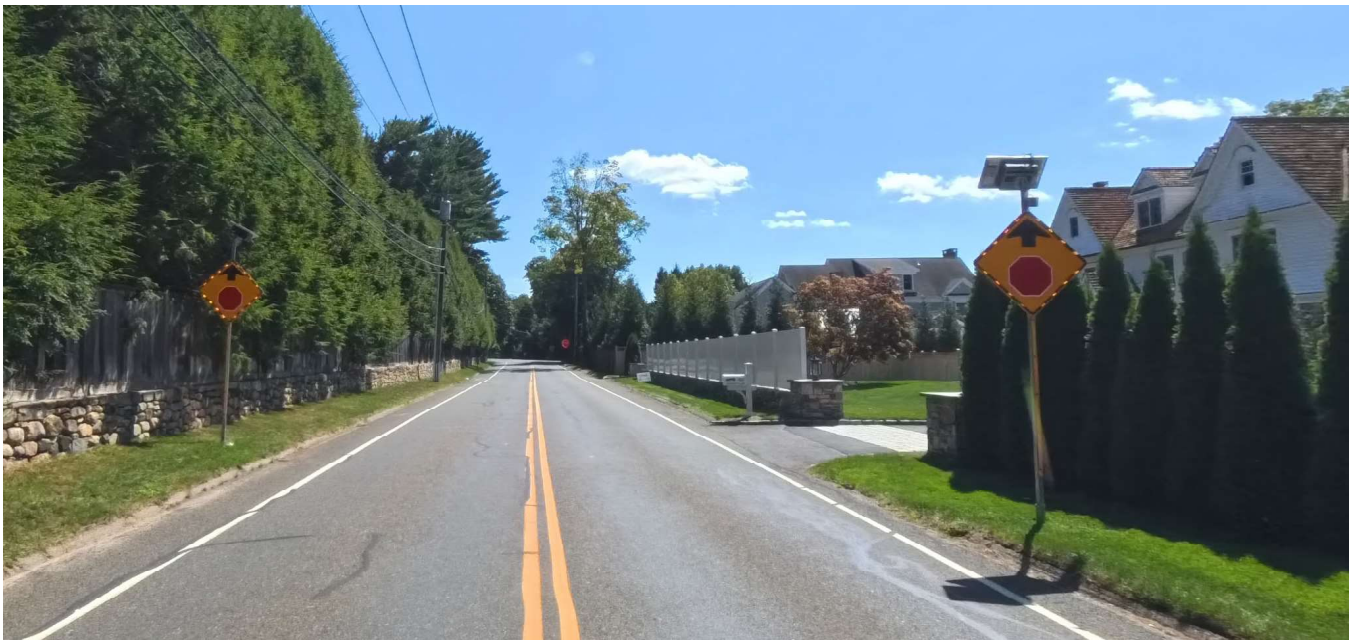
Deliverables

- Shop Drawings Reviews (up to 10)
- Construction Observation Records (up to 20 days)
- Pay Requisition Reviews (up to 4)
- Semi-Final Inspection & Punch List
- As-Build Plans

Assumptions and Exclusions

In an effort to provide you with a reasonable fee for the requested services, we have prepared a detailed scope of services based on our understanding of the project needs and the services identified by the Town of Westport in the Request for Proposals. In the same regard, the following list includes the assumptions that serve as the basis of our proposal and services that are not included. If these services are required, we will modify our proposal accordingly to meet your needs.

- The design services are included for the improvements detailed in the scope of work as well as signs and pavement marking improvements based on a review of the corridor. The design for additional or more significant improvements are not contemplated in our fee estimate. An amendment can be prepared for any additional required design services.
- We have assumed that the proposed improvements will not necessitate roadway drainage analyses, and these services are excluded.
- Based on the proposed improvements, construction is estimated to take approximately 3 to 4 months. Our proposal includes part time observation during construction covering the major work items and our fee estimate includes 20 days of field observation effort.
- Permits beyond those described in the proposal are excluded. Permit fees are excluded, and we assume that permit fees will be paid directly by the Town.
- Services not explicitly detailed in the scope are excluded.
- Additional meetings, public engagement, stakeholder engagement, etc. are excluded.



Vehicle actuated stop ahead and stop sign installation, Cross Highway, Westport, CT

Project Team & Experience

Tighe & Bond has assembled a project team with substantial qualifications and experience in each of the specialty fields that are required to complete this project. Full resumes have been included in Appendix A.

Key Personnel

CHRISTOPHER GRANATINI, PE | PROJECT DIRECTOR

Christopher uses his broad background in civil, transportation, and traffic engineering to design and manage transportation assignments for clients with a focus on context sensitive solutions. His diverse technical experience includes roadway design, parking lot design, transportation planning studies, traffic control signal design, maintenance and protection of traffic engineering, signing and pavement marking design, ITS planning, and preparation of traffic studies. He is a skilled public liaison, providing clients with a trusted representative to interface with project stakeholders and the public to execute public outreach initiatives.

CRAIG YANNES, PE, PTOE, RSP1 | PROJECT MANAGER

Craig Yannes utilizes his experience in transportation and traffic engineering to develop improved roadway and street networks that balance effective traffic operations and safety, not only for vehicular traffic, but all modes of transportation. His technical specialties include traffic analysis & modeling, transportation planning, traffic safety engineering, and traffic calming & signal design. Serving as a Project Manager in Tighe & Bond's Land Use & Transportation business line, Craig has been involved with and led successful projects from design through construction for a blend of private, Municipal, and State clients. Through these projects, Craig has become a trusted advisor to our clients, utilizing his relationships and expertise in analysis, design, and the permitting process to streamline project delivery.

JONATHAN BOSSI, PE | ASSISTANT PROJECT MANAGER / DESIGN LEAD

Jonathan Bossi serves as a design lead on a variety of site planning and design, stormwater management, and roadway projects. His experience includes, storm and sanitary sewer design, utility design, stormwater sampling, hydraulic and hydrologic modeling, construction observation and administration, cost estimating, and local, state, and federal permitting. Jon has extensive experience working on similar complete streets improvement projects in the Town of Westport along State Routes, including prior work along Riverside Avenue.

MATTHEW STOUTZ, PE, PTOE, RSP1 | ROADWAY DESIGN

Matt is a project engineer with a focus on transportation planning and traffic and transportation safety projects throughout the northeast region. He holds his Professional Traffic Operations Engineer and Road Safety Professional certifications. His additional experience includes traffic impact studies, maintenance and protection of traffic, and transportation engineering projects. He is proficient in Connecticut Department of Transportation standards projects through his extensive work on projects as part of a multi-year transportation on-call contract.

COLLENE BYRNE, RSP2I | TRAFFIC ENGINEER

Collene Byrne utilizes her experience specializing in traffic engineering and transportation to develop implementable solutions for roadway networks that strive to balance safety and mobility for all road users. She has served as Project Engineer, Project Manager, and Senior Project Manager for transportation engineering projects for a variety of public and private sector clients. She has been responsible for the engineering design and preparation of study documents for a wide variety of projects.

JONATHAN IVES, PE | STRUCTURAL ENGINEER

Jon is a career bridge engineer with over 23 years in the design and management of transportation structure projects. His experience includes vehicular, railroad and pedestrian bridges of all shapes and sizes, Accelerated Bridge Construction, and Alternative Delivery Methods. Having served as a Team Leader for bridge safety inspections, Jon possesses a hands-on familiarity with the detailing and functionality of all types of structures. As Senior Project Manager, he is responsible for project delivery from the proposal stage through design and construction.

CHRISTOPHER DUBUQUE, PE | CONSTRUCTION ADMINISTRATOR

Christopher Dubuque has civil engineering experience in land development and roadway design, hydrologic and hydraulic calculations, surveying, composing engineering reports, and preparing cost estimates. He is proficient in using Civil 3D software to link the roadway alignment, profile, corridor, and cross sections, resulting in 3D design models. His extensive AutoCAD skills equip him to prepare professional engineering drawings. Chris has also been integral to Tighe & Bond's Construction Observation projects serving as the construction coordinator, for several projects under various funding programs.

THOMAS WAMSER, PE, RSP1 | MAINTENANCE & PROTECTION OF TRAFFIC

Thomas is a project engineer focused on traffic and transportation engineering. His project experience includes traffic signal design, maintenance and protection of traffic, traffic calming, traffic impact and corridor planning studies, roadway design, and parking study disciplines. Thomas is also involved in creating maintenance and protection of traffic plans to maintain safe operating conditions for a variety of clients' roadway construction projects. He is a member of the Institute of Transportation Engineers and the American Society of Civil Engineers.

MATTHEW ROMANO, PE | ELECTRICAL ENGINEER

Matthew Romano's 17 years of experience and background in electrical engineering and computers equips him to design and specify power, lighting, HVAC, fire and intrusion detection, instrumentation and control, public address, and telephone systems. He has worked on a broad array of projects focused on water resources, wastewater treatment, industrial waste, solid waste, and electrical demolition.

GLEN CARMAN | CONSTRUCTION ADMINISTRATOR / OBSERVER

Assistant Engineer/Inspector with experience in traffic safety, milling, paving, excavation, drainage, concrete, sewers, steel reinforcement, pile driving/ drilling, bridge deck repair, MEP, and building rehab. Reliable and responsible team player skilled in problem solving, designing, drafting, reporting, and structural evaluation.

Subconsultants

MARTIN SURVEYING ASSOCIATES, LLC | SURVEYOR

Martin Surveying Associates, LLC is a Connecticut based surveying consulting company established in 2005 with the specific objectives of providing clients with a high level of technical expertise and efficient, responsive personalized service. Dean Martin, MSA's Founder and President, is a member of the Board of Directors of the Connecticut Association of Land Surveyors.

Dean Martin
201 Christian Lane, Suite D
Berlin, CT 0603
860-832-9328 | DMartin@martinsurvey.com

Riverside Avenue Roadway and Sidewalk Improvements

Westport, CT

OWNER Town of Westport

Before

After

SERVICES

Sidewalk Design

Public Information Meetings

Coordination with CTDOT

Coordination with CTDOT Signals

Construction Administration

Construction Observation

This particular section of Riverside Avenue is a heavily used area for vehicles, bicyclists, and pedestrians given its proximity to the Saugatuck Train Station, Rowing Club, Saugatuck River access, retail, and restaurants. The existing sidewalk network had deteriorating and missing sections needing upgrades to create a continuous and safe means of travel. Additionally, the roadway was in poor condition. The existing roadway consisted of a concrete slab with bituminous shoulders, which had settled over time.

Tighe & Bond was retained by the Town of Westport to provide design services for the reconstruction of Riverside Avenue and construction of new sidewalks. Construction was funded under the CTDOT Local Transportation Capital Improvement Program (LOTCIP).

Tighe & Bond worked closely with the Town of Westport to identify where upgrades were needed and provided layout for new ADA and PROWAG compliant sidewalks on Riverside Avenue from Charles Street to Railroad Place and other scattered sections where spalling had occurred on existing sidewalks. Tighe & Bond also proposed full-depth reconstruction of the roadway, which included removal of the existing concrete slab.

