

Response to Request for Statement of Interest / Qualifications

Submitted to:
Franklin Regional Council of Governments
Ellen Batchelder
Assistant Procurement Officer
Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, Massachusetts 01301



Known for excellence. Built on trust.

Design and Rehabilitation Plan of the **TOWN COMMONS** **BLANDFORD, MA**

Prepared by:
GZA GeoEnvironmental
1350 Main Street, Suite 1400
Springfield, MA 01103

Submitted: February 23, 2021



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VIA EMAIL

15.P000191.21

February 23, 2021

Ellen Batchelder
Assistant Procurement Officer
Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, Massachusetts 01301

Re: Request for Statements of Interest/Qualifications
for Design and Rehabilitation Plan of the Town Commons
Blandford, Massachusetts

Dear Ms. Batchelder:

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit to the Franklin Regional Council of Governments (FRCOG) on behalf of the Town of Blandford our response and proposal to provide Design Services as outlined in your Request for Statements of Interest/Qualifications (RFI-20210223).

GZA is a multi-disciplinary consulting firm that distinguishes itself by focusing on responsiveness and communications with our clients. Our technical services are in the fields of civil engineering, landscape architecture, water resources and environmental engineering, wetland and environmental sciences and permitting, dam engineering, geotechnical services, hazardous waste assessment and remediation, and construction-related services. This breadth of services allows us to provide wide project support to our Clients and to conceptualize solutions that address the many types of issues that arise during a project, particularly in the complex natural and urban environments encountered in New England. GZA employs almost 700 engineers, scientists, and technical support staff in 31 offices which collectively may bring significant resources to any assignment.

From initial review of the project area and understanding of the Town of Blandford's goals, GZA offers a creative solution that could lead to massive benefits for the Town, lead to a safer intersection, and greater future funding opportunities by linking the park improvements to improvements in transportation safety and efficiency. To help evaluate the existing conditions and traffic-related improvements, GZA proposes to partner bring Alfred Benesch & Company, a respected traffic engineer with offices in Glastonbury, CT.

GZA offers the following attributes for FRCOG's consideration:

- GZA has practiced engineering in Massachusetts since 1964 and holds on-call consulting agreements with numerous municipal- and state-agency clients. GZA can provide our substantial list of current on-call contracts upon request.
- Relative to this RFI/Q, our most applicable experience is demonstrated by several successful design and construction phase services for several public park and memorial projects located in western Massachusetts. GZA has had the opportunity to work with FRCOG on two recent projects, Crittenden Hill Road, and the Mohawk Trail project.



- GZA’s proposed Lead Landscape Architect and overall Project Manager, Anja Ryan Duffy (MA L.A. License No. 4000), possesses a current professional landscape architecture registration in the Commonwealth of Massachusetts. Mrs. Duffy is also a graduate of the Gateway Regional School system, and spent her formative years growing up in the hill towns.
- GZA’s references will attest to the quality of GZA’s personnel and performance and the value of the services we provide.
- GZA is headquartered in Norwood, Massachusetts, and has a downtown Springfield office location at 1350 Main Street. We have approximately 25 full time staff in our Springfield office. We also have Massachusetts offices in Amesbury, Hingham, and Boston. A complete listing of all 31 GZA offices can be found at <http://www.gza.com/office-locations>.

Additionally:

- GZA accepts all the Terms and Conditions as contained in the Town’s RFI-20210223.
- GZA acknowledges receipt, review, and acceptance of Addenda Nos. 1 , 2, 3 and 4 to RFI-20210223.
- GZA qualifications and important considerations:
 - Proven quality of resilient design concepts.
 - Understanding of Client’s needs and vision.
 - Demonstrated ability to squeeze the most out of a project’s budget.
 - Proven capacity to meet critical project deadlines, especially as related to grants.
 - GZA’s civic commitment to the hill towns of Western Massachusetts.

The GZA Project Team appreciates the opportunity to submit this Proposal which we believe demonstrates the technical and professional skills required to meet the Town of Blandford’s needs. We would welcome the opportunity to discuss this proposal in person with the RFI/Q review committee. Should you have any questions, please contact Anja Duffy at (413) 726-2116 / anja.duffy@gza.com.

The enclosed qualifications package will demonstrate that GZA has the necessary experience, expertise, and capacity to assist the Town of Blandford with its project needs. On behalf of the GZA Team, we would appreciate the opportunity to help the Town with its future projects. Thank you for your consideration.

Sincerely yours,
GZA GeoEnvironmental, Inc.

Anja Ryan Duffy, PLA
Project Manager

Thomas E. Jenkins, P.E.
Principal-in-Charge

Guy P. Dalton, P.E., LSP, LEP
Consultant / Reviewer

Enclosure: GZA Response to Request for Statement of Interest / Qualifications – Design and Rehabilitation Plan of the Town Commons, Blandford, MA



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COMPANY PROFILE

GZA has been executing successful municipal parks projects in the Commonwealth for decades and is excited by the opportunity to provide services for the Town of Blandford. Founded in 1964 as Goldberg-Zoino & Associates, Inc. as a soils and foundations specialty consultant, GZA GeoEnvironmental, Inc. (GZA) has grown into a full-service company providing its clients with highly diversified technical services supporting our five core practice areas. We have 13 New England offices and 31 offices overall, located across New England, the Middle Atlantic states, and the mid-west. GZA's technical services are in the fields of civil engineering, landscape architecture, water resources and environmental engineering, wetland/ecological services and permitting, geotechnical services, hazardous waste assessment and remediation, and construction-related services.

