

# John Q. Adams, P.E., PTOE

## Maine Regional Manager

### Years of Experience:

With This Firm: 5  
With Other Firms: 17

### Education:

B.S., Civil Engineering  
University of Connecticut  
Storrs, CT

### License/Certification:

Professional Engineer  
- Maine  
- Connecticut  
Professional Traffic Operations  
Engineer, ITE  
Maine DOT Locally Administered  
Project (LAP) Certification, 2015  
IMSA Level 1 Traffic Signal  
Technician, 2015

### Professional Affiliations:

Institute of Transportation  
Engineers, New England  
Section ITE,  
Board of Directors - Director  
Maine Association of Planners  
Maine Better Transportation  
Association  
Association of Pedestrian and  
Bicycle Professionals  
American Public Works Association



Mr. Adams has over 20 years of engineering experience including roadway and intersection design, traffic signal design and coordination, design of signal system communications architecture, operation of traffic signal systems via signal management software, and traffic impact safety and planning studies. Mr. Adams also has experience in trail design, drainage improvements, bridge and roadway inspection, on-site sewage disposal system design, landfill closure plans, and gas recovery system design.

Highlights of Mr. Adams' experience include:

### On-Call Municipal Traffic Peer Review

Mr. Adams has been retained by Maine communities to assist municipal staff and planning boards in the review of proposed development applications. The traffic peer reviews have ranged from smaller residential and commercial developments to large multi-use retail, residential, and commercial uses. Some of the communities that John has assisted include; Gorham, South Portland, Westbrook, and Turner. He recently assisted the City of Westbrook with the proposed Dirigo Plaza development, an approximately 500,000 square foot mixed-use development, with 40 study intersections in Westbrook and Portland, and several million dollars of proposed off-site improvements to intersections and roadways to mitigate impacts.

### Spring Street Reconstruction and Streetscape Portland, Maine

Serving as Project Manager and lead transportation engineer for this ongoing "complete streets" project for Spring Street. Mr. Adams performed the traffic operations, analysis, and modeling of the roadway to determine appropriate lane use at each of the project intersections and leads communications and coordination with city staff. Overall, the redesign will revise the road alignment to eliminate large raised median and incorporate new sidewalks, shorter crosswalks, landscaped esplanades, dedicated bike lanes, and streetscape amenities on approximately 2,400 linear feet of Spring Street.

### Depot Street Reconstruction and Streetscape Bridgton, Maine

Lead transportation engineer for a roadway redesign and streetscape project to enhance Depot Street with new sidewalks, curbing, crosswalks, landscaping, furniture, and lighting. The roadway will be reconstructed to maximize drainage efficiency by incorporating additional drainage infrastructure and establishing a new vertical profile. Mr. Adams assisted throughout the design process and with public information meetings.

### College Street Reconstruction Brunswick, Maine

Project Manager for 1,800-foot roadway reconstruction project. The project involved streetscape and traffic calming elements including raised speed tables, granite crosswalks, street bollards, lighting, and tree plantings. The project also included new sidewalks and ramps, roadway reconstruction, drainage improvements, and replacement of water and sewer line.

**Training:**

ITE Complete Streets Workshop, 2012  
AASHTO Bike Design Guide Workshop, 2013  
ITE Pedestrian & Bicycle Facility Design, 2013  
2009 MUTCD Updates Workshop, Maine ITE Chapter 2011  
Intersection Red Light Running Reduction Workshop, Maine ITE 2010  
FHWA Northeast Roundabout Peer Exchange Workshop, 2010  
ITE NE Section, Pedestrian Design Concerns at Signalized Intersections, 2010  
Naztec Signal Controller Coordination Operation and Communication Network Architecture, 2010  
Transit Signal Priority Training, NEITE & Northeastern University, 2009  
IMSA - Traffic Signal Technician Level 1 & Work Zone Temporary Traffic Control Technician, July 2015  
Synchro/SimTraffic 7 Training 2008, 2010  
Traffic Signal Controller Operations, Detection and Communications Workshop, Transit Priority Systems Electric Light Company, 2007, 2008, 2011, 2013, 2015  
Federal Highway Administration, Roundabout Design Class, 2007  
ITE, NE Section, Mixed Use Development Trip Generation, 2007  
Naztec Controller, Street-wise System, and Traffic Responsive Systems Training Workshop, AD Electric, 2006  
Federal Highway Administration, Intersection Safety Class, 2006  
Detention Pond System Modeling Pondpack Software, Haestad Methods 2004  
Subsurface Sewage Disposal System Workshop CT Department of Health 2002  
Northwestern University, Certified Traffic Signal Workshop, 2001  
Landfill Gas System Engineering Design Seminar, LANDTEC 1994

**York Village Study**

**York, Maine**

Lead Transportation and Traffic Engineer for review of existing safety and traffic operations, characteristics, analysis of proposed design alternatives, and preliminary design and layout of chosen alternative in the York Village study area.

**Elm Street Streetscape**

**Mechanic Falls, Maine**

Project Manager for roadway reconstruction and streetscape project. Project involves addition of sidewalks, lighting, on-street parking, storm drain system improvements, and roadway reconstruction. The goals of the project are to enhance traffic operations and safety for all modes and to help revitalize the downtown Mechanic Falls area.

**Mixed-Use Developments**

**Portland, Maine**

Lead traffic engineer for traffic permitting and impact studies. Projects have involved trip generation, accident data analysis, sight distance evaluations, design of intersections and turning radii, parking studies, preparation of traffic demand management plans, traffic modeling of existing and proposed conditions, and client representations at public hearings.