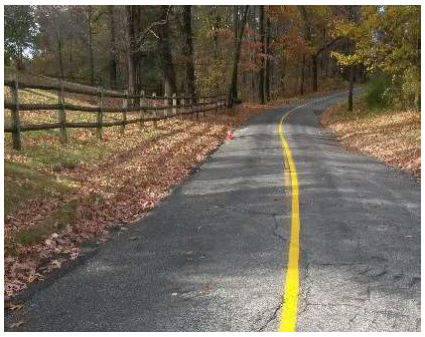
The sections of the Town-owned Riverside Avenue abutted three state-owned signalized intersections. This required coordination with the CTDOT District 3 and Traffic Engineering Offices to secure the Encroachment Permit for the project and ultimately gain approval from CTDOT through LOTCIP.

Tighe & Bond performed construction administration and observation services for the project, and the construction cost was approximately $850,000.

Task Based Traffic and Safety Engineering Services

Various, CT

OWNER Connecticut Department of Transportation



SERVICES

Data Collection and Analysis

Traffic Engineering

Safety Engineering

Traffic Control Signal Design

Signage, Pavement Marking, and Design

Transportation Planning

Public Outreach

Tighe & Bond provided on-call traffic and safety engineering to CTDOT, regularly supporting a variety of initiatives to improve safety and efficiency on roadways throughout the State. Completed assignments include:

District 1 Traffic Signal Clearance Intervals: Tighe & Bond reviewed, evaluated, and recalculated the yellow, all-red, and pedestrian clearance intervals of approximately 800 state-owned traffic signals in District 1. Additionally, record traffic control signal plans were redrafted to reflect current signal plan drawing standards and to show the updated clearance intervals. The new timings were implemented by District Signal Maintenance staff.

District 2 Rural Roadway Horizontal Curve Safety Improvements: Tighe & Bond performed fieldwork, tested advisory speeds, and designed horizontal curve warning sign and pavement marking improvements at over 850 locations on locally-owned and maintained High Risk Rural Road (HRRR) horizontal curves under State Projects No. 172-451 and 172-456.

District 3 State Route Horizontal Curve Safety Improvements: Tighe & Bond assessed the horizontal curvature of every state-owned roadway in District 3, including freeways and freeway ramps, to identify locations that warranted horizontal curve warning signs and to identify locations where existing signs were not warranted. Tighe & Bond performed fieldwork and designed horizontal curve warning signs at approximately 650 locations and identified over 150 locations where signs could be removed under State Project No. 173-485.

District 4 Rural Roadway Horizontal Curve Safety Improvements: In District 4, under State Project No. 174-406, Tighe & Bond performed fieldwork, tested advisory speeds, and designed horizontal curve warning sign and pavement marking improvements at over 400 locations on locally owned and maintained HRRR horizontal curves.

Statewide State Route Road Diet Study: Tighe & Bond assessed the feasibility of implementing road diets on all multi-lane undivided state routes based on traffic volumes, safety, and alternative travel mode connectivity. Work was performed under State Project No. 170-348. As part of the final study deliverable, Tighe & Bond worked cooperatively with the Division of Traffic and Engineering applications to provide a GIS-based deliverable for department-wide integration of the study recommendations.

Route 111 Traffic Signal and Roadway Improvements

Trumbull, CT

OWNER Town of Trumbull

SERVICES

Multi-Use Trail Design

Pedestrian Safety Improvements

Traffic Control Signal Design

Roadway Design

Retaining Wall Design

Construction Administration

Public Engagement

The revised trail crossing and plaza driveway intersection signalization was previously conceptualized by Tighe & Bond in the Routes 25 and 111 Transportation Engineering and Planning Study for Connecticut Metropolitan Council of Governments (MetroCOG) and preliminarily approved by Connecticut Department of Transportation (CTDOT). The approach to identify feasible, implementable solutions in the transportation planning process is a proven method for successful development of future projects. To bring the project from concept to final design, Tighe & Bond provided the following services:

- Preparation of a Local Transportation Capital Improvement Program (LOTCIP) application to secure funding for the project.
- Conducted a traffic signal warrant analysis and full traffic control signal design including span pole calculations, signal timing and phasing, coordinated signal system interconnection, electrical wiring, and vehicle detection zones.
- Development of site/civil plans for roadway modifications, trail and sidewalk construction, signing and pavement markings, and cross-sections.
- Geotechnical engineering to support the design of traffic signal span pole foundations and a retaining wall design.
- Regulatory approvals from the Town of Trumbull for site plan revisions and OSTA for the site plan and traffic signal design.
- Conduct public engagement through several Public Information meetings.

Complimentary improvements will also be implemented in conjunction with the work. Inside Trefoil Plaza, the parking lot driveway will be reconfigured to improve traffic operations and queuing. Additionally, at the next driveway intersection to the north on Route 111, the driveway for the Woodland Hills housing development will be converted from right-in/right-out to full access with the removal of a channelizing island and provision of a northbound left-turn pocket on Route 111.

Tighe & Bond will provide bid phase assistance and construction administration services after the final design is complete. A resident engineer will also be available to check shop drawings, confirm quantities, ensure conformance to contract documents, and prepare daily observation reports of the work.

Prospect Street Complete Street Improvements

New Haven, CT

OWNER Yale University/City of New Haven

Tighe & Bond prepared the City of New Haven's first Complete Street project along Prospect Street. The project reduced a four-lane arterial roadway to a two-lane roadway with on-street parking, curb bumpouts, mid-block crosswalks, and speed tables. The roadway upgrades are associated with Yale University's two new residential colleges. The influx of 850 new students into the residential colleges significantly increased bike and pedestrian traffic along Prospect Street, providing the impetus to implement the Complete Street elements into the design.

The scope of services included extensive data collection and analyses of existing and future conditions, including the opening of Yale's new residential colleges. The design of Prospect Street incorporated roadway traffic calming elements defined in the City of New Haven's Complete Streets Manual.

The roadway design included modifying the roadway profile to eliminate a deep sag curve to better align the roadway with the adjacent buildings. The improvements included new electronic pedestrian-actuated signage, new street lighting, and enhanced pavement markings to define the proposed mid-block crosswalk. The project also included shared bike lanes and pertinent signage.

SERVICES

Complete Streets Engineering Study

On-Street Parking Design

Curb Bumpouts and Mid-Block Crosswalks

Pedestrian Actuated RRFB Crossing

Shared Bike Lanes and Signage

Roadway Lighting Design

Route 77 Pedestrian Improvements

Guilford, CT

OWNER Town of Guilford

SERVICES

Pedestrian Improvements

Roadway Design

Traffic Signal Design

Drainage Design

Permitting

Construction Administration

Construction Observation

Tighe & Bond worked with the Town of Guilford, Connecticut and the Connecticut Department of Transportation (CTDOT) to design pedestrian improvements along Route 77 (Church Street) from Hubbard Road South to the Elisabeth C. Adams Middle School. The goal of the project was to encourage and facilitate pedestrian movements through the project corridor and provide connectivity between the Elisabeth C. Adams Middle School and Town facilities, such as the Public Safety Complex, Guilford Arts Center, and Guilford Racquet Club. The project created a continuous route for pedestrians from the Guilford Town Green north to Hubbard Road.

The project was funded through the Federal Transportation Alternatives (TA) program. Tighe & Bond used highway design and traffic engineering expertise to develop a design aimed at improving safety for all modes of transportation through the corridor. Services included operational analysis, safety analysis, traffic signal design, drainage design, roadway design, permitting, and cost estimating.

Tighe & Bond also assisted the Town throughout the Right-of Way process and development of Property Acquisition Maps for the limited properties where property acquisitions were required for sidewalk construction. The project included new sidewalks along Route 77 that met PROWAG requirements, traffic signal improvements, and installation of a Rectangular Rapid Flashing Beacon (RRFB) along a roughly 2,800-LF-long section of Route 77. The design was created in accordance with CTDOT requirements and included public outreach and coordination. The roadway is a designated Scenic Roadway, and Tighe & Bond worked with the Scenic Roads Committee to ensure the historic character of the roadway was maintained.

The project created a safe, accessible connection for pedestrians along Route 77 between the Elisabeth C. Adams and significant Town facilities. The project also created a continuous route for pedestrians from the Guilford Town Green north to Hubbard Road.

Tighe & Bond also provided full-time construction engineering and inspection services in accordance with CTDOT's Four Book System to comply with Federal funding requirements. This included coordination with the District 4 MSAT Office and the Town of Guilford throughout the construction phase and preparation of documentation for material testing, pay requisitions, contract changes, etc.

Kings Highway (US Route 1) Complete Street Improvements

Fairfield, CT

OWNER Town of Fairfield

SERVICES

Complete Streets Design

Transportation Planning

Traffic Signal Design

Public Engagement

CTDOT Coordination

Utility Coordination

Storm Drainage Design

Rights-of-Way/Easements

Construction Administration

Construction Observation

Tighe & Bond worked with the Town of Fairfield and Connecticut Department of Transportation (CTDOT) to design complete street improvements along Kings Highway East (U.S. Route 1) from Chambers Street to Villa Avenue. The goal of the project was to encourage and facilitate alternative means of transportation through the project corridor and provide connectivity to the new Fairfield Metro Center Train Station.

The project was funded through a combination of the MAP-21 Transportation Alternatives program and the Local Transportation Capital Improvement Program (LOTCIP). Tighe & Bond worked extensively with the Town and CTDOT to ensure the funding requirements of both projects were met.

Using extensive highway design and traffic engineering expertise, Tighe & Bond developed a design aimed at improving safety for all modes of transportation through the corridor. Services included operational analysis, safety analysis, multi-modal concept development and alternatives analysis, drainage design, roadway design, and cost estimating.

A Preliminary Engineering phase was conducted to identify several alternatives that would correct the narrow, deteriorated sidewalks throughout the corridor. Options were severely limited by major overhead utilities and right-of-way constraints. Tighe & Bond worked with the Town and CTDOT to develop a highway design that narrowed the roadway width to create accessible sidewalks with only minor impacts to utilities and right-of-ways. This approach significantly reduced the project design schedule and allowed the design of improvements that were below the project's funding limits.