GZA offers all these services out of our Springfield, Massachusetts office, allowing us to provide the Site-related services the Town of Blandford may need in the design of the Blandford Town Commons project. GZA also has the resources to call upon other experts as needed from our vast team of professionals in our offices in Massachusetts and beyond.

GZA was recently ranked #114 in the ENR's Top 500 Design Firms list and #97 in ENR's annual list of the Top 200 Environmental Firms. GZA is an employee-owned firm with staff motivated to propel the firm forward, seeking integrated, complex, and interesting projects that underscore a commitment to client satisfaction, environmental stewardship and best practices in science, engineering and construction. GZA distinguishes itself by focusing on responsiveness and effective, proactive communication with our clients, exemplified by the repeat services that our local office has provided in Western Massachusetts for so many years.

We're Local! In 2010, GZA's East Longmeadow, Massachusetts office, which had been in operation as Baystate Environmental Consultants since the early 1980s, relocated to downtown Springfield, Massachusetts, to provide a more centralized location for our clients. We are just a 35-minute drive from our office to Blandford. Most of our employees live right here in the Pioneer Valley, so we are very familiar with the region and its resources. GZA is a privately-held company and all shareholders own less than 5 percent of the Company.

GZA at a glance

YEAR FOUNDED: 1964

NO. OF EMPLOYEES: 663

TOTAL OF OFFICES: 31

NO. OF OFFICES IN
NEW ENGLAND: 13

GROSS REVENUES: \$100M/YR

MA / CT OFFICES:

- SPRINGFIELD, MA
- AMESBURY, MA
- BOSTON, MA
- GLASTONBURY, CT
- HINGHAM, MA
- NORWOOD, MA
- TRUMBULL, CT



Established in 1964 as
"Goldberg-Zoino &
Associates (GZA).



GZA has grown into a
multi-disciplined firm with
over 650 employees in 31
offices.



GZA has 5 office
locations in Massachusetts:
Norwood, Springfield,
Amesbury, Hingham,
and Boston



Core services include:
Environmental, Geotechnical,
Ecological, Water and
Construction Administration



ENR's Ranking: 127
of the Top 500
Design Firms and 96
of the Top 200
Environmental Firms.

PROJECT TEAM

The team members presented in this proposal were specifically selected to provide the Town of Blandford with exceptional project coordination, technical services, schedule and cost controls, and quality control. You can expect a flexible, proactive, professional team regardless of the complex nature of the project. We are a team that is passionate and energetic about solving problems and helping communities with their unique challenges.

Tom Jenkins, P.E., will be the Principal-in-Charge for this assignment. Mr. Jenkins is a Vice President in GZA's Springfield, MA office and has over 30 years of experience in design, construction, and permitting for civil engineering projects, including stormwater management, municipal parks, site development, and water resources related projects. Mr. Jenkins has seen numerous projects through from assessment and conceptual level design to final design, permitting, and construction. He will be responsible for the successful execution of this project under the current standards of professional practice. His duties will be to supervise the Project Manager and staff such that the project scope is completed on time and within budget, while maintaining quality assurance and client satisfaction.

The overall **Project Manager/ Lead Landscape Architect will be Anja Ryan Duffy, PLA**. Ms. Duffy will serve as the primary contact regarding the technical work and financial management of the project, as well as the lead designer. Mrs. Duffy has developed designs and provided technical oversight for more than two dozen municipal parks over the last thirteen years. She will work with the FRCOG and Town officials to schedule project-related meetings and manage the preparation of the deliverables. Mrs. Duffy will work closely with the Town, FRCOG, and community members through public outreach to develop a redesign of the Town Common that is resilient, aesthetically pleasing, environmentally sensible, safe and accessible.

Engineering design for the civil design and stormwater related aspects of the project will be the responsibility of **Steven D'Ambrosio, P.E.** and supported by **Jennifer Burke, P.E.** Both engineers have more than 19 years of experience with design of site developments, stormwater management, and water resources related projects. Both are also well versed and experienced in the preparation of design plans that comply with state and local standards and requirements and associated documentation. Ms. Burke has been GZA's Project Manager on many municipal water resources and permitting related projects, and has also worked on and managed projects located in several Olmsted parks for water resource restoration work.

Based on our initial thoughts and concepts developed through our site visit, GZA anticipates that traffic engineering may be required in order to maximize the potential benefits for the Town. We propose subcontracting such services with **Alfred Benesch & Company**, a respected traffic engineer with offices in Glastonbury, CT. GZA and Benesch have a positive working relationship and have worked together on multiple traffic-related projects in the past.

GZA may self-perform some minor topographical survey work; however, if needed, GZA would subcontract with **Heritage Land Surveying & Engineering, Inc.** of Southampton, MA. We have used Heritage on numerous successful park projects in the past.

Quality Control / Quality Assurance for the project will be the responsibility of the assigned in-house Consultant / Reviewer (C/R), **Guy Dalton, P.E., LSP, LEP**. The team we have put together for this project has been continuously working together on similar projects for over ten years. Every project at GZA has a Principal-in-Charge and a Project Manager who have extensive experience in their area of practice. In addition, GZA uses the concept of independent internal "Consultant/Reviewer" (C/R) to review all reports, specifications, and design plans. The C/R is typically a Principal of the firm and possesses extensive experience in providing similar services.