**Intersection Safety Improvement - Hedgehog Mountain Road at Pownal Road**

**Freeport, Maine**

Performed safety study for the intersection including review and analysis of accident data and existing intersection sight distance deficiencies. The project involved the design of intersection sight distance improvements by removing an embankment along the inside of a horizontal curve, installing rock slope stabilization, and landscape elements.

**Seacoast United Athletic Fields & Arena**

**Freeport, Maine**

Project Manager for the proposed Seacoast United Facility. The site design and layout included two regulation outdoor soccer fields and an indoor soccer arena. The facility was strategically located adjacent to the Town of Freeport's outdoor fields to create a localized center for multi-purpose fields and arena. Permitting included local site plan application, Maine DEP, and Maine DOT applications.

**Eastern Trail**

**Saco to Old Orchard Beach, Maine**

Provided construction oversight and construction administration services for a 4.3-mile section of the Eastern Trail in Saco to Old Orchard Beach, Maine.

**Mountain Division Trail**

**Fryeburg, Maine**

Provided construction oversight and construction administration services for two sections of the Mountain Division Trail in Fryeburg for the Maine Department of Transportation, Multimodal Program.

**Maine Department of Transportation**

**On-Call Inspection Services GCA**

Project Manager overseeing inspection contracts for highways and multimodal projects.

### **Bay Landing Drainage Improvements**

#### **Boothbay Harbor, Maine**

Project Manager for drainage improvement project. The project involved performing topographic survey drainage analysis of the existing stormwater system on the Bay Landing property and the town and state stormwater system on Tupper Road, Perkins Road, and Route 27 and designing improvements. The project improved an existing flooding problem by conveying stormwater into the existing storm drainage systems.

### **Traffic Signal Utility Identification & On-Call Traffic Peer Review Services**

#### **South Portland, Maine**

Project Manager providing guidance to city staff for a citywide traffic evaluation. Mr. Adams is also providing traffic peer review services under an on-call contract.

### **Fort Preble Preservation Planning Study**

#### **South Portland, Maine**

Project Manager for the evaluation of environmental, physical, structural, historic, and recreational resources at historic Fort Preble. This evaluation is the first phase of creating a sustainable site that is ecologically thriving, safe, aesthetically inviting, and accessible for educational purposes.

### **PACTS Regional Traffic Management System Operational Maintenance**

#### **Portland, South Portland, Scarborough, and Westbrook, Maine**

Providing traffic engineering services to PACTS to assist in transitioning to a regional signal management approach. Duties include establishing regional framework and communications protocols, increasing number of signal systems that have communications with the Streetwise signal management system, implementing new and enhancing existing coordination programming, evaluating existing transit priority equipment and the capabilities and benefits of implementation, field troubleshooting and fine-tuning signal operations, identifying safety and performance issues, and designing corrective measures. Initial phase of project is focused on 8 major corridors with 82 signalized intersections. Developed preliminary design of future system architecture including schematic mapping of regional system architecture and communications, locations of primary and backup servers, assistance with following system's engineering protocols to determine best option for new Advanced Traffic Management Software (ATMS) package to operate and maintain the region's traffic signal infrastructure, creating regional traffic signal equipment and communication architecture specifications, prepared preliminary purpose and need statement for the regional system, created prioritized work plans for the region and individual member municipalities, and investigated ATMS software packages for appropriateness and compatibility with existing traffic signal and communications infrastructure.

### **Androscoggin Transportation Resource Center (ATRC), ATMS**

#### **Lewiston/Auburn Area, Maine**

Performed on-call traffic engineering assistance with Streetwise signal management software; signal coordination programming; and field troubleshooting and fine-tuning to enhance traffic signal operations, safety, and progression. ATRC is currently responsible for managing 80 traffic signals, of which approximately 40 are currently connected to and managed via Streetwise signal management software.

### **Sabattus Street Traffic Signal Design**

#### **Lewiston, Maine**

Lead Transportation Engineer for the design of a new fully actuated and coordinated traffic signal at the intersection of Wildwood Drive and Sabattus Street. The traffic signal was designed to be ADA compliant with crosswalks, ramps with warning fields, and signal pedestrian phases with countdown indications. Final inspection and review of operations was performed after signal turn-on.

### **Town-wide Traffic Signal Operations Review & Upgrades**

#### **Scarborough, Maine**

Lead Traffic Engineer for this ongoing assignment working for the Town Planning and Public Works Departments reviewing existing traffic signal operations in order to identify programming deficiencies and safety issues by performing field reviews; proposing improvements; implementing improvements and programming changes and following up to confirm; improve vehicle progression; reduce congestion; enhance safety for all modes of traffic; and reduce fuel consumption and emissions to improve quality of life.

Prior to joining Milone & MacBroom, Mr. Adams worked on the following assignments:

### **Traffic Signal Design**

#### **Route 25 at Route 113 (Maine DOT)**

##### **Standish, Maine**

Designed a fully actuated traffic signal for a high speed rural “T” intersection. Specified TS2 Type 1 controller in ground-mounted “P” cabinet. Vehicle detection was provided by video cameras. Dilemma zone protection was provided by a Wavetronix radar device for both Route 25 approaches due to the high speeds. Protected/Permitted Phasing was provided for the exclusive left-turn lane on Route 25. The traffic signal was installed based on the intersection meeting the 8-hour condition B signal warrant (Interruption of Traffic), developing accident patterns, and the excessive delay experienced by the stop-controlled Route 113 approach.