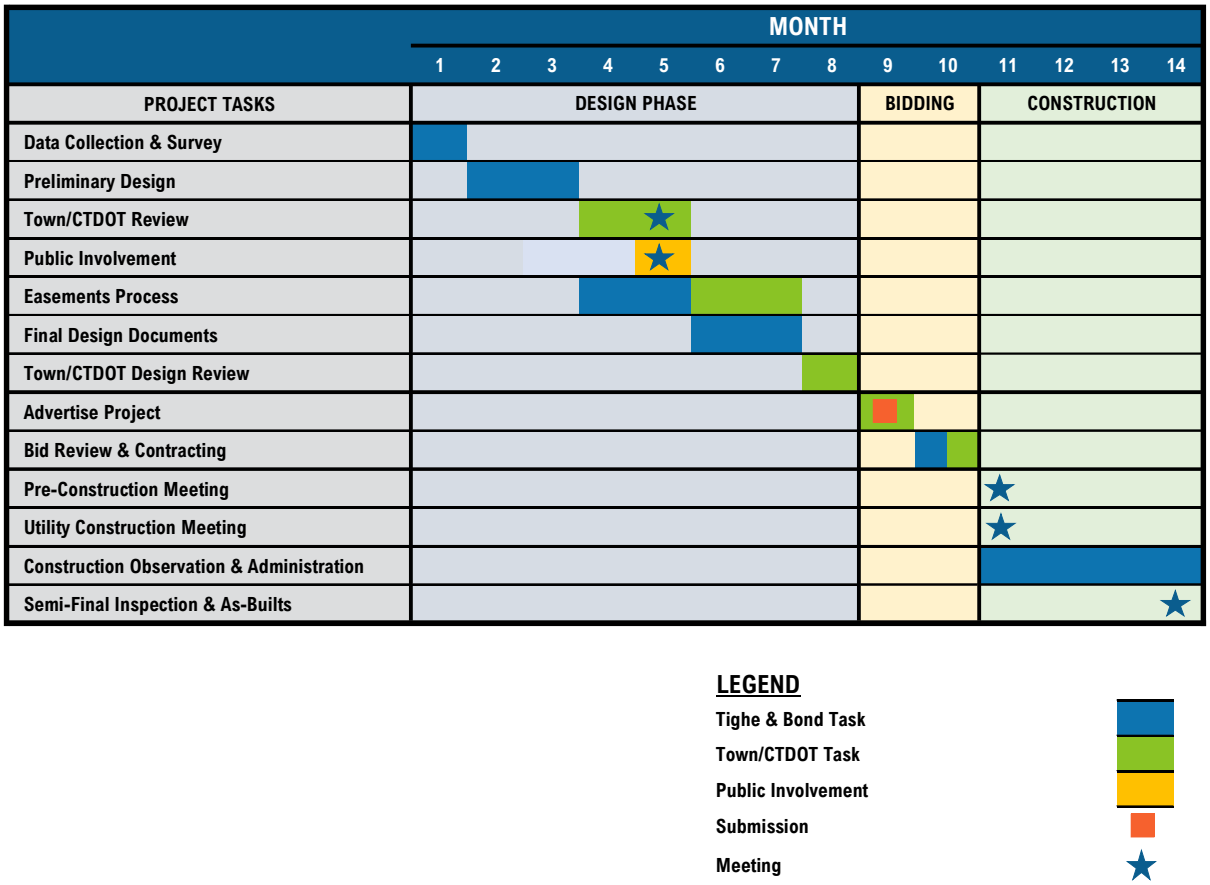
The project included new wider sidewalks along both sides of the roadway that met PROWAG requirements, drainage improvements, replacement of the existing deteriorated median with stamped concrete treatment, as well as traffic signal revisions along a roughly 3,700-foot long section of Kings Highway East. The design was created in accordance with CTDOT requirements and included public outreach and coordination. Tighe & Bond also facilitated the Design Exceptions process to address non-conforming design elements through the Design Exceptions Committee.

Tighe & Bond also provided construction administration and full-time construction engineering and inspection services to comply with funding requirements throughout the construction phase of the project. These services were coordinated through the District 3 MSAT office.

Proposed Timeline

Tighe & Bond understands that the successful completion of this project is dependent on effective communication, coordination and collaboration between our Project Manager, the Town of Westport, permitting agencies, CTDOT, utility companies, and other stakeholders. We have developed a preliminary schedule for the project, identifying tasks, meetings, permits and deliverables. The schedule includes review periods, timetables for incorporation of comments, and ultimately, the final submission date for deliverables. The detailed schedule will also provide a critical path to ensure that tasks are prioritized to ensure efficient execution of the work effort and maintain schedule.

Assuming a start date of late October 2024, we feel confident that the project could be designed and constructed by the end of 2026 if construction funding is readily available.



The Mayor of the City of Stamford, David Martin, along with the James Travers and Frank Petise from the Bureau of Traffic and Parking, commemorate the completion of the Oaklawn Avenue Reconstruction Project. Residents of the neighborhood join the ceremony to celebrate the new sidewalks and accommodations for bike traffic through the residential neighborhood.

References

We invite you to contact the individuals below to hear directly from your colleagues in the industry how Tighe & Bond has performed on projects of a similar size and scope:

TOWN OF TRUMBULL, CT

William Maurer, PE, LS
Town Engineer
5866 Main Street, Trumbull, CT 06611
wmaurer@trumbull-ct.gov
(203) 452-5056

Project Description: On-Call Engineering Services including, Town-Wide Storm Drainage Improvement Program; Park Street Culvert Replacement; Town-Wide Culvert Inventory; Park Improvements; On-Call Engineering Services. Completed the Strobel Road Improvements and Culvert Replacement.

Project Dates: 2011 - Ongoing (On-Call) / 2012 - 2021 (Strobel Rd)
Staff: Christopher Granatini, Alfred Mascia, Craig Yannes, Jonathan Bossi, Mattew Stoutz, Christopher Dubuque, Thomas Wamser, Joseph Canas, Richard Canavan

TOWN OF THOMASTON, CT

Edmond Mone
First Selectman
158 Main Street, Thomaston, CT 06787
emone@thomastonct.org
(860) 283-4421

Project Description: On-Call Engineering Services including, Carter Road Bridge Inspection and Reconstruction of Hickory Hill Road. Services included a structural bridge assessment. Tighe & Bond also provided grant support.

Project Dates: 2019 - 2021
Staff: Christopher Granatini, Alfred Mascia, Craig Yannes, Jonathan Bossi, Mattew Stoutz, Christopher Dubuque, Thomas Wamser, Joseph Canas, Richard Canavan

TOWN OF RIDGEFIELD, CT

Rudy Marconi
First Selectman
400 Main Street, Ridgefield, CT 06877
selectman@ridgefieldct.org
(203) 431-2774

Project Description: Design of Branchville TOD Improvements. Design of pedestrian improvements, including a new pedestrian bridge. Services include operational analysis, safety analysis, traffic signal design, drainage design, roadway design, geotechnical engineering, permitting and cost estimating.

Project Dates: 2019 - Ongoing
Staff: Christopher Granatini, Craig Yannes, Jonathan Bossi, Christopher Dubuque, Thomas Wamser, Joseph Canas, Richard Canavan

Conflict of Interest Statement

Tighe & Bond, Inc. certifies that no official or employee of the Town of Westport, CT has a financial interest in this quotation or in the contract which Tighe & Bond, Inc. offers to execute or in the expected profits to arise there from, and that this quotation is made in good faith without fraud or collusion or connection with any other person submitting a quotation. In addition, no proposed staff have been employed by the Town or Schools.

Appendix A: Resumes

CHRISTOPHER GRANATINI, PE

VICE PRESIDENT

Christopher Granatini uses his broad background in civil, transportation, and traffic engineering to design and manage transportation assignments for clients with a focus on context sensitive solutions. His diverse technical experience includes roadway design, parking lot design, transportation planning studies, traffic control signal design, maintenance and protection of traffic engineering, signing and pavement marking design, ITS planning, and preparation of traffic studies. His knowledge of the latest roadway design applications, including 3-D design software tools, provides him with the expertise to contribute his design experience while managing assignments. He is a skilled public liaison, providing clients with a trusted representative to interface with project stakeholders and the public to execute public outreach initiatives.

EXPERIENCE
25 Years

SPECIALTIES
Roadway Design

Traffic Control Signal Design

Maintenance and Protection of Traffic

Transportation Planning

Traffic Studies

Parking Consultancy

Public Engagement

Construction Administration

EDUCATION
Bachelor of Science
Civil Engineering
University of Connecticut

LICENSES & REGISTRATIONS
Professional Engineer
CT #22299
RI #12835

PROFESSIONAL AFFILIATIONS
Institute of Transportation Engineers

American Society of Civil Engineers

Urban Land Institute

ACEC-CT Emerging Leaders Committee

ROADWAY DESIGN

OAKLAWN AVENUE RECONSTRUCTION—STAMFORD, CT
Project management of roadway realignment to improve safety and correct poor horizontal geometry, new sidewalks along both sides of the roadway and widening the roadway section for bikes, and improving roadway drainage. The project involves 15 right of way actions to accommodate the improvements, a public outreach initiative to coordinate with the area residents, and coordination with the City and State on this City administered project.

ROUTE 25 AND 111 ENGINEERING AND PLANNING STUDY—TRUMBULL AND MONROE, CT
Project Manager for a major transportation and land use planning study in the Towns of Trumbull and Monroe along Routes 25 and 111. These corridors have seen significant local development take place in addition to regional traffic growth which has resulted in poor peak hour operations, safety concerns and significant congestion. The corridors also provide very limited alternative mode facilities and poor access management. The study is reviewing existing and future traffic operations, safety and economic development to determine the future needs to provide safe and efficient travel for all travel modes while maintaining the character of the roadways. The public engagement program included coordination with a Technical Advisory Committee, Community Advisory Committee and individual meetings with corridor stakeholders and affected property owners.

HEBRON AVENUE AT HOUSE STREET MODERN ROUNDABOUT—GLASTONBURY, CT
Project Manager for the design of a new hybrid multi-lane modern roundabout along Hebron Avenue in the main shopping district. The project is a result of a study to assess the feasibility of installing a modern roundabout to mitigate existing safety concerns at the existing two-way stop-controlled intersection while providing acceptable traffic operations. Design included geometric design, utility coordination and design of a modular block retaining wall. The project is funded by CTDOT under the Local Accident Reduction Program (LARP) and supports adjacent real estate development while improving safety at this gateway into Glastonbury's downtown area.

STILL RIVER DRIVE MODERN ROUNDABOUT—MILFORD, CT
Project Manager for the design of a modern roundabout for the Town of New Milford, CT. The intersection reconstruction replaced an existing multi-lane approach, stop-controlled intersection with a single lane modern roundabout. The project scope also included a mill and overlay treatment along Still River Drive from Danbury Road (US Route 7/202) to the Still River Drive over Still River bridge. The design was funded under the LOTCIP Program through WestCOG. The design services included roadway geometric design, storm drainage design, utility coordination, landscape design, maintenance and protection of traffic and construction staging design. Tighe & Bond conducted a public information meeting to present the project to the public in accordance with the funding requirements, and provided construction administration and construction observation services to the Town to verify contractor compliance with the contract drawings and specifications.

HUXLEY AVENUE MODERN ROUNDABOUT—PROVIDENCE, RI
Project Manager for the geometric design of a modern roundabout on the Providence College campus in Providence, RI. The project included the abandonment of the public right-of-way of Huxley Avenue to Providence College and converting the former City street into a new campus gateway with the roundabout controlling access to the campus. The design included close coordination with Providence College Facilities and Operations to ensure that campus delivery vehicles were accommodated by the geometrics of the design. The design included provisions for a RIPTA bus stop and a security station and guardhouse on the entry approach to the campus.

PROSPECT STREET, COMPLETE STREET IMPROVEMENTS—NEW HAVEN, CT
Senior Engineer providing technical oversight for the design of streetscape and geometric enhancements along Prospect Street in New Haven, CT adjacent to Yale's new Residential Colleges. The project featured a road diet concept to reduce Prospect Street from 4-lanes to 2-lanes with the addition of shared bike lanes and on-street parking. The design also involved a new mid-block pedestrian crossing including signing and pavement markings, speed hump design and rectangular rapid flashing beacons and lighting enhancements to define the pedestrian crossing location. Finally, drainage improvements were made to mitigate ponding concerns at the roadway low point. The design of pedestrian, landscaping, and transit enhancements to Prospect Street was developed in conformance with the New Haven Complete Streets Design Manual.