WHO WE ARE













Alfred Benesch & Company (Benesch) is a multi-disciplined engineering and professional services firm. Roads, bridges, schools, parks and airports are just a few examples of where you can find our work. We enhance infrastructure and communities across the country – creating spaces and providing connections in ways that make a difference.

As a mid-sized firm, we are nimble enough to remain responsive to client needs, yet large enough to offer exceptional bench strength. As a matter of practice, we look for ways to exercise innovation and resist relying on how things have been done before.

Since 1946, Benesch has successfully completed thousands of planning, design and engineering projects throughout the United States and is currently ranked #119 among the Top 500 Design Firms in the country by Engineering News Record.



WHAT WE DO

 Aviation	 Geotechnical	 Roadway
 Bridges	 Landscape Architecture	 Site Development
 Buildings	 Municipal	 Value Engineering
 Environmental	 Railroad	 Water Services



750+ EMPLOYEES | 39 LOCATIONS | 18 STATES | 1 TEAM

We routinely tap into our firm’s high-level expertise to solve project challenges for clients across the country. Each of our offices benefit from the wealth of engineering, design and planning resources of the combined Benesch Team. Through proactive knowledge sharing, state-of-the-art communications technology and work sharing, we turn our nationwide capacity and expertise into high-value solutions for local infrastructure challenges.

www.benesch.com

KEY TEAM MEMBER RESUMES

Professional resumes for key team members identified herein are included in section 5 of this document.

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SCOPE OF SERVICES

PROJECT UNDERSTANDING / APPROACH



Based on GZA's understanding of the project, the Town of Blandford requires a cohesive and resilient plan for the center of Blandford, or the Town Commons area. According to the RFI/Q, there are five points of interest within the Town Commons area: Veterans' Park, the Historical Society, the White Church, the Cemetery, and the Site of the Old Meeting House. Centrally located between the five points of interest is a wooded open space area with mature pine and oak trees, with an elevation change of about 40-feet from North Street to North Blandford Road.

GZA understands that Veterans' Park is an important focal point for the Town as Veterans and Memorial Day events are held on the small triangularly shaped piece of land, and thus shall be the focus of the redesign project. Veterans' Park is surrounded by roadway on all three sides and does not allow for much space for people to congregate. Viewers of the memorial events therefore sit across the street on the wooded slope described above. There is no formalized access, or places to sit other than the ground surface, and the slope is often overtaken with poison ivy.

GZA knows Blandford has a long history, and that Rt. 23 where Veterans' Park lies was the main colonial era route between Boston and Albany and saw many travelers throughout history, notably Colonel Henry Knox.

The Henry Knox Trail, also known as the Knox Cannon Trail, is a network of roads that traces the route of Colonel Henry Knox's "noble train of artillery" from Crown Point to the Continental Army camp outside Boston, Massachusetts, early in the American Revolutionary War.

From GZA's initial observation of the layout of the parcels, their topography and orientation, GZA has developed a possible solution to the navigational challenges which would not only improve spatial constraints, accessibility, and aesthetics, but would also offer increased safety, connectivity, and feeling of 'place'.



Veterans' Park and adjacent roads

The solution GZA would like to explore with the Town if selected as its designer is a way to re-configure the intersection of North Blandford Road and Rt. 23. Currently, the intersection appears to have dangerous geometry, with a poor line of sight (especially at night) and no safe/accessible pedestrian crossing or paths. Re-routing the terminus of North Blandford Road to meet Rt. 23 at a 90-degree angle opposite the beginning of Herrick Road would be a much safer configuration for motorists and pedestrians and would allow the Town to gain about ¼ acre of useable open space for a redeveloped Veterans' Park and Town Common area. By annexing the area that is now North Blandford Road, Veterans' Park would have ample room to reconfigure the Veterans' memorial stones, cannon, and flag poles, while also making room for a small seating area and trailhead that leads up the wooded hillside to the north. It is GZA's opinion that repositioning the memorial with the pine and oak hill as a backdrop would also be more aesthetically pleasing, and would serve as the catalyst and anchor of a reimagined Town Commons area that connects all five points of interest identified above.



Conceptual design of roadway reconfiguration and proposed trail system connecting five areas of interest

If selected, GZA will strive to develop a revitalized parkland that provides access to recreational opportunities for people of all abilities. GZA will design the redeveloped Town Commons Area to meet universal design standards, such as the Americans with Disabilities Acts (ADA) requirements, Massachusetts Architectural Access Board (MAAB), and U.S. Forest Service Trail Accessibility Guidelines. GZA understands the importance of creating spaces for people of all abilities, and we strive to redevelop outdoor spaces that are seamlessly accessible whether it be a picnic area, memorial grounds, or a trail system.

GZA will develop a climate-resilient landscape that responsibly handles stormwater on-site through implementation of appropriate stormwater best management practices. Based on our general knowledge of the geology of the site and how it sits on top of a drumlin, there may be rocky shallow soils due to ledge. If so, considerable amount of effort and expense would need to occur to fully infiltrate and store all stormwater from within the Town's property. Where practical, GZA will introduce bioretention swales with deep rooted plantings and free-draining soils that will aid in storing stormwater between storm events. As practical, GZA will propose locally-sourced materials as opposed to material that is imported and has a larger "environmental footprint". Furthermore, native pollinator plantings will be proposed in both formalized and naturalized planting areas.

GZA understands that the Town may use the preliminary design for funding applications. GZA has assisted several municipalities within the region with the preparation of numerous master plans for Parkland Acquisitions and Renovations for Communities (PARC) Grant Program applications. GZA has performed design and engineering services from project inception through construction on a multitude of projects that were funded through the PARC Grant Program.