#### **McKeen Street at Maine Street (Maine DOT)**

##### **Brunswick, Maine**

Designed a fully-actuated traffic signal for a “T” intersection with moderate pedestrian traffic near the Bowdoin College Campus. Specified TS2 Type 1 controller in ground-mounted “P” cabinet. Vehicle detection was provided by video cameras. Countdown ADA compliant pedestrian signals heads with audible locator tones and crossing message were provided. The traffic signal was installed based on the intersection meeting the 8-hour condition B signal warrant (Interruption of Traffic) and the excessive delay experienced by the stop-controlled McKeen Street approach.

#### **Franklin Arterial at Somerset Street**

##### **Portland, Maine**

Designed upgrades for a major urban four-way intersection. Upgrades included revised signal phasing and splits, increasing left-turn lane storage lengths, geometric improvements, installing video vehicle detection, and emergency vehicle preemption. In addition, pedestrian appurtenances were upgraded for ADA compliance with countdown signal heads with audible locator tones and crossing messages and new ramps with pedestrian warning fields.

### **Coordinated Traffic Signal System Design and Operation**

#### **Maine Mall Traffic Signal System**

##### **South Portland, Maine**

Designed updated coordination programming for the two major corridors in the Maine Mall area retail district (22 traffic signals). Programming included time-of-day schedules, cycle lengths, splits, and offsets. Interconnection was provided to each controller with dedicated 12-strand fiber optic communications to the city’s server. Traffic signal operations were monitored remotely via an internet-based VPN connection and Streetwise (Naztec) Traffic Signal Management software.

#### **Ellsworth Traffic Signal System**

##### **Ellsworth, Maine**

Performed final inspection on the installation and upgrade of eight traffic signals in the retail district of Ellsworth. Designed initial signal system coordination programming including time-of-day schedules, cycle lengths, splits, and offsets. Interconnection was provided by a combination of copper wire and wireless radio. Traffic signal operations were monitored remotely via an internet connection and Aries (Econolite) Traffic Signal Management software.

#### **Androscoggin Transportation Resource Center (ATRC)**

##### **Traffic Signal Coordination and Communications Upgrade (Maine DOT)**

##### **Lewiston & Auburn, Maine**

Designed signal system communications and coordination upgrades for five corridors. Contracted with local service providers for internet-based communication connections to the master signal in each corridor. Upgrades included installation of 12-strand fiber optic interconnect, video detection with remote viewing and editing features, controllers upgraded to TS2 Type 1 with Ethernet ports, and IP addressable routers added to signal controllers. Communications to the system were provided at ATRC offices with remote VPN connections available to authorized users. Server-based Streetwise signal management software was employed for signal operations and monitoring.

### **Maine Department of Transportation**

#### **I-295 Exit 3 Interchange Reconfiguration for the Northbound On-Ramp and Roadway Widening**

Project Traffic Engineer for signing and final traffic signal designs for two intersections; including the southbound off-ramp at Westbrook Street and Westbrook Street at Broadway. The goals of the \$6,000,000 project were to address capacity issues and improve two high-crash intersections.

### **Maine Department of Transportation**

#### **Traffic Signal Design - I-95 Exit 187 Hogan Road Northbound Off-Ramp**

Project Traffic Engineer for traffic signal upgrades. Upgrades included traffic signal controller replacement with a TS2 Type 1 controller. Replaced signal heads and a mast arm. Installed pole-mounted signal head for increased visibility on off-ramp approach and improved alignment and geometry for off-ramp right-run lane to reduce accidents.

#### **Traffic Signal Design, Sabattus Street Lewiston, Maine**

Lead Transportation Engineer for the design of a new fully-actuated and coordinated traffic signal at the intersection of Wildwood Drive and Sabattus Street. The traffic signal was designed to be ADA compliant with crosswalks, ramps with warning fields, and signal pedestrian phases with countdown indications. The traffic signal was also integrated into the existing coordinated Sabattus Street corridor. Final inspection and review of operations were performed after signal turn-on.

#### **Traffic Signals, Interconnect & Communications Improvements Brewer, Maine**

Project manager and lead design engineer for the inventory and analysis of eleven existing traffic signals and related interconnect and communications infrastructure on State Street, Wilson Street, Parkway South, and Dirigo Drive. Prepared construction plans to successfully upgrade signal, interconnect and communications equipment, utilizing existing copper interconnect and proposed wireless radio communications combined with the City's existing Ethernet based communications network to fully integrate the initial phase of traffic signals with the City's ATMS (ARIES system).

### **Traffic Planning & Impact Studies**

#### **Brunswick "Triangle" - Maine Street at Bath Road Brunswick, Maine**

Led stakeholder group, which included the Town of Brunswick, Bowdoin College, First Parish Church, and the Maine Department of Transportation, through a preliminary design phase to revise the existing "Triangle" operations. The goals of the study were to improve pedestrian safety and access, reduce accidents at two high-crash locations through intersection and geometric enhancements, and improve vehicular capacity. The design process resulted in a proposed plan which addressed all of the project goals and was supported by all of the stakeholders.

#### **Ellsworth High Street/Maine Coast Mall Study - High Street (Routes 1/3) Ellsworth, Maine**

Design Engineer on a study to evaluate alternatives to improve traffic operations and safety along a heavily traveled retail and tourist corridor. Ellsworth serves as a service center for the region and as a passthrough for tourists in route to Bar Harbor and Acadia National Park. The design relocated an existing intersection and improved intersection geometry and installed a new fully actuated traffic signal with video detection and emergency vehicle preemption.