HOSPITAL PARK AVENUE CAMPUS OFF-SITE IMPROVEMENTS—BRIDGEPORT, CT
Senior Engineer providing technical oversight for the geometric and roadway design for the roadway improvements, including the roundabout geometry at the southbound Merritt Parkway ramps and vertical geometric revisions along Park Avenue, in addition to supporting the traffic control signal design. The project included roadside design modifications to improve the obsolete guiderail systems. A single lane modern roundabout and two new signalized intersections along with geometric and drainage improvements now accommodate a new medical office building for Bridgeport Hospital. The project was coordinated with CTDOT Roundabout Committee and District e to facilitate the design approval and permitting process.

RECONSTRUCTION OF HOSPITAL AVENUE—DANBURY, CT
Project Manager for the reconstruction of Hospital Avenue and Tamarack Avenue, in the City of Danbury, as part of the offsite improvements for the Danbury Hospital North Tower Expansion. The project involved roadway widening to mitigate the traffic growth projected for the hospital expansion. Detailed maintenance and protection of traffic plans were developed to facilitate efficient traffic operations adjacent to the hospital. Additionally, the traffic control signal at the intersection of Hospital Avenue and Tamarack Avenue was redesigned with a new mast arm supported signal, which included video detection, fiber optic communications to facilitate coordination with an adjacent intersection, and siren detection to accommodate emergency response traffic.

CRAIG D. YANNES, PE, PTOE, RSP1

PROJECT MANAGER

Craig Yannes utilizes his experience in transportation and traffic engineering to develop improved roadway and street networks that balance effective traffic operations and safety, not only for vehicular traffic, but all modes of transportation. His technical specialties include traffic analysis & modeling, transportation planning, traffic safety engineering, and traffic calming & signal design. Serving as a Project Manager in Tighe & Bond's Land Use & Transportation business line, Craig has been involved with and led successful projects from design through construction for a blend of private, Municipal, and State clients. Through these projects, Craig has become a trusted advisor to our clients, utilizing his relationships and expertise in analysis, design, and the permitting process to streamline project delivery.

EXPERIENCE
12 Years

SPECIALTIES
Traffic Signal Design

Transportation Planning & Feasibility Studies

Traffic Impact & Parking Studies

Roadway Design

Traffic Calming Planning & Design

EDUCATION
Master of Science
Civil Engineering
University of Connecticut

Bachelor of Science
Civil Engineering
University of Connecticut

LICENSES & REGISTRATIONS
Professional Engineer
CT #29075
RI #12796
Professional Traffic Operations Engineer #3567
Roadway Safety Professional 1 #301

PROFESSIONAL AFFILIATIONS
Institute of Transportation Engineers (Past President of the Connecticut Chapter)

American Society of Civil Engineers

ROUTE 25 AND 111 ENGINEERING PLANNING STUDY—TRUMBULL, CT
Lead Transportation Engineer for the Transportation Planning Study of State Routes 25 and 111 in Monroe and Trumbull. Tasks included detailed analysis of existing and future traffic conditions, a traffic safety review, and identification of improvement alternatives to develop a transportation plan solving recurring congestion, safety, and mobility issues along the corridor. The study, funded through LOTCIP, includes coordination with the Connecticut Metropolitan Council of Governments (METROCOG), the Towns of Monroe and Trumbull, CTDOT and corridor stakeholders.

KINGS HIGHWAY PEDESTRIAN IMPROVEMENTS—FAIRFIELD, CT
Assisted in the design of pedestrian connectivity improvements along U.S. Route 1 (Kings Highway). The scope includes the restriping of Kings Highway and reconstruction of the sidewalks for better pedestrian connectivity, complete with ADA accessible sidewalks, ramps and crosswalks. Project funding included the MAP-21 Transportation Alternatives program and LOTCIP.

HEBRON AVENUE CORRIDOR ROUNDABOUT STUDY & HEBRON AVENUE AT HOUSE STREET ROUNDABOUT —GLASTONBURY, CT
Performed a roundabout planning study for the Hebron Avenue Corridor. The project included capacity analyses, microsimulation, and conceptual layouts to evaluate the feasibility of roundabout installations at the New London Turnpike and House Street intersections. The results of the study were presented to the Town Council resulting in funding for the design of the roundabouts. Assisted in the design of the modern roundabout at the intersection of Hebron Avenue at House Street.

RIVERSIDE AVENUE AND MAIN STREET ROADWAY AND SIDEWALK IMROVEMENTS—WESTPORT, CT
Assisted with the design of roadway reconstruction and sidewalk improvements on Main Street and Riverside Avenue through LOTCIP. Responsible for the traffic signal design including construction drawings and specifications while coordinating with Town, CTDOT, and WestCOG staff for regulatory approvals.

STROBEL ROAD IMPROVEMENTS—TRUMBULL, CT
Assisted with the preparation of construction documents and permitting for the 1.5 mile Strobel Road roadway and drainage reconstruction project. The design included a new traffic signal at the intersection of Strobel Road and

Daniels Farm Road to improve traffic and pedestrian safety and operations due to the proximity of Trumbull High School. The project was funded under the CTDOT LOTCIP program.

MAIN STREET AT LAFAYETTE STREET TRAFFIC SAFETY IMPROVEMENTS (SPN 088-194)—NEW BRITAIN, CT

Traffic signal designer responsible for the design of a new signal replacing the existing all-way stop control at the intersection of Main Street at Lafayette Street in New Britain to improve intersection safety. The design included far-side mast arms, video detection, countdown pedestrian signals, a fiber-optic drop for future connection to the City traffic control system and coordination of the signal timing with the adjacent signal at Myrtle Avenue and East Main Street via a GPS Time Clock system. The project was funded under the Local Accident Reduction Program (LRARP) administered by CTDOT.

PEQUONNOCK RIVER TRAIL CROSSINGS IMPROVEMENTS—TRUMBULL, CT

Performed the design of the Pequonnock River Trail crossings of State Route 111 and Whitney Avenue in Trumbull. The project aimed to improve safety for trail crossing users by installing pedestrian activated rectangular rapid flashing beacons at the crossings along with advanced warning signage and pavement markings. A radar speed sign was installed on Whitney Avenue in advance of the crossing to reduce approaching vehicle speeds.

ROUTE 2 BIKE/PED STUDY—NORTH STONINGTON, CT

Served as porject manager on the study to develop conceptual roadway improvement plans for approximately three miles of Route 2 in North Stonington from Route 184 to Holly Green. The concepts focused on implementing bicycle and pedestrian accommodations along the corridor based on demonstrated need and deficiencies in the existing roadway. A separated multi-use path and/or on-street buffered bike lanes were proposed alongside sidewalk, pedestrian crossing, and access management improvements.

STATEWIDE ROAD DIET FEASIBILITY STUDY (SPN 170-3480)

Served as the traffic and safety engineering technical adviser for the Transportation and Safety Road Diet Feasibility Study on State-owned four-lane undivided state roadways. Tasks include an analysis of existing and future traffic operations and safety conditions, identification of implementable alternatives to improve the safety, mobility, and access deficiencies for all users along the roadway segments.

BRANCHVILLE TOD PEDESTRIAN IMPROVEMENTS—RIDGEFIELD, CT

Provided traffic and roadway design services for pedestrian improvements to U.S. Route 7 (Ethan Allen Highway) and Route 102 (Branchville Road) in the Branchville section of Ridgefield. This Transportation Alternatives (TA) Program funded project originated from recommendations in the Branchville TOD Study and seeks to create safe, accessible sidewalks throughout the area and a link to the Branchville Railroad Station. The project includes approximately 2,300 LF of new sidewalks meeting PROWAG guidelines, a new pedestrian bridge over Cooper Pond Brook, drainage improvements, intersection improvements and traffic signal revisions. The project includes extensive permitting, coordination with CTDOT and the Town of Ridgefield as well as public outreach.

STILL RIVER DRIVE ROUNDABOUT—NEW MILFORD, CT

Assisted in the design of a modern, single lane roundabout at the intersection of Still River Drive with Lanesville Road and Pickett District Road. The project included coordination with the Town, Western Connecticut Council of Governments (WestCOG) and CTDOT and was funded through the Local Transportation Capital Improvement Program (LOTCIP). The roundabout installation was aimed at addressing capacity concerns at the existing all-way stop to easing congestion on Still River Drive.

JONATHAN BOSSI, PE

PROJECT ENGINEER

Jonathan Bossi serves as a Project Engineer on a variety of site planning and design, stormwater management, and roadway projects. His experience includes, storm and sanitary sewer design, utility design, stormwater sampling, hydraulic and hydrologic modeling, construction observation and administration, cost estimating, also local, state, and federal permitting.

EXPERIENCE
6 Years

SPECIALTIES
Stormwater Management

Site/Civil Design

Utility Planning and Design

Roadway Design and Rehabilitation

Construction Observation

EDUCATION
Bachelor of Science
Environmental Engineering
University of Connecticut

LICENSES & REGISTRATIONS
Professional Engineer
CT #33931

PROFESSIONAL AFFILIATIONS
National Society of Professional Engineers

American Society of Civil Engineers

Connecticut Society of Civil Engineers

ROADWAY

RIVERSIDE AVENUE ROADWAY AND SIDEWALK IMROVEMENTS—WESTPORT, CT
Prepared application and assisted the Town in securing state funds for an $850,000 roadway reconstruction and sidewalk project on Riverside Avenue through the Local Transportation Capital Improvement Program. Responsible for completing the construction drawings and specifications while coordinating with Town, state, and WestCOG staff during design. Assisted the Town during construction with daily site visits, reviewing shop drawings and RFI's, tracking quantities, and reviewing payment requisitions.

MAIN STREET SIDEWALK IMPROVEMENT PROJECT – WESTPORT, CT
Project Engineer for a sidewalk replacement project spanning approximately 3,500 linear feet on Main Street and 500 linear feet on Compo Road North. The project also included new signalized crossing at the intersection of Main Street and Compo Road N. Tasks included preparing the LOTCIP application, local inland wetlands permitting efforts, preparing final construction documents, and coordinating with utility companies, CTDOT District 3, and CTDOT Traffic Engineering departments. The project is scheduled to begin construction in Summer 2022 at an estimated cost of $900,000.

COMPO ROAD SOUTH SIDEWALK IMPROVEMENT PROJECT – WESTPORT, CT
Project Engineer for replacement and infill of approximately 6,800 linear feet of sidewalk on Compo Road South, improving connectivity from Route 1 to the Long Island Sound shoreline. The project is funded through LOTCIP and will be constructed in the state right-of-way, requiring coordination with the CTDOT District 3 office. Design tasks include sidewalk layout and upgrades to meet ADA and PROWAG guidelines, utility relocation, easement acquisitions, and pavement marking and signing upgrades to improve conditions for bicyclists. Final design is expected to be completed in early 2023 with construction starting in Spring 2023.

RIDGEFIELD BRANCHVILLE TOD PEDESTRIAN IMPROVEMENTS PROJECT
Provided civil design services for pedestrian improvements to U.S. Route 7 (Ethan Allen Highway) and Route 102 (Branchville Road) in the Branchville section of Ridgefield. This Transportation Alternatives (TA) Program funded project originated from recommendations in the Branchville TOD Study and seeks to create safe, accessible sidewalks throughout the area and a link to the Branchville Railroad Station. The project includes approximately 2,300 LF of new sidewalks meeting PROWAG guidelines, a new pedestrian bridge over Cooper Pond Brook, drainage improvements, intersection improvements and traffic signal revisions. The project includes extensive

permitting, coordination with CTDOT and the Town of Ridgefield as well as public outreach.