GZA has a demonstrated ability to achieve park construction project outcomes that result in “the most bang for the buck.” GZA is confident that the project goals will be achieved by creatively siting the proposed features so the Town can capitalize on the unique and historic site features.



Quality Control

To deliver consistently high-quality products and services to our clients, GZA infuses quality into all aspects of our operations. This is evidenced through our repeat business rate and through our corporate commitment to continuous improvement and customer satisfaction. The goal of our quality assurance and control (QA/QC) program is that the work is performed with the highest levels of technical accuracy and soundness. It is the responsibility of all assigned project staff to implement the QA/QC plan for every phase of the work process.

As part of our Quality Control program, the Principal-in-Charge assigns a Consultant/Reviewer who is trained and experienced in the appropriate technical qualifications to coordinate the independent review of the project milestones and to provide technical input at the planning stage and at critical points as the project develops.

Our Quality Control procedures are used to independently check and review documents, plans, cost estimates, and supporting data in their final format before they are released. Documents and supporting data include reports (either formal or informal), written project programs (design basis or criteria), design analyses (design computations and design sketches), drawings, project or procurement manuals (specifications), cost estimates, schedules, operation manuals, and equipment maintenance manuals. One managed consideration that is carefully monitored is the timeliness of the project’s development, an important consideration for Blandford Town Commons.

GZA has a proactive company culture. This unique way of doing business is how we strive for excellence and will perform our work for you. We are proactive in:

- **Communicating:** We reach out to our clients to avoid any surprises. We strive to return calls, emails, and incoming communications within 2 hours or less but no later than the day you contact us. We meet face to face with our clients (when possible), actively listen to them and learn their needs, objectives, schedules, and project constraints.
- **Identifying Core Issues and Risk Alternatives:** We operate in uncertain environments, so we assess hazards, possible exposures and risks. We involve independent quality control specialists on the team. We assess proven solutions and technologies and are open to new approaches.
- **Taking Ownership:** The needs of our clients and their bottom line are our bottom line. We ask ownership questions, engage stakeholders, put ourselves in our client's position, and take full responsibility for our work.



1916 Garden of Remembrance

DETAILED SCOPE OF SERVICES

GZA has performed evaluations and designs for numerous public park redesign and renovation projects, and through those efforts we have developed a strong understanding of municipal government and funding stipulations and public outreach components. With each completed public park renovation and rehabilitation project, we have increased our level of experience and deepened our understanding of what the municipalities may expect from their consultants. In short, GZA intends to bring all these attributes to the design of Blandford Town Commons.

To accomplish the goals of a redeveloped Town Commons, we propose the following Scope of Services:

Task 1 – Project Kick-Off and Program Description

Meet with the appropriate Franklin Regional Council of Governments (FRCOG) staff, Town of Blandford (Town, Client) staff, members of the public, and stakeholders at a project “Kick-Off” meeting to review program elements and goals. GZA will meet at the Project Site to review program elements and overall Project goals. Based on discussions at the Kick-Off meeting, GZA will develop and distribute a narrative Program Description of the Project’s goals such as the Client’s overall organizational objectives, and recap overall Project schedule goals including desired meeting dates and final deliverables.

Task 2 – Site Analysis

GZA will conduct a review of the site and analyze existing conditions of surrounding infrastructure, drainage patterns, sun and wind exposure, and ADA accessibility, and perform an inventory of significant trees. GZA will perform a desktop review of potential constraints related to rare species and wetlands, as well as soils and surficial geology information from MassGIS. GZA will conduct a field reconnaissance of any wet areas of the Project Site to enhance our understanding of the site conditions and potential remedial actions to address drainage.

Optional: If the Town would like to explore reconfiguring the intersection at North Blandford Road and Route 23, GZA may subcontract with Benesch for a traffic study of the existing and proposed intersection conditions.

Task 3 – Develop Existing Conditions Base Plan

Under this task, GZA will compile and review existing available surveys and create an existing conditions base plan. GZA will compile all available and relevant existing conditions mapping (topography, property boundaries and easements, layout, stormwater and utility information, etc.) as provided by the Town or other readily available sources (e.g., MassGIS). Based on site analysis and available mapping information, including LiDAR topographic information, GZA will create an existing conditions base plan at a minimum scale of 1”= 50’ and with 1-ft contour intervals. This existing conditions plan will be used as a base plan for the series of conceptual study plans.

Task 4 – Develop Preliminary Concept Plans

Based on the results of the kick-off meeting and review of site conditions, GZA will develop a series of conceptual site improvement plans and corresponding preliminary cost estimates. The conceptual site improvement plans will graphically describe the site redevelopment elements and will address traffic considerations, utility layout, topography, safety, accessibility, climate resiliency, views, and built features, etc. Together, the conceptual site plans and cost estimates will illustrate the project’s scope and the relationship of the project components to one another and the relationship of the project to surrounding properties. Conceptual specifications reflecting preliminary selections of materials, building systems, and equipment will be indicated on the plans.

Task 5 – Develop Selected Concept Design Plan

Based on the outcome of the design review meeting of the preliminary concept plans, GZA/Benesch will further develop the selected concept plan into the final conceptual Master Plan for the Rehabilitation of Blandford Town Commons. GZA will generate a corresponding detailed estimate of probable costs and present this to the Client at a final design review meeting. Following final design review, GZA will make any final minor revisions before presenting the plans to the Town’s people at a public meeting.