#### **Nappi Distribution Center - Route 25 Gorham, Maine**

Lead Traffic Engineer representing the applicant through local and state permitting process and approval. The study involved an analysis of traffic impacts to Route 25 and nearby intersections as a result of increased traffic from the proposed distribution facility. The study resulted in approval of the project with the addition of a new 150-foot left-turn lane on Route 25 at the site entrance. The left-turn lane was designed and approved by the Maine DOT and was subsequently built.

## Roundabout Design

### **Ross Road**

#### **Saco, Maine**

Preliminary design of a roundabout at the entrance to a large residential subdivision on Ross Road. The design involved the use of a single-lane roundabout with appropriate signing, markings, and horizontal layout to determine property impacts. Another goal of the roundabout was to promote traffic calming and reduced traveling speeds on Ross Road.

### **Design Peer Review - Turner Street**

#### **Auburn, Maine**

Peer review of design of two roundabouts on Turner Street in a heavily retail section of Auburn. Services encompassed a comprehensive review of roundabout design elements including signing, pavement markings, approach alignments, design of splitter islands, review of "fastest path" and vehicle paths through the roundabout, design speed, inner apron design, vertical clearances through the roundabout, and handling of pedestrians and bicyclists.

### **Preliminary Design - Route 1 at High Street and Maine Coast Mall Entrance**

#### **Ellsworth, Maine**

Preliminary design of a partial single/two lane roundabout to replace a proposed signalized intersection. The design involved the use of a roundabout with appropriate signing, markings, and horizontal layout to determine property impacts. Another goal of the roundabout was promote traffic calming and reduced traveling speeds and accidents at the intersection.

## Roadway & Drainage Design

### **Route 25 Roadway Improvements**

#### **Gorham, Maine**

Design of roadway improvements associated with the development of a beverage distribution center. The design included determination of required storage lengths for the proposed left-turn lane with appropriate merging of through and left-turning traffic. The design incorporated widening on the inside of the roadway to reduce overall impacts to Route 25, required rights-of-way, and construction costs.

### **Baltic Heights Roadway Improvements**

#### **Sprague, Connecticut**

Project Manager responsible for providing design services for roadway improvements which included widening of the roadway, design of a retaining wall with integral guardrail, and storm drainage improvements. The design incorporated a poured-in-place concrete wall to stabilize the outside slope of the roadway. Inspection services were also provided during construction.

### **Plain Hill Road Improvements**

#### **Sprague, Connecticut**

Project Manager responsible for providing design services for drainage and roadway improvements which included replacement of existing undersized culvert and improvements to the inlet conditions and outfall conditions. The design corrected an existing drainage and erosion problem, as well as improved flooding and erosion issues for an adjacent property owner.

## Bridge Inspection

### **Potash Hill Road over the Little River**

#### **Sprague, Connecticut**

Served as Chief Inspector on a complete bridge replacement project administered under the Connecticut Department of Transportation's Local Bridge Program. Responsible for daily monitoring of construction activities, measuring and authorizing pay items for monthly contractor's payment. Provided quality control on all construction methods and materials utilized. The design involved the use of prestressed concrete deck units on poured-in-place concrete footings, wingwalls, and abutments built on steel piles driven to bedrock.

**Windham Road over the Little River  
Hampton, Connecticut**

Served as Inspector on a complete bridge replacement project administered under the Connecticut Department of Transportation's Local Bridge Program. Responsible for assisting in daily monitoring of construction activities and measuring pay items. Provided quality control on all construction methods and materials utilized. The design involved the use of prestressed concrete deck units on poured-in-place concrete footings, wingwalls, and abutments set on steel piles driven to bedrock.

**Sand Hill Road over the Little River  
Hampton, Connecticut**

Served as Inspector on a complete bridge replacement project administered under the Connecticut Department of Transportation's Local Bridge Program. Responsible for assisting in daily monitoring of construction activities, measuring pay items. Provided quality control on all construction methods and materials utilized. The design involved the use of prefabricated concrete arch units on poured-in-place concrete footings, wingwalls, and abutments.

**Site Design**

**Holcombe Hills Residential Subdivision - Bush Hill Road  
Manchester, Connecticut**

Project Manager for the development, design, permitting, and approval of a 22-lot, single-family home subdivision. The design included boundary and topographic survey of the parcel, horizontal and vertical roadway layout, closed drainage system design, stormwater management, grading, soil testing, and preliminary septic system design for each lot. The project was lead through the local approval process and several public meetings.

**Plot Plan - Westchester Road (Route 149)  
Colchester, Connecticut**

Project Manager for the development, design, permitting, and approval of a site plan and on-site septic system design for a residential lot. The design included boundary and topographic survey of the parcel, grading and drainage design, soil testing, and septic system design. The project was lead through the local approval process.

**Plot Plan - Route 6  
Bolton, Connecticut**

Project Manager for the development, design, permitting, and approval of a site plan and on-site septic system design for a residential lot. The design included boundary and topographic survey of the parcel, grading and drainage design, soil testing, and septic system design. The project was lead through the local approval process.

**Landfill / Solid Waste**

**Landfill and Transfer Station Improvements Study - Wintergreen Avenue  
Hamden, Connecticut**

Project Engineer responsible for the design of improvements to the town's existing transfer station facility. Also assisted in an economic review and analysis of the method of disposal and transfer of solid wastes, recyclables, and site-generated mulch.