GUILFORD ROUTE 77 PEDESTRIAN IMPROVEMENTS PROJECT
Provided civil design services for pedestrian improvements to Route 77. The goal of the project, funded through the CTDOT's Transportation Alternatives (TA) Program, is to create a safe, continuous sidewalk network between the Elisabeth C. Adams Middle School with Hubbard Road and important facilities such as the Guilford Racquet Club, Guilford Art Center and Guilford Public Safety Complex. The project includes approximately 2,700 LF of new sidewalks meeting PROWAG guidelines, drainage improvements, a new traffic signal and a new Rectangular Rapid Flashing Beacon (RRFB).

KINGS HIGHWAY PEDESTRIAN IMPROVEMENTS—FAIRFIELD, CT
Provided civil design services for pedestrian improvements to a 3,700 LF section of Kings Highway East (U.S. Route 1). The goal of the project, funded through the Map-21 Transportation Alternatives program and LOTCIP, was to encourage alternative means of transportation through the corridor to the Fairfield Metro Center Train Station. The project included narrowing of Kings Highway to create wider sidewalks to meet PROWAG guidelines, replacement and upgrades to the existing median, drainage improvements, utility relocations, and traffic signal revisions.

PHASE 1 ROADWAYS DRAINAGE AND PAVING PROJECT–THOMASTON, CT
Prepared construction documents for a 2.3 miles roadway project in Phase 1 of Thomaston's drainage and paving improvement program. The project area included a residential network of roadways adjacent to the downtown area that was in need of pavement rehabilitation, sidewalk improvements, and sanitary sewer and drainage upgrades. Responsible for coordinating the survey, geotechnical investigation, utility correspondence, and obtaining local approvals.

SANITARY SEWERS PHASE 4, PART B–SOUTH NICHOLS AREA
Reviewed preliminary sewer design and evaluated feasibility of dividing the project into multiple construction phases. Coordinated and observed 125 test borings over seven miles of roadway. Prepared engineering report including complete cost estimate for each phase including sewer, drainage, and paving costs, geotechnical investigation, and permitting requirements.

CONSTRUCTION OBSERVATION/ADMINISTRATION

PHASE 1 ROADWAYS DRAINAGE AND PAVING PROJECT—THOMASTON, CT
Served in lead construction administration role for sanitary sewer and drainage upgrades and full-depth reclamation of 2.3 miles of roadway in Thomaston, CT. Performed regular construction observation services and plan revisions throughout the fast-paced construction period. Coordinated field and formal project update meetings with the Town and Contractor, and managed project payment requisitions, submittals, and change orders.

TRUMBULL STORM AND SEWER IMPROVEMENTS—TRUMBULL, CT
Provided construction observation and administration services for the Town of Trumbull throughout various storm and sanitary sewer replacements and upgrades. Generated daily work reports, updated the town GIS system, and reviewed pay requisitions.

WAYPOINTE MIXED-USE DEVELOPMENT—NORWALK, CT
Served as the Construction Observer for the streetscape upgrades for this development in Norwalk, CT. Responsible for overseeing and documenting work performed including installation of curbing, sidewalks, landscaping and pervious pavers. Bookkeeping was completed in accordance with the CTDOT 4 Book Method. Also, regularly attend construction meetings at Norwalk City Hall to update progress and scheduling.

MATTHEW STOUTZ, PE, PTOE, RSP1

PROJECT ENGINEER

Matt is a project engineer with a focus on transportation planning and traffic and transportation safety. He holds his Professional Traffic Operations Engineer and Road Safety Professional certifications. His additional experience includes traffic impact studies, maintenance and protection of traffic, and transportation engineering projects. He is proficient in Connecticut Department of Transportation standards projects through his extensive work on projects as part of a multi-year transportation on-call contract.

EXPERIENCE
6 Years

SPECIALTIES
Transportation Planning

Traffic and Transportation Safety

Road Diets

Traffic Engineering

Transportation Engineering

Site/ Civil

EDUCATION
Bachelor of Science
Civil Engineering
University of Hartford

LICENSES & REGISTRATIONS
Professional Engineer
CT #33944
MA #56952

Professional Traffic Operations Engineer
#4,927

Road Safety Professional 1
#289

PROFESSIONAL AFFILIATIONS
Institute of Transportation Engineers

American Society of Civil Engineers (Connecticut Section)

TRANSPORTATION PLANNING

ROUTE 66 ENGINEERING PLANNING STUDY—PORTLAND AND EAST HAMPTON, CT
Analyzed and evaluated potential improvements to mitigate existing and future operational deficiencies and safety concerns along the 11-mile corridor. The project included coordination between the River Valley Council of Governments, the Towns of Portland and East Hampton, and corridor stakeholders.

FARMINGTON AND HARTFORD TRANSPORTATION PLANNING STUDY—FARMINGTON, CT
Developed several concept improvements plans and recommendations aimed at mitigating existing operational deficiencies and safety issues, accommodate future regional traffic growth, and enhance opportunities for alternative travel modes. The study included coordination between Capitol Region Council of Governments (CRCOG), the Town of Farmington, CTDOT and corridor stakeholders.

ROUTES 190 & 220 ENFIELD SQUARE MALL AREA TRAFFIC STUDY—ENFIELD, CT
Currently conducting a transportation assessment of the area surrounding the Enfield Square Mall Shopping area to identify safety, capacity, and multimodal deficiencies. The future conditions assessment will incorporate potential future development scenarios for the mall and surrounding areas and provide recommendations to improve the transportation system for all road users.

TRAFFIC AND TRANSPORTATION SAFETY

CTDOT ROAD DIET FEASIBILITY STUDY
Evaluated undivided, four-lane state routes in Connecticut for potential road diet implementation based on safety concerns, average daily traffic, and access deficiencies. Safety and operational analyses were performed on potential candidate segments. Conceptual designs were developed for feasible locations, which included striping, signing, and signal modifications. Recommended improvements aim to improve safety, mobility, and access deficiencies for all users along the candidate segments. Public outreach was conducted prior to implementation. A final GIS deliverable was developed to be used to facilitate road diet implementation as future opportunities arise.

HORIZONTAL CURVE EVALUATIONS—CTDOT
Evaluated approximately 250 horizontal curves on rural roads in District 1 and 205 curves in District 3, and 800 horizontal curves on state routes in District 3 based on collected field data. Horizontal curve treatments were designed in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD) and CTDOT's Catalog of Signs.

DISTRICT 2/ DISTRICT 3 CLEARANCE INTERVAL RETIMING—CTDOT
Calculated updated yellow, red and pedestrian clearance times at 435 signals in District 3 and 676 signals in District 2 as part of district-wide retiming projects. Clearance intervals were calculated based on design methodology outlined in CTDOT's Traffic Control Signal Design Manual.

SUFFIELD TOWNWIDE TRAFFIC AND PEDESTRIAN SAFETY STUDY
Currently conducted a townwide study to identify existing safety deficiencies, review feasible countermeasures, develop recommendations, and provide an implementation plan to facilitate future improvements to address safety concerns for all road users. Outreach efforts for the project include surveys and meetings with Town staff, the steering committee, and the public.

TRANSPORTATION ENGINEERING

HEBRON AVENUE ROUNDABOUT—GLASTONBURY, CT
Designed a hybrid multi-lane roundabout at the intersection of Hebron Avenue and House Street in Glastonbury, CT. The project was a result of a preliminary engineering study to assess the feasibility of installing a modern roundabout to mitigate existing safety concerns at the existing two-way stop-controlled intersection while providing acceptable traffic operations. The construction of the project was funded through the Local Road Accident Reduction Program through CTDOT and supports adjacent real estate development while improving safety at this gateway into Glastonbury's downtown area. The project was awarded an ACEC-CT Engineering Excellence Award in 2020.

TRAFFIC IMPACT STUDIES

THE PRESERVE AT BEAVER BROOK HOUSING DEVELOPMENT—MILFORD, CT
Prepared a traffic impact study for a proposed 342-unit residential development in Milford, CT. The study included a capacity and collision analysis.

MERIDEN RETAIL HEALTH—MERIDEN, CT
Prepared a traffic impact study for a proposed medical office space in Meriden, CT. The project proposes to convert approximately 180,000 square feet of existing retail space to medical office space.

RAYNES AVENUE DEVELOPMENT—PORTSMOUTH, NH
Prepared a traffic impact study for a proposed mixed-use development on Raynes Avenue in Portland, NH. The proposed development includes a 128-unit hotel, 60-unit residential building, 5,200 SF of retail space and 4,400 SF of restaurant space.

TRAFFIC SIGNAL DESIGN

HAWK SIGNAL—GARDNER, MA
Designed a High Intensity Activated Crosswalk (HAWK) signal in the Town of Gardner. The project was part of a larger complete streets project that proposes to construct a multi-use path, upgrade crossings, and install several Rapid Rectangular Flash Beacon (RRFB) to improve pedestrian safety and connectivity in the City.

COLLENE BYRNE, RSP2I

PROJECT MANAGER

Mrs. Byrne has over seventeen years of civil engineering experience specializing in traffic engineering and transportation. She has been responsible for the engineering design and preparation of study documents for a wide variety of projects. She has served as Project Engineer, Project Manager, and Senior Project Manager for transportation engineering projects for a variety of public and private sector clients. Traffic and Safety Engineering responsibilities have included the preparation of traffic impact studies including traffic data collection, operational analysis, safety recommendations, signing, pavement markings, crash analysis, cost estimating, preparation of planning studies, traffic signal design, maintenance and protection of traffic plans, and technical documentation and reports. Highway design experience includes pavement design, roadway safety, utility design, cost estimating, photometric (illumination) design, and construction documents and specifications.