Preparation for and attendance at the following meetings are included in GZA's scope of services:

1. Project Kick-off Meeting
2. Preliminary Review Meeting- Existing Conditions Plan, Preliminary Conceptual Improvement Plans, and Preliminary Cost Estimates
3. Final Design Review Meeting- Refined selected Concept Master Plan
4. Up to two (2) additional meetings (Stakeholders, Public Meetings, Town Council, etc.)

PROJECT SCHEDULE

GZA will be available to commence the requested services following authorization to proceed by the Client and will coordinate with Client to perform the services in a timely, responsive manner. We will maintain regular communication with Client contacts so that issues and concerns are addressed on a timely basis. GZA will work in concert with all parties to provide suitable delivery at the anticipated schedule listed below, with the anticipated level of care required by our services.



Timber frame pavilion at Gunnery Sgt. Sullivan Park



SIMILAR EXPERIENCE

SIMILAR EXPERIENCE

GZA’s Springfield office has been working on municipal parks projects since the mid-1980s and has extensive experience with municipal parks, including providing master planning and cost estimating services.



Memorial at Beaugard & Schiavina Memorial Park

GZA has provided landscape design services to the City of Springfield for well over 30 years. Over the past ten years, we have maintained an “on-call” contract for civil engineering and landscape design services, through which we have provided almost continual professional services throughout the City’s extensive park system. We also have provided park-related design services to the towns of Montague, West Springfield, Agawam, Newton, and Gloucester.

The follow three projects are public commemorative spaces for which GZA provided landscape architectural and engineering services, including the master planning stage to design development, final design, bid phase, construction phase, to project close-out.

PROJECT	CLIENT	ENGINEERING FEE	CONSTRUCTION COST
Gunnery Sargent Thomas J. Sullivan Memorial Park Springfield, MA	City of Springfield, MA- Department of Parks, Buildings, & Recreation Management	\$60,200 (Included topographic survey, Wetlands permitting, and preparation of Stormwater Pollution Prevention Plan)	\$561,171
Beaugard & Schiavina Memorial Park Springfield, MA	City of Springfield, MA- Department of Parks, Buildings, & Recreation Management	\$74,200 (Included topographic survey, and preparation of Storm- water Pollution Prevention Plan)	\$636,612
1916 Garden of Remem- brance Springfield, MA	City of Springfield, MA- Department of Parks, Buildings, & Recreation Management	\$1,000 (Mostly donated ser- vices)	Construction was performed mostly in-house by Parks De- partment personnel



GZA has extensive experience with all elements of park design and improvements that may be selected for the Blandford Town Commons project, including:

- Memorials
- Picnic areas
- Accessible trails, boardwalks, and paths
- Parking facilities
- Playgrounds
- Resilient landscaping.

We have developed numerous master plans over the years and have worked at improving over 40 parks, playgrounds, and open spaces within the City of Springfield alone. We understand and see the importance of providing safe, accessible green spaces for people of all ages and abilities, and we take great satisfaction and pride in seeing the community enjoy parks we have worked on over the years.



Master Plan for 1916 Garden of Remembrance

EXAMPLE PROJECT DESCRIPTIONS

The following pages include descriptions of park rehabilitation projects completed by GZA within the past five (5) years in Massachusetts.



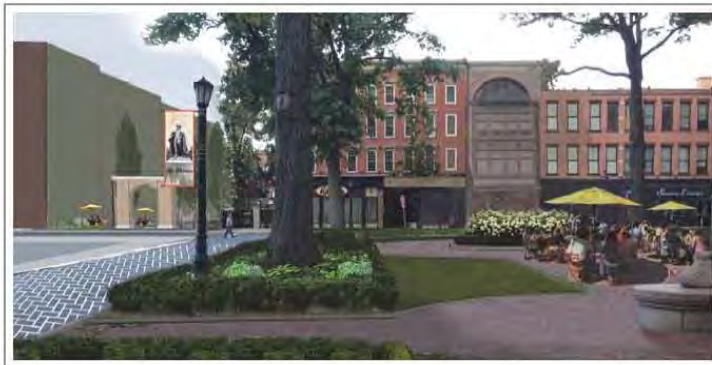

PROJECT PROFILE

Stearns Square and Duryea Way Design and Construction Phase Services

Springfield, MA

Project Highlights

- Master Planning
- Stormwater Pollution Prevention Plan Preparation
- Civil Engineering
- Landscape Architecture



Rendering by GZA of improved Stearns Square looking towards an improved Duryea

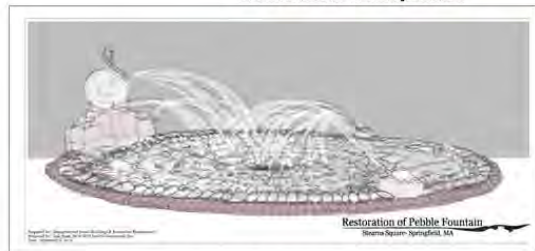
GZA provided landscape architectural and civil engineering services to the City of Springfield for the redevelopment of Stearns Square and Duryea Way as part of a downtown rehabilitation effort. GZA provided conceptual master planning/design, coordinated multi-City Department reviews (DPW, Planning, Parks, Traffic Commission), cost estimating, before finalizing design and preparing construction documents for public bid.