**NORCAP MSW Landfill - Wapping Road  
East Windsor, Connecticut**

Project Engineer responsible for performing inspection on a landfill capping and closure project and providing design services for a landfill gas recovery system with an enclosed ground flare. Inspection work involved monitoring and documenting daily construction activities for conformance with contract documents, sampling materials for testing, performing testing on membrane cap liner for tensile and shear strength, and air testing for leaks. In addition, acted as lead designer on the landfill gas recovery system, which included design and placement of gas extraction wells, design of landfill gas and condensate conveyance lines, placement of low points with pump stations and storage tank for condensate management and design and specifications for a landfill gas enclosed ground flare.

**Transfer Station Site Study  
Waterford & New London, Connecticut**

Assisted the Town of Waterford and the City of New London in screening sites for the development of a shared solid waste transfer station. The study reviewed on-site regulatory and design elements such as wetlands, plant and animal species of significance, topography, and past uses for potential hazardous wastes. Off-site features were also reviewed, which included relative location to major travel routes in Waterford and New London, pavement condition, accident data, and existing intersection geometry and capacity along likely travel routes. Preliminary costs estimates were prepared for the short-listed sites.

**Connecticut Department of Transportation  
Wethersfield, Connecticut**

Mr. Adams served as Transportation Engineer from 1999 to 2003 working in the Division of Traffic Engineering designing traffic signals, performing safety studies, reviewing signs and marking plans, and handling complaints from local citizens and government officials. A sampling of these projects included:

- Town of Madison, CT: Design of new traffic signal at Horse Pond Road at Green Hill Road (Intersection 075-219)
- City of New London, CT: Design of traffic signal replacement Route 1 at Route 85 (Intersection 094-201)
- City of New London, CT: Route 1 from Vauxhall Street to Jefferson Street safety improvement projects which reduced Route 1 from four lanes to three lanes with a center turn lane



# David G. Sullivan, P.E., Associate Manager of Traffic Engineering

## Years of Experience:

With This Firm: 28  
With Other Firms: 5

## Education:

B.S., Civil Engineering  
University of Connecticut  
Storrs, CT

## License/Certification:

Professional Engineer  
- Connecticut

## Professional Affiliations:

Institute of Transportation  
Engineers  
American Society of Civil  
Engineers



As Manager of Traffic Engineering, Mr. Sullivan has supervised numerous traffic engineering and transportation planning studies and improvement plans for new developments, corridors, and campus settings. Integral to these efforts were multimodal evaluations and complete streets solutions. He has also supervised countless traffic impact studies for a variety of uses, including educational facilities, industrial plants, superblocks, shopping centers, residential developments, and office/business parks. The firm's traffic signal design efforts also come under his review. Mr. Sullivan has significant experience related to parking studies. This includes evaluation of multiple facilities within town/city centers; individual multiuse projects where shared parking demand by users was evaluated; and operational evaluation of various parking strategies.

The following is a sampling of Mr. Sullivan's project experience:

### **Gorham Bicycle & Pedestrian Study**

#### **Gorham, Maine**

Providing senior oversight to a study of the bicycle, pedestrian, and transit environment along the Route 25 corridor in Gorham, Maine. The focus of the study is to evaluate current connectivity and the quality of multimodal infrastructure and, with the benefit of a substantial public outreach program, develop actionable short- and long-term recommendations to accommodate all uses of the corridor safely and efficiently.

### **New London Transportation Oriented Development**

#### **New London, Connecticut**

Directed a comprehensive study of transportation needs in the center of New London focused on identifying appropriate improvements to best accommodate new development including a National Coast Guard Museum and expansion of the Cross Sound Ferry. Pedestrian safety and access was assessed. Future transportation demands were estimated based on the new developments, as well as increased vibrancy in the downtown and increased ridership at several transportation providers that flow through the city's intermodal transportation center. Future traffic, parking and non-motorized mitigation needs were then identified and context-sensitive improvement concepts were developed. An analysis of conversion of downtown one-way streets to be two-way streets was also part of this study.

### **Consolidation of Enfield High Schools**

#### **Enfield, Connecticut**

Directed traffic engineering efforts as a subconsultant to Silver/Petrucci & Associates for the consolidation of Fermi High School and Enfield High School. The proposed new facility will be 305,347 square feet and is expected to have approximately 1,700 students when the two high schools merge. Design challenges include the fact that construction must take place in phases while the school is open. Construction began in 2014 and the new school is to open in 2017.

### **University of Connecticut Health Center Ambulatory Care Center**

#### **Farmington, Connecticut**

Managed the traffic engineering elements for the design of a new Ambulatory Care Center located on the University of Connecticut Health Center Campus in Farmington, Connecticut. The Ambulatory Care Center will be approximately 250,000 to 275,000 gross square feet and includes a parking structure for approximately 1,250 cars.

**Woodbridge Fire House  
Woodbridge, Connecticut**

Assisted in evaluating appropriate strategies for emergency vehicle access to and from a proposed new firehouse and development of a safe pedestrian crossing of Route 114, a heavily traveled state highway. Alternatives included installation of a fully actuated traffic signal accommodating both pedestrian and emergency access, separate signalization for the firehouse with a separate pedestrian crossing at another location, and the use of passive methods to safely alert motorists. Liaison with CTDOT in this process was an integral part of the study.