EXPERIENCE
17 Years

SPECIALTIES
Traffic Impact Studies

Traffic Control Signal Design

Maintenance and Protection of Traffic

Roadway Design

Parking Studies

Construction Administration

EDUCATION
Bachelor of Science
Civil Engineering
Rensselaer Polytechnic Institute

LICENSES & REGISTRATIONS
Engineer in Training
MA #21561

Road Safety Professional-
Level 2 (Infrastructure)
#104

SHOPRITE—GREENBURGH, NY

Mrs. Byrne served at the senior engineer responsible for traffic signal design to accommodate the reconfigured intersection in coordination with the upgrade of the traffic signal at Old Country Road under a state roadway project, corresponding traffic impact study. The traffic impact study spanned a one-mile corridor with ten signalized intersections and included traffic data collection, trip generation assessment, intersection operational analysis, safety analysis, recommended safety and operational improvements, signing and striping improvements, and a comprehensive traffic impact report. Traffic signal design was also provided for the project site driveway with Saw Mill River Road which includes replacement of signal poles, span wire and signal heads, implementation of video detection, and upgrades to pedestrian accommodations. This project overlaps with a major state roadway improvement project which includes pedestrian upgrades at the intersection of Saw Mill River Road & Old Country Road. Mrs. Byrne has served in a project management role for the extensive ongoing coordination with several NYDOT departments to coordinate permitting and concurrent construction schedules. Highway Access Permitting services were also provided for the work within the right of way along Saw Mill River Road (Route 9A) for the improvements at the site driveway and utility connections.*

TOWNE LINE PLAZA—MONROE, CT

This project included the development of a vacant site totaling approximately 6.968 acres with the construction of a 4,276 SF convenience store with a gas station component and coffee shop with drive through, a restaurant of approximately 4,950 SF, a mixed-use retail building of approximately 17,500 SF, and a medical office of approximately 10,000 SF. The proposed development includes a 38-foot-wide main driveway with new traffic signal control along Monroe Turnpike (Route 111). Providing comprehensive traffic engineering services for the development, Mrs. Byrne served as the Project Manager responsible for the preparation of the Traffic Impact Study and signal warrant analysis including permitting services with the Connecticut Department of Transportation during the Major Traffic Generator certificate process. Highway engineering services included the preparation of detailed roadway improvements plans for widening approximately 1000 feet of Monroe Turnpike (Route 111).*

75 CHURCH HILL ROAD—NEWTOWN, CT
Provided comprehensive planning and engineering services for the development of a retail shopping center. Mrs. Byrne served as the Assistant Project Manager responsible for the preparation of the Traffic Impact Study including traffic data collection, intersection operations analysis, sight distance evaluation, and safety analysis. Traffic engineering services included significant coordination with Connecticut Department of Transportation regarding the relocation of Edmond Road, roadway design, and traffic signal design under state project 096-192. CTDOT coordination and design documents were also provided during the encroachment permitting process.*

TOWNE CENTER AT SHELTER RIDGE—SHELTON, CT
Provided comprehensive traffic engineering services for the development of 121-acre site located in Shelton, Connecticut. This project proposed over 1.2 million SF of mixed-use development and traffic impact analysis including 5 miles of corridor and 21 intersections. Mrs. Byrne served as the Assistant Project Manager responsible for the preparation of the Traffic Impact Study included traffic data collection, intersection operations analysis, sight distance evaluation, safety analysis, roadway design, traffic signal design, as well as local and state permitting services.

WHEELERS WOODS RESIDENTIAL COMMUNITY—MILFORD, CT
Providing comprehensive traffic engineering and permitting services for the proposed 180-unit residential community along Wheelers Farms Road in Milford, Connecticut. Mrs. Byrne served as the project manager responsible for the preparation of the traffic impact study including traffic data collection, trip generation analysis, intersection operations analysis, safety analysis. Permitting services included modification to the existing Major Traffic Certificate through the Office of the State Traffic Administration and local Police Commission approval for the traffic signal design.*

HAMPTON INN & SUITES—ROCKY HILL, CT
Provided comprehensive traffic engineering services for the development of a 93- room hotel in Rocky Hill, Connecticut. Mrs. Byrne served as the Assistant Project Manager responsible for the preparation of the Traffic Impact Study including traffic data collection, intersection operations analysis, sight distance evaluation, and safety analysis. Traffic engineering services includes encroachment permitting with Connecticut Department of Transportation to modify an existing traffic control signal to provide enhanced pedestrian accommodations. *

WAL-MART SUPERCENTER—MONROE, CT
Served as the Transportation Engineer responsible for the preparation of the Traffic Impact Study for the development of a Wal-Mart Supercenter. Traffic Engineering services included collection of existing traffic data, analysis of existing and future traffic conditions at five study area intersections, safety and operational improvements, and preparation of traffic impact study document. She also served as Assistant Project Manager for the off-site roadway improvement design and traffic signal design including permitting as a MTG with CTDOT OSTA. The off-site improvements also included new sidewalk, ADA compliant pedestrian accommodations, and a bus shelter along Route 25.*

CROSS ROAD CENTER—MONROE, CT
The project included the development of a 2.25- acre parcel with a mixed-use development consisting of 14,040 SF of shopping center. Mrs. Byrne served as the Senior Project Engineer responsible for the preparation of the Traffic Impact Study and Maintenance and Protection of Traffic plans. Traffic Engineering services included collection of existing traffic data, traffic operational analysis, and preparation of traffic impact study document, as well as local and state permitting services.*

**With previous firm*

JONATHAN IVES, PE

SENIOR PROJECT MANAGER

Jon is a career bridge engineer with over 21 years in the design and management of transportation structure projects. His experience includes vehicular, railroad and pedestrian bridges of all shapes and sizes, Accelerated Bridge Construction, and Alternative Delivery Methods. Having served as a Team Leader for bridge safety inspections, Jon possesses a hands-on familiarity with the detailing and functionality of all types of structures. As Senior Project Manager, he is responsible for project delivery from the proposal stage through design and construction.

EXPERIENCE
21 Years

SPECIALTIES
Bridge Design & Analysis

Bridge Evaluation & Repairs

Project Management

EDUCATION
Bachelor of Science
Civil Engineering
University of Connecticut

Master of Science
Civil Engineering
University of Connecticut

LICENSES & REGISTRATIONS
Professional Engineer
CT #24592

NBIS Certified Team Leader for Bridge Safety Inspection

STRUCTURAL/BRIDGES

SPRING STREET BRIDGE OVER QUINNIPIAC RIVER—SOUTHINGTON, CT
Served as Structural Department Manager for this Federal-Local Bridge project, which consisted of the complete replacement of a short span steel bridge with a 70-foot span steel rolled beam bridge on integral abutments. Now in construction, the bridge is being replaced in two stages while local traffic is maintained through the site. As part of the work, sewer and gas mains are being extended over the bridge and through the project limits. Jon developed and presented the replacement concept to the Town at the project interview and oversaw the design effort from inception through completion.

EAST LIBERTY STREET BRIDGE OVER MAD RIVER—WATERBURY, CT
Served as Structural Department Manager for this municipal project funded through the State-Local Bridge Program. The project was comprised of the complete replacement of a hundred-year-old concrete arch with a 90-foot span steel plate girder bridge on integral abutments. The work also included the replacement of gas and water mains that were carried by the original bridge. Jon was involved from start to finish, having prepared the structure type study, overseen the design, and served as Construction Coordinator.

JAMES STREET BRIDGE OVER SILVERMINE RIVER—NORWALK, CT
Served as Structural Department Manager for this municipal bridge replacement project, funded through the Federal-Local Bridge Program. The construction involved the complete replacement of a prestressed concrete superstructure with an 80-foot span steel rolled beam bridge, reconstruction of the abutment bridge seats to accept the new superstructure, and minor widening. The end blocks at the four corners of the bridge incorporated natural stone veneers, satisfying a request made during the extensive public involvement process.

PERRY AVENUE BRIDGE OVER NORWALK RIVER—NORWALK, CT
Served as Principal Structural Engineer for this Federal-Local Bridge project, which was comprised of a superstructure replacement and substructure widening. 80-foot span prestressed box beams were used to facilitate multistage construction; two lanes of vehicular traffic, pedestrian traffic and utilities were maintained throughout the project including underground gas, sewer, and water. Jon oversaw final design efforts and was engaged for the resolution of key technical issues during construction.

I-95 MEDIAN RECONSTRUCTION & RESURFACING—NORWALK AND WESTPORT, CT
Served as Structural Department Manager for this project, which includes the complete replacement of the I-95 bridge over Saugatuck Avenue in Westport using Accelerated Bridge Construction. In this case, ABC will be accomplished via a "lateral slide". While new abutments are constructed beneath the end spans of the existing bridge, new Northbound and Southbound superstructures will be constructed adjacent to it on temporary supports. Over an extended weekend, bidirectional traffic will be maintained on the Southbound barrel of the highway while the existing Northbound bridge is demolished and the new one is jacked into place. On a subsequent weekend, the process will be duplicated for the Southbound structure. Jon proposed and developed the plan for the lateral slide and guided the design from inception through completion. The project is slated to be the largest lateral slide undertaken in Connecticut to date.

AMTRAK OVER HARBOR BROOK—MERIDEN, CT
Served as Structural Department Manager for this municipal flood relief project. The hydraulic capacity of Harbor Brook was formerly constrained by a railroad bridge, which carries Amtrak and freight trains. Increasing the hydraulic capacity of Harbor Brook at this point was identified as a key component of the City's flood relief program. The volume of rail traffic dictated that the bridge remain open; to meet this difficult constraint, two 5-foot diameter culverts were jacked under the railroad embankment. The operation consisted of installing a jacking pit within the adjacent City parking lot and then pushing (jacking) pipe under Amtrak's rail lines while simultaneously digging out the soil captured within the casing pipe.

WEST CENTER STREET BRIDGE OVER EIGHT MILE RIVER—SOUTHINGTON, CT
Served as Principal Structural Engineer for this municipal bridge project funded through the State-Local Bridge Program. The construction involved the replacement of the 50-foot span steel rolled beam superstructure, reconstruction of the abutment bridge seats, and replacement of gas and water mains carried by the bridge. Since the bridge was in poor condition, the design schedule was compressed to one year.

LAUREL LANE BRIDGE OVER MOUNT HOPE RIVER—MANSFIELD, CT
Served in a lead role for this Federal-Local Bridge project, which was comprised of the complete replacement of a two-span steel rolled beam bridge with a 78-foot single-span steel rolled beam bridge on integral abutments. The bridge is among the first integral abutment structures constructed in Connecticut. Jon wrote the Structure Type Study Report, performed bridge and roadway design, and assembled complete design plans for the project.

STERLING HILL ROAD BRIDGE OVER EKONK BROOK—PLAINVILLE, CT
Served in a lead role for this Federal-Local Bridge project. The new bridge is a 40-foot clear span precast concrete rigid frame, which was selected to provide the greatest hydraulic opening possible given the layout of the watercourse, roadway, and adjacent driveways. Jon wrote the Structure Type Study Report, performed bridge and roadway design, and assembled complete design plans for the project.

SOUTH RIVER STREET BRIDGE EMERGENCY REPAIRS—ENFIELD, CT
Served as Structural Department Manager for this emergency repair project. The bridge, which provides the only access point for oil trucks and emergency services to approximately 26 residences, had been closed due to deterioration reported by the Connecticut DOT's bridge safety inspectors. The ends of the steel rolled beams had deteriorated to the point that the bridge was at risk of losing support under load, and both abutments were undermined by scour. When contacted by the Town, Jon responded immediately by performing a hands-on inspection of the structure and working with his team to prepare a package of plans and specifications to address the State's concerns and restore access.

CHRISTOPHER DUBUQUE, PE

SENIOR ENGINEER

Christopher Dubuque has civil engineering experience in land development and roadway design, hydrologic and hydraulic calculations, surveying, composing engineering reports, and preparing cost estimates. He is proficient in using Civil 3D software resulting in 3D design models. His extensive construction administration experience allows him to assist clients through the construction phase of projects.

EXPERIENCE
19 Years

SPECIALTIES
Construction Administration

Hydraulics and Hydrology

Drainage Systems

Watershed & Flood Plain Modeling

Roadway Improvements

Site/Civil Design

EDUCATION
Associate in Engineering
Civil and Environmental
Engineering Technology
Vermont Technical College

Bachelor of Science
Civil Engineering
University of Vermont

LICENSES & REGISTRATIONS
Professional Engineer
CT #25755

PROFESSIONAL AFFILIATIONS
American Society of Civil Engineers

Connecticut Society of Civil Engineers

ROADWAY

RIVERSIDE AVENUE ROADWAY AND SIDEWALK IMROVEMENTS—Westport, CT
Assisted with construction administration tasks, making sure the proper paperwork is submitted and tracked. Advised the Town and our Construction Observer as project issues were encountered.