The site re-development of Stearns Square, a 0.75-acre green space, Duryea Way a pedestrian alley, and the Worthington Street streetscape located between the two properties was project managed by Anja Duffy, PLA. Tom Jenkins, P.E. served as the principal in charge and the lead civil engineers.

The \$1.5 million construction project involved: reconstruction of a historic fountain originally designed by Augustus Saint-Gaudens; creation of pedestrian spaces and outdoor dining areas Duryea Way and sidewalk bump-outs along Worthington Street and Stearns Square West; lighting and landscaping improvements; traffic calming measures; way-finding signage; restoration of an existing August Saint-Gaudens granite bench; utilities upgrades; and implementation of bike share parking station. The project was completed in the Spring of 2019.



Reconstruction historic fountain



Rendering by GZA of restored Augustus Saint-Gaudens fountain



Overall plan of Stearns Square and Duryea Way site improvements



Beauregard & Schiavina Memorial Park

Springfield, MA



Project Highlights

- Landscape architecture
- Civil engineering
- Memorial park
- Soccer fields
- Walkways
- Playground

GZA provided landscape architectural and civil engineering services to the City of Springfield for a new park dedicated to fallen Springfield Police Officers Alain Beauregard and Michael Schiavina. The new park is situated on twelve acres adjacent to the Mary Lynch Elementary School on North Branch Parkway. The Development of Beauregard & Schiavina Memorial Park features a memorial to the fallen officers with seating wall, granite memorial stone and plaque, and flagpole. The park also features one new regulation size soccer field, two youth practice soccer fields, accessible walkways, universally accessible and inclusive playground with safety surfacing, benches, trash receptacles, park signage, utility connections, associated landscaping, and irrigation.



Memorial to Fallen Officers



Accessible playground



PROJECT PROFILE

Development of Gunnery Sergeant Thomas J. Sullivan Park

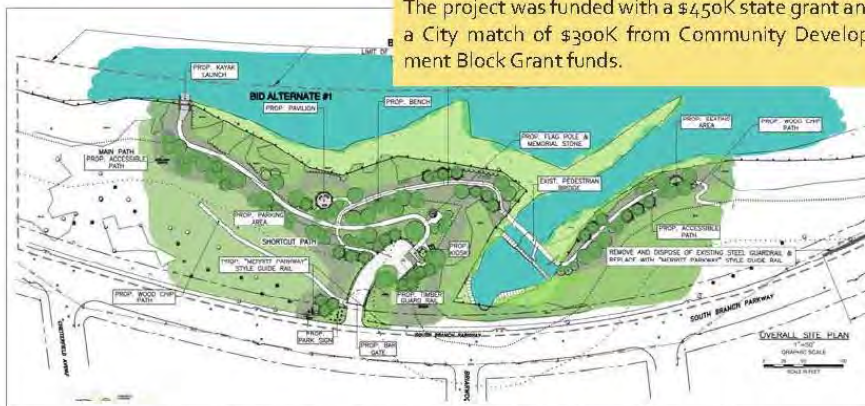
Site Civil Design, Landscape Architecture Design, Permitting
Springfield, MA

GZA provided site civil engineering and landscape architectural services to the City of Springfield for a new park dedicated to fallen marine and Springfield native Thomas J. Sullivan. The passive park features an accessible walking path to the shore of Watershops Pond and allows for wheelchair access to fishing, rowing, kayaking, and canoeing. The GZA designed park also features a timber-frame pavilion, kiosk, flexible porous paved walking trails, porous bituminous concrete parking lot, wildflower meadows, extensive tree plantings, seating areas, flagpole/memorial area, landscaping and signage. Paving was reduced to minimize development impacts, and low impact development stormwater management practices were employed throughout the new park. The park was dedicated in Fall of 2017.



Wildflower meadow, flexible porous paved path, and pavilion

The project was funded with a \$450K state grant and a City match of \$300K from Community Development Block Grant funds.



Overall Site Plan prepared by GZA used for public bid (color rendered afterwards)
Master Plan prepared by GZA that was instrumental in securing funding for the project.

Project Highlights

- Conceptual Master Plan for Successful Grant Applications
- Site Civil Engineering
- Landscape Architectural Design
- Utilities Design
- Wetlands Delineation, Assessment, and Permitting
- Rare Species Permitting
- Section 408 Permitting with the U.S. Army Corps of Engineers



Seating at flagpole memorial overlook area. View towards informational kiosk, parking and access drive.



Kayak launch



GZA PROJECT PROFILE

Development of North Riverfront Park
 Site Civil Design, Landscape Architecture Design, Permitting
 Springfield, MA



Ribbon-cutting ceremony on October 27, 2015, for North Riverfront Park

GZA provided site civil engineering and landscape architectural services for this new municipal park located along the Connecticut River. The park features a direct, accessible connection to the Connecticut River Walk and Bikeway. The passive recreation park is adjacent to City property leased by the Pioneer Valley Riverfront Club, a center for rowing, kayaking, canoeing, and dragon-boat paddling on the river. The project includes a fitness trail with exercise stations along Riverside Road and the River Walk. GZA's accessible designs feature a new gazebo, trellis overlook adjacent to the river, site lighting, open lawn and turf areas, plantings, benches and picnic tables, and landscape irrigation. Paving was reduced to minimize development impacts, and low impact development stormwater management practices were employed throughout the new park. Project interfaces the USACE-constructed flood control levee which required Section 408 permitting for alteration of a Federally constructed project.