**Widening and Signalization of CT Route 4, S.R. 508 & Local Roadways  
UConn Health Care Center (UHC) Expansion  
Farmington, Connecticut**

Evaluating the traffic impact and parking adequacy of a major expansion to the UHC campus in Farmington. The expansion includes a new hospital bed tower, a medical office building, a new research laboratory, and three new parking structures. Work included widening and signalization improvements on CT Route 4, S.R. 508, and side streets. Applications to the Office of the State Traffic Administration (OSTA) are also part of this study. Developed postapproval design/redesign of several new and revised traffic signals, new and revised intersection geometry, and a new on-campus roundabout.

**Downtown Waterbury Traffic & Parking Study  
Waterbury, Connecticut**

Project Manager involved in providing traffic engineering and parking consulting services to evaluate access implications and infrastructure improvements to accommodate the merging of Waterbury Hospital and St. Mary's Hospital into a single campus in downtown Waterbury.

**Point-in-Time Survey & Parking Plan Update  
New Haven, Connecticut**

Project Director responsible for overseeing the management and execution of the annual 2009 through 2014 Point-In-Time Survey and Parking Plan Update for the City of New Haven.

**Route 68 Corridor Study  
Wallingford, Connecticut**

Project Manager for a corridor study that includes a detailed field review to identify and quantify areas of capacity constraints and safety issues. Tasks include an evaluation of alternative and creative solutions such as access management; traffic calming; addressing defined accident patterns; as well as the need for roadway, intersection, and traffic signal modifications. Developed short- and long-term improvements within and outside the corridor, including cost estimates for implementation to be evaluated through consultation with the town staff and through public participation.

**Route 67 Improvements  
Seymour, Connecticut**

Senior Traffic Engineer responsible for preparing the traffic components of the Route 67 Improvements study, which focuses on the section of Route 67 through the western section of Seymour from the Naugatuck River extending nearly to the Oxford town line. The corridor was observed and analyzed under existing conditions to determine current deficiencies and recommended improvement strategies developed and tested.

**Interstate 91 and I-90 Interchange Access Alternatives  
Holyoke, Springfield, Westfield, Massachusetts**

Senior Traffic Engineer responsible for assessing the feasibility of a proposed casino and resort development. Assessed traffic impacts of the planned development through an evaluation of highway capacity and operational and safety issues at interchanges and the surrounding roadway system. Proposed improvements included new interchanges, signal timing revisions and coordination on local roads, and the provision of turn lanes.

**Wilcoxson Avenue Traffic Calming Study  
Stratford, Connecticut**

Developed traffic-calming strategies for Wilcoxson Avenue, a street serving a residential neighborhood and an elementary school. Created concept plans utilizing proven speed reduction measures along with innovative crosswalk and intersection treatments. Other tasks included presenting findings to the public and gathering additional input and feedback from neighborhood residents.

**Trump Parc  
Stamford, Connecticut**

A traffic impact study and Office of the State Traffic Administration (OSTA) certificate application was prepared for the high-rise residential tower in downtown Stamford. At the time of its approval, it was the tallest building approved in Stamford. Site access and parking operations were key elements to this study.

**Tresser Square  
Stamford, Connecticut**

A multifaceted study of the redevelopment of an entire city block in the central business district of Stamford. Significant off-site improvements, revised lane use, increased capacity, and new and revised signalization were some of the recommendations to accommodate the traffic associated with the 850 new residential units and approximately 150,000 square feet of new commercial space.

**National Coast Guard Museum Pedestrian Overpass  
New London, Connecticut**

Directed the traffic impact elements of construction of a pedestrian overpass to access the proposed National Coast Guard Museum from the City's municipal garage as well as other destinations north of the AMTRAK rail line 4. The National Coast Guard Museum is anticipated to draw an additional 200,000 visitors on an annual basis to the waterfront port in New London, in the heart of New London's Regional Intermodal Transportation Center, Cross Sound Ferry terminal, and City Pier. Key components of the evaluation were the adequacy of the downtown, new key roadway intersections, and public parking as well as the cumulative impacts of the pedestrian access overpass, the National Coast Guard Museum, Amtrak, Shoreline East, SEAT, the Greyhound Bus Terminal, pedestrian and vehicular ferry service, and casino shuttles.

**Thames Street Corridor Rehabilitation Study  
Groton, Connecticut**

Performed all aspects of traffic engineering in completing the feasibility of converting Thames Street, a primary waterfront roadway, from two-way orientation to one-way flow. The methods used to assess the impacts related to the roadway reconfiguration involved determining the current travel patterns in the corridor between I-95 at the north terminus of Thames Street and several employers (General Dynamics and Pfizer) at the southern end of Thames Street. Analyses of origin/destination characteristics, travel time, and traffic operations were performed as part of this study.

**Downtown Torrington Planning/Design  
Torrington, Connecticut**

Completed all aspects of traffic engineering including operational modeling/simulation and crash data analysis to determine the existing traffic conditions and safety downtown. Main Street was proposed to be changed from the current two-way traffic flow to one-way northbound flow. The new orientation allows for greater pedestrian mobility and increased on-street parking. Additional improvements include the extension of City Hall Avenue to connect with East Main Street (CT Route 202), reconfiguring the intersection of East Main Street/Center Street, and the design of two new traffic signals.

**Downtown Circulation Access Improvement Study  
Nantucket, Massachusetts**

Provided traffic engineering services for a Downtown Circulation Access Improvement Study for the Town of Nantucket. The study area consisted of 26 intersections for which vehicular, bicycle, and pedestrian circulation were studied.