OAKLAWN AVENUE—STAMFORD, CT
Redesigned the drainage system to meet the CTDOT requirements for Oaklawn Avenue in Stamford, CT.

STROBEL ROAD ROADWAY REHABILITATION
Designed Strobel Road, a 1.5 mile roadway reclamation project with improvements to the vertical geometry of the roadway. Designed a new storm drainage system in the roadway and designed a new dual box culvert crossing to handle the flow from a one square mile watershed area. The design also included a snow shelf along both sides of the roadway. A wall was specified where cutting the side slopes back to meet existing grade was not practical. Coordinated the utility relocation effort to be handled as the roadway construction progressed. Detailed phasing plans were created for construction on the busy roadway.

HICKORY HILL ROADWAY RECONSTRUCTION
Designed Hickory Hill Road, a complete reconstruction of 2.15 miles of roadway. This design improved the horizontal and vertical geometry of the roadway to comply with AASHTO design standards. There were also improvements to site distances and layout at several intersections and a snow shelf was created along both sides of the roadway. Designed a new drainage system for the roadway and multiple culvert crossings to handle storm flow from the upstream watershed area.

WARD-HEITMANN HOUSE MUSEUM DRAINAGE AND SITE IMPROVEMENTS
The Ward-Heitmann House project consisted of drainage improvements designed to collect and infiltrate stormwater runoff from the site. An ADA compliant bluestone walkway was designed to access the facility. I also designed a foundation drain and waterproofing membrane around the stone foundation to keep the water out of the basement.

CONSTRUCTION OBSERVATION FOR ROADWAYS
Performed full time construction observation duties for the Main Street Traffic Signal Improvements project in Glastonbury, CT, West Avenue Roadway Improvements project in Norwalk, CT, and the Bruce Avenue Roadway Improvements project in Stratford, CT. Used the CTDOT four book system for project documentation.

LAFORGE ROAD—DARIEN, CT
Designed a drainage system on a roadway that is prone to flooding in Darien, CT. Improvements included the replacement of 1,200 LF of 36-inch diameter equivalent elliptical pipe and upgrading storm drainage. The design was challenging due to the numerous utilities and grade restrictions. Also provided full time construction observation.

WEST AVENUE RECONSTRUCTION—NORWALK, CT
Prepared construction documents for the reconstruction of West Avenue in Norwalk, CT, including design changes for several on/off ramps leading to I-95 and Route 7. This is a major arterial road leading into South Norwalk and will ready the roadway infrastructure for future business development in the area.

PINE STREET DEVELOPMENT—NORWALK, CT
Developed construction drawings and prepared cost analysis for the development of Pine Street in Norwalk, CT.

ROUTE 7 INTERSECTION—NORWALK, CT
Prepared construction drawings for intersection widening on Route 7 in Norwalk, CT. This project improved the functionality of a very busy intersection on a state roadway.

AGRISCIENCE AND BIOTECHNOLOGY CENTER PAVEMENT REHABILITATION
Designed a new parking lot at the school and provided construction services with an aggressive construction schedule (summer break). Unsuitable base materials were removed and replaced with free draining material and underdrains were added to intercept groundwater.

CIVIL/SITE

THE RESERVE DEVELOPMENT—DANBURY, CT
Designed drainage systems, outlet control structures, and pollutant removal systems for The Reserve mixed use development in Danbury, CT. This design collected the stormwater runoff, treated the stormwater to acceptable pollutant levels, and discharged the water at a reduced flow rate so no damage would be caused downstream of the project.

SANITARY SEWER—PALMER, MA
Designed a sanitary sewer system to replace a combined sewer overflow system in Palmer, MA. Design documents included plan and profile view of the sewer and storm systems, a construction cost estimate, and recommendations to the town.

WATERSHED MODELING—DANBURY, CT
Utilized HEC-1 program to model existing and proposed watersheds for many developments, including a 600+ acre site in Danbury, CT. These models were used to determine how the proposed developments impacted the watershed basins.

RIVER AND FLOOD PLAIN MODELING—DARIEN/GEORGETOWN, CT
Used HEC-RAS river modeling program to determine flood elevations in Darien and Georgetown, CT. Both projects proposed filling in a portion of the flood plain and with the use of HEC-RAS I was able to predict the impacts to the river.

THOMAS WAMSER, PE, PTOE, RSP1

PROJECT ENGINEER

Thomas Wamser is a project engineer focused on the traffic impact and corridor planning study, roadway and traffic signal design, traffic calming, maintenance and protection of traffic, and parking study disciplines. He has worked extensively on developing conceptual roadway improvement plans for multiple Connecticut corridor planning studies to improve safety and efficiency. Thomas is also involved in creating roadway and traffic signal construction plan sets for municipal and state-owned facilities. He is a member of the Institute of Transportation Engineers and the American Society of Civil Engineers.

EXPERIENCE
7 Years

SPECIALTIES
Traffic Impact Studies

Corridor Planning Studies

Roadway Design

Traffic Signal Design

Road Diets

Traffic Calming

Signage & Pavement Markings

Maintenance & Protection of Traffic

Parking Studies

EDUCATION
Bachelor of Science
Civil Engineering
University of Connecticut

LICENSES & REGISTRATIONS
Professional Engineer
CT #0034758

Professional Traffic Operations Engineer
#5128

Road Safety Professional 1
#298

PROFESSIONAL AFFILIATIONS
Institute of Transportation Engineers

American Society of Civil Engineers

TRAFFIC IMPACT AND CORRIDOR PLANNING STUDIES

ROUTES 25/111 ENGINEERING PLANNING STUDY—MONROE / TRUMBULL, CT
Utilized Synchro traffic analysis software to analyze roadway capacity under 2040 forecasted conditions and identified existing pedestrian and transit deficiencies on State Routes 25 and 111 in Monroe and Trumbull, CT. Examined collision history for evidence of patterns to develop concept plans detailing operational and safety improvements to the network. Prepared public presentations and technical reports summarizing the findings of the study.

ROUTE 4 TRANSPORTATION SAFETY AND IMPROVEMENTS STUDY—FARMINGTON, CT
Forecasted future intersection and roadway operations and analyzed collision history for Route 4 in Farmington, CT to identify deficiencies and propose improvements to increase efficiency and address safety concerns. Additionally, opportunities for pedestrians and transit were identified and implemented into conceptual improvement design plans.

ROUTE 2 BICYCLE/PEDESTRIAN STUDY—NORTH STONINGTON, CT
Developed conceptual roadway improvement plans for approximately three miles of Route 2 in North Stonington from Route 184 to Holly Green. The concepts focused on implementing bicycle and pedestrian accommodations along the corridor based on demonstrated need and deficiencies in the existing roadway. A separated multi-use path and/or on-street buffered bike lanes were proposed alongside sidewalk, pedestrian crossing, and access management improvements. An opinion of probably construction costs was developed and the concepts were broken into feasible phases of constructability. Property, utility, and roadside geometry impacts were all included in the estimate.

GROTON JLUS STUDY—GROTON, CT
Conducted an extensive field investigation and analyzed traffic data in the area of the subbase and Electric Boat properties in Groton, CT. Identified operational and safety deficiencies, forecasted future needs based on planned regional growth, and developed conceptual improvement plans and anticipated project costs for numerous study area roadways and intersections. Concepts addressed roadway capacity, safety, and pedestrian and transit amenities.

ROADWAY & TRAFFIC SIGNAL DESIGN

STRAWBERRY HILL AVENUE INTERSECTION IMPROVEMENTS—STAMFORD, CT
Developed a comprehensive set of design plans for roadway reconstruction and traffic signal operational improvements for the intersection of Strawberry Hill Avenue at Strawberry Hill Court and Rock Spring Road in Stamford, CT. The project was a result of concern by the city and public with ongoing safety and capacity issues at the intersection. A realignment of the side streets eliminated split phasing and reduced intersection skew to address the problems. Pedestrian crossings were shortened, and corner radii reduced to create safer crosswalks.

CARALUZZI'S MARKET OFF-SITE IMPROVEMENTS—DANBURY, CT
Worked to create roadway and traffic signal design plans for U.S. Routes 6 & 202 (Mill Plain Road) in the area of a proposed Caraluzzi's Market in Danbury, CT. The associated project required the installation of a new traffic signal on Mill Plain Road and widening was needed to accommodate the new sidewalk and left-turn lanes to ensure signal operations facilitated safe, efficient traffic operations on the roadway. The design adhered to all CTDOT guidelines for roadway and traffic signal design.

COLLYER STREET RETAINING WALL ROADWAY DESIGN—PROVIDENCE, RI
Drafted a full set of roadway design plans to reconstruct the Collyer Street roadway, sidewalk, and supporting retaining walls in Providence, RI in response to the deteriorated road and wall conditions requiring a closure. This time-sensitive project aimed to restore traffic flow on the roadway while the design was upgraded to provide improved amenities and withstand the required structural burden in the future.

TRUMBULL TRANSFER STATION SPRING HILL ROAD IMPROVEMENTS—TRUMBULL, CT
Designed roadway improvements for widening Spring Hill Road and constructing sidewalks and a trail crossing in Trumbull, CT in order to facilitate better access to the regional transfer station and improve traffic congestion on Spring Hill Road and the adjacent roadway network. Put together a comprehensive set of design plans detailing the site and town roadway improvements.

ROUTE 111 PEQUONNOCK RIVER TRAIL CROSSING—TRUMBULL, CT
Worked on a rectangular rapid flashing beacon crossing of Route 111 for the Pequonnock River Trail in Trumbull, CT. Designed a longer-term solution relocating the trail crossing to a newly signalized intersection near the existing crossing to provide an exclusive signalized pedestrian crossing phase. Additionally, improved the trail amenities and provided appropriate signage and pavement markings at the crossing of Spring Hill Road nearby.

ROAD DIETS

STATE STREET MULTI-USE PATH—NEW HAVEN, CT
Coordinated multiple planned road diets and multi-use/bike facilities in the area of Water Street and Union Avenue in New Haven with proposed changes to State Street North. The project entailed eliminating a travel lane to provide an on-street bi-direction multi-use path for two city blocks where no sidewalk existed so a continuous network could be provided to provide connectivity within the network.

CTDOT ROAD DIET FEASIBILITY STUDY
Analyzed existing roadway geometry, safety deficiencies, and capacity in order to identify segments suitable for road diet implementation. Opportunities to reduce the number of travel lanes and reduce lane widths to accommodate bike lanes, center two-way left turn lanes, and on-street parking were identified. Recommendations were made based on the analyses to develop conceptual restriping plans. Approximately 40 segments were analyzed for this project.

MATTHEW ROMANO, PE

SENIOR ELECTRICAL ENGINEER

Matthew Romano's 17 years of experience and background in electrical engineering and computers equips him to design and specify power, lighting, HVAC, fire and intrusion detection, instrumentation and control, public address, and telephone systems. He has worked on a broad array of projects focused on water resources, wastewater treatment, industrial waste, solid waste, and electrical demolition.