Project Highlights

- Graphical Plans for Successful Grant Applications
- Site Civil Engineering
- Landscape Architectural Design
- Utilities Design
- Wetlands Delineation, Assessment, and Permitting
- Rare Species Permitting
- Section 408 Permitting with the U.S. Army Corps of Engineers



Pedestrian plaza and signage at Park entrance. The plaza features mapping of the Connecticut River walk and Bike Path produced by GZA



New park is on the shores of the Connecticut River and provides direct waterfront access.



Master Plan prepared by GZA that was instrumental in securing funding for the project.



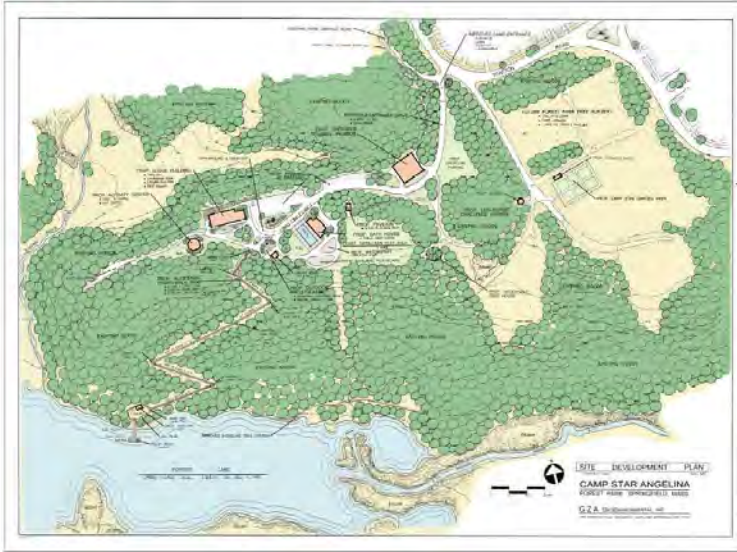
Governor Patrick at the project's ceremonial ground breaking (master plan in background).



GZA PROJECT PROFILE

**Development of Camp STAR Angelina
Site Civil and Landscape Architecture
Design and Permitting**

Springfield, MA



Project Highlights

- Master Plan of Development
- Phase I Environmental Site Assessment
- Geotechnical Investigation, Recommendations, and Design
- Site Civil Engineering for Phase I of Development
- Low-Impact Development (LID) Stormwater Management
- Design of Outdoor Amphitheater
- Landscape Architectural Design for Phase I of Development
- Wetlands Delineation, Assessment, and Permitting
- Utilities Design for Full Implementation of the Master Plan



Facility Signage designed by GZA

GZA provided site civil engineering and landscape architectural services for the first phase of development which included the new swimming pool, bathhouse, and camp infrastructure at the City of Springfield's Camp STAR Angelina. The swimming pool includes a zero entry interface for full accessibility along with multiple waterspray play features interspersed throughout the shallow end. Site development elements include multiple rain gardens and other low impact development practices, water distribution systems for fire protection and domestic supply, sanitary sewage collection and pumping station, new electrical infrastructure for the camp, site lighting, and communications. In addition to the rain gardens, landscape elements include accessible parking and walkways, outdoor seating, picnic grove, and grass pavers for intermittent vehicular access to the bathhouse. The outdoor amphitheater includes a centrally-located fire pit and performance stage, with accessible routes to every seat.



Zero entry pool with waterspray elements allows wheelchairs to enter directly into the water



The \$1.8M project was funded by the Commonwealth of Massachusetts through the state's Signature Urban Parks Program, numerous community businesses, parents and friends of Camp STAR Angelina, and the Springfield Council for Cultural and Community Affairs. Camp STAR Angelina offers inclusive recreational programs for youth and young adults (ages 3-22) with and without disabilities.

Phase I of the Master Plan was constructed 2014-2015 and became operational in August 2015. Funding for Phase II, including the Camp Lodge, is currently being secured.



GZA PROJECT PROFILE

Development of Mary Troy Park
Springfield, MA

Project Highlights

- Landscape Architecture and Design
- Stormwater Management Design & Utilities
- Universal Accessibility
- Contract Plans & Specifications
- Construction-Phase Services



Seating plaza area features colored concrete plaza, planter beds, and game tables

GZA provided site civil engineering and landscape architectural services for this new neighborhood municipal park located in Springfield, MA. The long and linear park features a colored concrete plaza, water spray pad, playground, fitness equipment cluster, LED site lighting, landscaping and landscape irrigation. The park is adjacent to a newly dedicated senior center, and was designed with multiple age groups in mind. The park's central walkway connects the adjoining residential neighborhood with a busy commercial area and allows for a safe and accessible route for seniors to walk. The plaza with game tables and colorful planter beds offers a place for an outdoor respite, while the adjacent water spray play area and playground offers exciting play opportunities for the neighborhood's younger population.

The park was dedicated in the Summer of 2015, and was constructed on-time and on-budget. The project was funded with a \$400,000 Massachusetts Parkland Acquisitions and Renovations for Communities (PARC) grant and a City match of \$250,000 from Community Development Block Grant Funds.



Play area for children 2 to 5 years old. This is one of four play areas. The park encompasses activity areas for all ages and all levels of abilities.



Kendall Street Entrance – provides open sight lines into the park



3D rendering of park was used to convey design ideas to City for approval prior to preparing construction documents.