**Stamford Hospital Long Range Master Plan Study  
Stamford, Connecticut**

Provided traffic and parking engineering services for a 10- to 15-year master plan to modernize the existing campus of Stamford Hospital. The goal of the long-range master plan is to create a plan for the phased replacement of the existing hospital facility that is attractive, efficient, cost-effective, and allows for the best delivery of healthcare to the community. Analyzed the impacts to the transportation system both on and off site, making a series of detailed recommendations with respect to on-site circulation, driveway location and traffic control, as well as the impact of the new hospital traffic on the surrounding roadway network. Also completed a detailed parking study for the hospital and revised the City of Stamford's parking regulations with respect to medical campuses to better reflect the needs of modern health care facilities. Postapproval efforts included traffic signal and traffic signal system design efforts.

#### **Howard Street, Bank Street, and Blinman Street Intersection**

##### **New London, Connecticut**

Provided traffic engineering services for improvements related to the intersection of Bank Street/Howard Street/Blinman Street in New London. Traffic operations were studied to determine the improvement necessary for accommodating peak periods of traffic demand. A new traffic signal was designed and constructed.

#### **Shelton Riverfront Development**

##### **Shelton, Connecticut**

Working in cooperation with the city and a private developer, traffic evaluations were made for the redevelopment of a large portion of Shelton's riverfront. Key elements included coordinating the developer's redevelopment goals, the city's planned improvements to infrastructure along the riverfront, and safety concerns associated with multiple at-grade crossings between the riverfront and Shelton's downtown area. The project includes approximately 600 new units of housing and over 100,000 square feet of commercial space.

#### **University of New Haven Parking Study**

##### **West Haven, Connecticut**

Provided traffic engineering and parking consulting services to the University of New Haven to evaluate existing and future needs of the growing university. Parking conditions were analyzed for the 2012 fall semester, two short-term future scenarios, and a long-term future scenario. To accommodate increased numbers of motorists expected to park at the university, a comprehensive plan was developed that identified areas for new potential parking supply, including new lots and a possible parking garage. Recommendations also included modifications to parking management and circulation and access improvements benefitting both motorists and nonmotorists.

#### **Transit Oriented Development District Analysis**

##### **Norwalk, Connecticut**

As part of a larger project team, assisted in identifying challenges and opportunities within a proposed Transit Oriented Development (TOD) area based upon identification and evaluation of existing conditions. Improvement strategies were developed for the overall transportation system and the separate modes of travel within and through the study area resulting in a comprehensive profile of pedestrian, bicycle, and vehicular travel patterns in the area. An assessment of connectivity between separate travel modes and for improved overall connectivity within the transportation system was made.

#### **Transit Oriented Development**

##### **Orange, Connecticut**

Prepared concept plans for a transit oriented development to be located at a proposed new train station on the MetroNorth system in Orange, Connecticut as part of a private / public partnership. Located adjacent to Yale University's West Campus and near the headquarters for United Illuminating and Southern Connecticut Gas Company, the project includes 250 resident dwelling units and a mix of small office, retail, and restaurant establishments focused on the new rail station and a parking garage for the residents of the community and transit commuters, enabling the creation of a vibrant pedestrian environment. Off-site traffic impacts and mitigation to address the impacts was made.

#### **Union Station Transit Oriented Development**

##### **New Haven, Connecticut**

Provided traffic engineering and parking expertise to assist the City of New Haven to better understand the advantages and disadvantages of different planning concepts with respect to the road network and traffic circulation for the

Union Station Transit Oriented Development (TOD). Tasks included: a Phase I Environmental Site Assessment (ESA), a baseline traffic circulation and impacts evaluation, a review of preliminary north garage site plans (two) with regard to traffic ingress/egress and circulation, a parking assessment to identify temporary parking alternatives within a half-mile radius of the New Haven Union Station, and development of a Circulation Plan for the south parking lot to accommodate planned future changes.

### **Transit Oriented Development Windsor, Connecticut**

Retained as a subconsultant to assist the Town of Windsor in developing a Transit Oriented Development (TOD) Planning and Facilitation Program. The project involved assessing the existing and future traffic and circulation conditions along with analyzing the feasibility of alternative improvement concepts including a recommended “road diet.”

### **Avalon Norwalk Traffic Impact Study Norwalk, Connecticut**

Traffic engineering and transportation planning services were provided for this urban downtown revitalization project. Tasks included conducting a traffic impact study, detailed plans, and mapping of the surrounding street systems, redesign and improvement of the traffic control signal at a major downtown intersection (U.S. Route 1 at Belden Avenue), and representation through the city and state approval processes.

### **Campbell Avenue Downtown Traffic & Circulation Study West Haven, Connecticut**

Assisted the City of West Haven in seeking to improve traffic circulation and promote pedestrian activity within the downtown area. The work program included a comprehensive field review noting existing traffic control, speed limits, parking zones, location and condition of crosswalks and sidewalks, land use patterns, roadway characteristics, sightlines, and bus stops, as well as collecting pertinent data including accident statistics, travel time data, traffic signal and roadway plans, and historical traffic trends. Based on analysis of the data collected, issues pertaining to parking needs, pedestrian safety, traffic flow, traffic accidents, and transit needs were identified. A series of recommendations were prepared to accomplish the objectives.