EXPERIENCE
17 Years

SPECIALTIES
Power Systems

Lighting Design

Fire, Intrusion, CCTV, and Public Address Systems

Arc Flash and Electrical Coordination Studies

Process Control and Instrumentation

Electrical Condition Analyses

EDUCATION
Bachelor of Science
Electrical and Computer Engineering
Worcester Polytechnic Institute

Master of Science
Electrical Power Engineering
Arizona State University

LICENSES & REGISTRATIONS
Professional Engineer
MA #48169
CT #27315
NH #14059
RI #11893
ME #17088
MI #6201060081

PROFESSIONAL AFFILIATIONS
Institute of Electrical and Electronics Engineers

National Fire Protection Agency

Tau Beta Pi
(National Engineering Honors Society)

Eta Kappa Nu
(National Electrical Engineering Honors Society)

ELECTRICAL CODE INSPECTION—WEST SPRINGFIELD, MA
Performed an electrical code inspection and analysis for a manufacturing facility in West Springfield, MA.

ELECTRICAL AND STRUCTURAL DESIGN—MASSACHUSETTS
Served as Project Manager and electrical design engineer for the design of electrical and structural portions of a senior center upgrade project.

ELECTRICAL AND STRUCTURAL DESIGN—DEERFIELD, MA
Assisted in the electrical design for a new squash court facility at this college preparatory school in Deerfield, MA.

ELECTRICAL, FIRE, AND INTRUSION SYSTEMS—HARTFORD, CT
Designed the electrical, fire, and intrusion systems for a customer service facility in Hartford, CT.

ELECTRICAL, FIRE, AND INTRUSION SYSTEMS—HOLYOKE, MA
Designed the electrical, fire, and intrusion systems for a maintenance facility in Holyoke, MA.

ELECTRICAL DESIGN—DEERFIELD, MA
Participated in the electrical design team for renovations to the Deerfield Academy Main Administration Building at a college preparatory school in Deerfield, MA.

WATER TREATMENT FACILITIES & PUMP STATIONS—CONNECTICUT
Performed numerous arc flash analyses and overcurrent protective device coordination studies for CT treatment facilities and pump stations.

ELECTRICAL, HVAC, AND CONTROL SYSTEMS—HARTFORD, CT
Designed the electrical, HVAC, and control systems for booster pump station located in Hartford and East Hartford, CT.

ELECTRICAL, HVAC, FIRE AND INTRUSION DETECTION SYSTEMS BLANDFORD, MA
Designed the electrical, HVAC, and fire and intrusion detection systems for a water treatment facility in Blandford, MA. Also assisted in the design of the facility's instrumentation and control system.

ELECTRICAL SYSTEM FOR PUMPING STATION—SOUTH HADLEY, MA
Designed the new electrical system for a dry well pumping station in South Hadley, MA.

WATER TREATMENT PLANT UPGRADES—STONINGTON, CT
Served as electrical design engineer for major upgrades to a water treatment plant in Stonington, CT. Included planning and organization of electrical demolition and renovations to an existing building as well as the design of new electrical, HVAC, and fire detection systems for a new chemical building.

ELECTRICAL MODIFICATIONS AND DEMOLITION PLANS—BARNSTABLE, MA
Assisted in the design of electrical modifications and demolition plans for a pumping station in Barnstable, MA.

BIOSOLIDS DRYER FACILITY UPGRADE—DETROIT, MI
Served as lead electrical engineer for a $132M sludge dryer facility for the City of Detroit, MI, which is the largest facility of its kind in North America. Design work included power distribution, controls, lighting, fire detection, security, telephone, public address, and lightning protection systems. Other electrical engineering work included arc flash analyses, coordination studies, harmonics analyses, and electrical construction administration

WATER POLLUTION CONTROL FACILITY—VERNON, CT
Serving as lead senior electrical engineer for a $70M upgrades project at a water pollution control facility in Vernon, CT. Design work included 15kV and 480V power distribution, normal and backup power systems, electrical safety enhancements, instrumentation and controls, lighting and fire detection. Other electrical engineering work includes arc flash analyses, coordination study, and electrical harmonics review.

NEW COMBINED SEWER OVERFLOW (CSO) DESIGN—CHICOPEE, MA
Designed the electrical systems for a new combined sewer overflow facility in Chicopee, MA. Tasks included design and coordination of the electrical distribution and backup power generation systems as well as the fire detection, security, and various other controls and communications systems.

WATER POLLUTION CONTROL FACILITY—SOUTHINGTON, CT
Served as lead electrical engineer for a $45M water pollution control facility upgrades project in Southington, CT. Design work included normal and backup power capacity analyses, arc flash study and design of power distribution systems, electrical safety enhancements, controls, lighting, fire detection, security, telephone, public address, and lightning protection.

NEW PUMP STATION DESIGN—MIDDLETOWN, CT
Designed the electrical distribution and controls systems for a new pump station in Middletown, CT.

WATER POLLUTION CONTROL FACILITY UPGRADES—REDDING, CT
Designed the electrical and HVAC systems for a major upgrades project at a water pollution control facility in Redding, CT. The design included the integration of a backup power generation system as well as an odor control system.

WASTEWATER TREATMENT PLANT UPGRADES—SOUTH HADLEY, MA
Served as electrical design engineer and assisted with construction coordination for upgrades to a wastewater treatment plant and pump station in South Hadley, MA.

GLEN CARMAN

CONSTRUCTION OBSERVER/INSPECTOR

Engineer/Inspector with experience in traffic safety, milling, paving, excavation, drainage, concrete, sewers, steel reinforcement, pile driving/ drilling, bridge deck repair, MEP, and building rehab. Reliable and responsible team player skilled in problem solving, designing, drafting, reporting, and structural evaluation.

EXPERIENCE
22 Years

EDUCATION
Bachelor of Science in Engineering Technology
Central Connecticut State University
New Britain, CT

Associate Degree in General Studies
Northwestern Connecticut Community Technical College,
Winsted, CT

COMPUTER SKILLS
AutoCAD Microstation, Primavera
Microsoft Access, Excel, & Word

PROFESSIONAL AFFILIATIONS
NETTCP (New England Transportation Certification Program)
Certification #561 Nuclear Density Testing

NICET (National Institute for Certificate in Engineering Technologies)
Certification #1695 Civil Engineering Technology-Certified Engineering Technologist

ROADWAY

ATLANTIC STREET/HENRY STREET INTERSECTION IMPROVEMENT (SPN 135-320) —STAMFORD, CT
Provided on-site construction observation/inspection for Atlantic & Henry Street realignment. Project included new traffic signal, roadway paving, curbs and sidewalks, construction of on-street parking, drainage improvements and creation of small park areas adjacent to the sidewalks.

OAKLAWN AVE ROADWAY IMPROVEMENTS (SPN 135-321) - STAMFORD, CT
Provided on-site construction observation/inspection for full depth roadway reconstruction, street realignment and widening, new curbing, sidewalks, retaining wall, new street signage installed, driveway aprons, drainage, and utility relocations.

RECONSTRUCTION OF STROBEL RD (SPN L144-0002) - TRUMBULL, CT
Provided on-site construction observation/inspection for LOTCIP project that included full depth roadway reconstruction, roadway widening, new curbing, sidewalks, retaining walls, new traffic signal, street signage, driveway aprons, drainage, utility relocation, new box culvert, fencing and metal beam rails.

RECONSTRUCTION OF HICKORY HILL RD (SPN L140-0001) - TOWN OF THOMASTON, CT
Provided on-site construction observation/inspection for LOTCIP project that included full depth roadway reconstruction, roadway widening with some realignment, new curbing, sidewalks, retaining walls, new street signage installed, driveway aprons, drainage, relocation of utilities, new box culverts, fencing and metal beam rails.

I-84 BRIDGE PRESERVATIONS—NEW BRITAIN/PLAINVILLE, CT
Served as Senior Quality Control Inspector and oversaw safety improvements and preservation for four Bridges on I-84, and RT 72. Responsibilities included supervising and assisting junior inspectors assigned to the project as well as the inspection of work related to substructure repairs, sounding of concrete, milling, sounding of bridge decks, and paving. Required to attend weekly meetings, updating staff on work activities relating to contractor schedule. *

I-95 PAVEMENT PRESERVATION—NORWALK/DARIEN, CT
Served as Construction Inspector for a five-mile pavement preservation project along I-95. Responsibilities included the inspection and monitoring of the micro milling of two inches of the travel surface and replacing it with 1 inches of Polymer Modified Asphalt S0.25 and two inches of PMA S0.50; and also the replacement of the top two inches of the travel surface on all ramps

within the project limits. Also covered additional activities when requested like sink hole on I-95, replacing CB tops, and asphalt plug expansion joints (APEJ). Also responsible for reviewing, revising, and correcting reports in project volumes. Trained junior inspectors and assisted the Operations Engineer with topics relating to project records and files. *

NEW HAVEN MNR RAILROAD COMPONENT CHANGE OUT SHOP AND CDW—NEW HAVEN, CT
MEP Inspector with responsibilities including the inspection of piping for drainage, HW & CW, vent piping, air, and gas. Other duties include the monitoring of activities at the water treatment facility and overseeing environmental health safety personnel. Responsible for the inspection and tracking of cost and activities. Additionally, assisted with the inspection of electrical as well as other activities for other trade when required. *

Q BRIDGE CONTRACTS B1 & B2–NEW HAVEN, CT
Construction Inspector, responsible for the inspection of the steel erection and safety patterns for the B2 Contract. Responsibilities on the B1 Contract consisted of the inspection of the painting and handling of contaminated water. *

RECONSTRUCTION OF ROUTE 7—DANBURY, CT
Construction Inspector, responsible for inspection of storm drainage, milling and paving, excavation of guard rail, contaminated materials, and unsuitable materials, street lighting, and bridge construction. *

SEWER PROJECT—MARLBOROUGH, CT
Construction Inspector, responsible for overseeing the installation of approximately 21,000 LF of 8-inch PVC, 11,000 LF of 12-inch PVC, 1,200 LF of 6-inch PVC, the construction of approximately 24-36 SMH, 12-24 low pressure terminal clean out MH, and the installation of 2 and 3-inch low pressure piping. The inspection of work also included bedding material, tees, wyes, drop inlets, back filling, and grading. Assisted with the construction inspection work regarding the new pump station, wrote daily inspection reports, created as-built drawings, and checked elevations of structures and piping using survey equipment. *

SEWER PROJECT—COVENTRY, CT
Senior Representative/Chief Inspector, responsible for conducting inspections of various construction activities. Acted as a liaison for the company, maintaining contact with clients, answering questions, and providing status on project progress. Attended monthly progress meetings to update the consulting firm and client on the activities and addressed problems when needed. Worked for sub-consultant to perform inspections of rehab of sewer treatment plants, sewer pump stations, and new installation of sewer systems. *

SEWER TREATMENT PLANT—STRATFORD, CT
Inspector, responsible for inspection of various activities including inspection of 95% of all installation for HVAC, electrical, fire alarm systems, heating, plumbing, egress, and partitions. *

I-95 RECONSTRUCTION OF MEDIAN AND RESURFACING—DARIEN/NORWALK, CT
Assistant Engineer/Inspector, responsible for the inspection of roadway resurfacing, median barrier installation, drainage systems, partial and total bridge deck replacement, concrete roadway replacement, hot mix asphalt paving operations, placement of subbase materials, earth excavation, and monitoring the disposal of controlled materials. Installation and testing of fire suppression standpipe systems, maintenance and protection of traffic, work zone signage, and channelizing devices. *

*with previous firm

OFFICES ACROSS THE NORTHEAST

Connecticut

Maine

Massachusetts

New York

New Hampshire

Rhode Island

www.tighebond.com | 800.561.0416

Tighe&Bond