### **CCSU OSTA Permit Assistance New Britain, Connecticut**

In conjunction with the Connecticut Department of Construction Services (CT DCS) and Central Connecticut State University (CCSU), an updated Office of the State Traffic Administration (OSTA) certificate application to support implementation of the campus master plan improvements was prepared. Information was gathered from existing documents and data collection efforts to develop a new baseline of information related to campus building square footage, parking supply, drainage systems, and access conditions. Traffic safety and operational analyses were performed along the roadways and intersections surrounding the campus to determine deficiencies. Sight lines at all driveways were reviewed for adequacy based on state standards. Suggestions for improvements were noted where necessary.

### **U.S. Route 5 Corridor Improvements East Windsor, Connecticut**

Engineering efforts related to a commercial development located at 33 and 54 Prospect Hill Road (US Route 5) in East Windsor, Connecticut were provided for a development of approximately 190,000 square feet of building spaces and 775 parking spaces. The site is expected to generate approximately 1,000 morning and afternoon peak-hour vehicle trips. Based on the operational modeling, it was discovered that the new main intersection requires the installation of a new traffic signal with geometric improvements and the nearby intersection at US Route 5 and the I-91 Interchange 44 ramps requires additional lanes and signal improvements and at the intersection of US Route 5 as well as Route 140 approximately 1 mile to the north. These signal improvements were subsequently designed.

### **Harbor Point and Yale & Towne Development Stamford, Connecticut**

Provided traffic engineering and transportation planning services for this Transportation Oriented Development. The project is one of the largest development projects on the U.S. East Coast and includes 6 million square feet of mixed-use development: 85 percent residential (4,000 residential units); 15 percent commercial including office buildings, a

grocery store, a waterfront hotel, restaurants, and a full-service marina; more than 11 acres of parks and public space; a community school; and publicly accessible waterfront access. Specific traffic engineering and transportation planning tasks for this \$3.5 billion project have included traffic counts, analysis, recommendations, and traffic signal design.

#### **Interstate 95 at Sargent Drive and Long Wharf Drive**

##### **New Haven, Connecticut**

Five traffic signals at Interchange 46 on I-95 at both Sargent Drive and Long Wharf Drive were revised to aid in the flow of traffic. Studies of these intersections included a traffic counting program and analyses and recommendations to provide enhanced traffic flow through the area. Road widening, turn lanes, bus stops and pull-offs, exclusive pedestrian phasing, and fiber optic interconnect from these intersections to the City Hall Traffic Operations Center were included in the design and construction documents.

#### **Interstate 95 Interchange with US Route 1/Route 110/Route 130**

##### **Stratford, Connecticut**

I-95 Interchange with US Route 1 forms a large rotary of convergent roadways bisected by the interstate highway. This rotary contains five signalized intersections. Three additional nearby intersections, one on Route 110 and two on U.S. Route 1, control traffic flow from major retail driveways. All eight intersection upgrades were designed to the latest federal and state standards and included in a closed-loop signal system to enhance the flow of traffic through the area.

#### **New Fairfield High School and Middle School**

##### **New Fairfield, Connecticut**

Retained by the Housatonic Valley Council of Elected Officials (HVCEO) to study the access conditions at the primary and secondary driveways at the campus containing New Fairfield High School and Middle School. Both driveways have poor sight lines and difficult geometry that makes for potentially unsafe conditions. Measures to improve safety at the schools' points of access were developed, including the establishment of a School Zone, erecting signs with flashing lights that operate during school arrival and dismissal hours, traffic calming along Gillotti Road, widening Gillotti Road to provide a bypass area, and the installation of a flashing beacon at the driveway. These recommendations were well received locally and received state approval for funding.

#### **Ridgefield Center Traffic Study**

##### **Ridgefield, Connecticut**

A study was conducted of the Main Street area in Ridgefield to evaluate existing parking conditions, vehicular and pedestrian circulation systems, and wayfinding techniques. The study included an update of the previous parking and traffic studies, review of existing parking conditions, traffic volumes during the peak periods of use, and pedestrian and vehicular circulation operations. The study recommended the conversion of narrow streets into pedestrian routes and the construction of new streets to create a more urbanized area. Improvements for internal traffic circulation within privately owned parking lots were recommended along with informational signage and ornamental lighting to improve safety at night.

#### **Route 806 Corridor Study**

##### **Danbury, Connecticut**

Prepared a study of the Route 806 (Newtown Road) transportation planning corridor study in Danbury, Connecticut. The purpose of the study was to prepare an integrated corridor plan that addressed challenges facing Route 806, as well as issues that were anticipated in the future. Tasks included preparing land use development projections, roadway safety concerns, roadway capacity upgrades, access management, pedestrian and transit access and enhancement, and aesthetic/beautification streetscape improvements.

#### **Second Hill Lane Elementary School Traffic & Safety Study**

##### **Stratford, Connecticut**

For the Town of Stratford, evaluated traffic, parking, and safety needs at the Second Hill Lane Elementary School in Stratford. Preliminary near-term and long-term improvements strategies were developed based on analyses and discussions with study stakeholders. The preliminary improvements were vetted and refined through consultations with study stakeholders into Preferred Near and Long Term Improvements Alternatives. Cost estimates for the preferred alternatives were also developed. The design of the preferred alternative began in spring of 2014 and construction followed.

**Route 57 at School Road Intersection Study  
Weston, Connecticut**

Undertook an intersection improvement study at Route 57 and School Road in Weston, Connecticut for the South Western Regional Planning Agency (SWRPA). Traffic operations, traffic circulation, and safety needs at the study intersection and the Hurlburt Elementary School located off School Road were undertaken. Based on the evaluation, a set of near-term and long-term traffic operation/circulation and pedestrian-friendly improvement strategies for the study area were developed.