Aerial view of pedestrian plaza



Elias Brookings School
Springfield, MA



Project Highlights

- Geotechnical Investigations, Recommendations, and Specifications
- Phase I Environmental Site Assessment
- Phase II Environmental Site Assessment
- Site Civil Design Drawings and Specifications
- Site Landscape Design Drawings and Specifications
- Green Infrastructure Stormwater Management
- Construction-Phase Design Services

GZA served the City of Springfield when the Elias Brookings Elementary School was severely damaged by a June 2011 tornado. The City needed to erect temporary classrooms in the athletic fields at the school in order to ensure that classes would be open on-time in the Fall. GZA was able to meet the hyper-accelerated schedule, rapidly determine an appropriate exploration program and mobilize a drilling subcontractor to complete test borings on short notice. GZA’s geotechnical work was on the critical path to successful project completion, and we were able to prepare a Report within the necessary timeframe, presenting our geotechnical recommendations for design and construction of the foundations for the temporary classrooms and temporary parking areas.

After the City determined that it would be more cost effective to build a new school nearby rather than to repair the old school, GZA again provided geotechnical consulting services for the new building site. We designed and performed a subsurface investigation to address building foundations, retaining walls, parking areas and stormwater management. GZA helped the City address the widespread presence of unprepared fill and old foundation remnants at the site by preparing plans and specifications that allowed the City’s contractor to prepare the building pad site during the main thrust of design and bidding. Early site pad preparation was the key to the City being able to meet another aggressive timetable for construction.

GZA provided full site civil and landscape design services including preparation of construction documents and specifications for the \$27.5 million state-of-art-building’s site and grounds. The site features a large parking area, playground, ballfield, retaining walls, gathering areas, walkways, paved play area, and associated landscaping. Stormwater management design includes a combination of gray and green infrastructure, including a rain garden and swale for infiltration of stormwater runoff. The building and site were opened to the public in March 2015.



Improvements to Nathan Bill Park

Springfield, MA

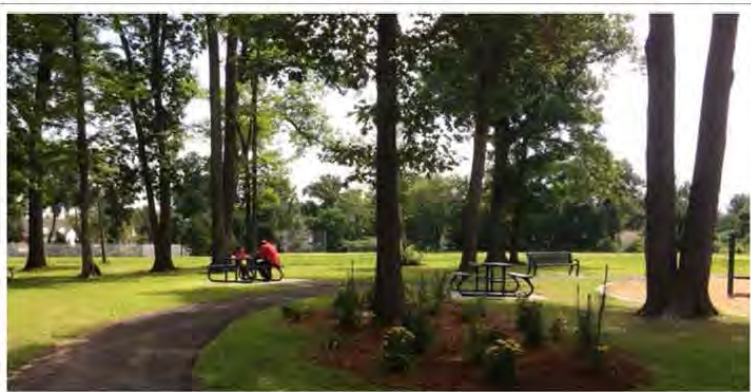


Renovated playground features a new waterspray play area

GZA provided site civil engineering and landscape architectural services for this existing neighborhood municipal park renovation located in Springfield, MA.

The park was dedicated in the Summer of 2015, and was constructed on-time and on-budget. The project was financed by \$750,000 in federal Community Development Block Grant Disaster Recovery funds and \$100,000 in city funds.

The improvements included new tennis courts, improved irrigated athletic fields, enhancements to the existing playground and swings, a new splash pad, perimeter walking track, landscaping, and improved parking. All existing and new program elements were made compliance with Americans with Disability Act (ADA) standards as part of the renovations.



Rehabilitated playground featuring picnic tables, accessible walkways, defined play areas, and landscaping

Project Highlights

- Landscape Architecture and Design
- Stormwater Management Design & Utilities
- Universal Accessibility
- Contract Plans & Specifications
- Construction-Phase Services



Springfield Mayor Domenic Sarno, joined by other city officials and residents, are shown celebrating the GZA prepared plans for improvements at Nathan Bill Park



Colored concrete waterspray play area



Existing playground was enhanced with addition of subsurface drainage, accessible walkways, safety surfacing and repairs to existing playground



Allen Street Roadway and Circulation Improvements

City of Springfield



Background: Allen Street and Bicentennial Highway are heavily travelled roadways in the City of Springfield. Located in the Sixteen Acres (Outer Belt) section of the city, the roadways are frequently congested and pose safety issues for local residents and commuters.

Scope: Benesch prepared planning and design documents for roadway and circulation improvements to the Allen Street and Bicentennial Highway Corridor. The planning phase included significant data gathering, numerous stakeholder meetings, conceptual design and traffic analyses along the 3,000 foot project corridor to determine project scope, project impacts, traffic volumes and analyze existing traffic movements.

Benesch developed numerous alternatives in concert with the City of Springfield and the Outer Belt Civic Association to determine the ultimate solution that will address the ever growing traffic volumes, while also attempting to provide safety for area residents.

Key Issues

- Traffic & safety engineering
- Traffic analyses & data gathering
- Circulation improvements
- Local roadway design
- Developed numerous design alternatives
- Attendance at stakeholder meetings

Dates of Service

2008 - 2014

Project Cost

\$2,500,000

Client Reference

Christopher Cignoli, PE
Director of Public Works
City of Springfield
70 Tapley Street
Springfield, MA 01104
P: 413-750-2808
E: CCignoli@springfieldcityhall.com





Traffic Signal Improvements at Griswold, Harris, & House Streets

Glastonbury, CT



Background: Benesch provided the Town of Glastonbury with engineering services for the design of traffic signal improvements related to the Griswold Street / Harris Street / House Street Intersection Improvement project.

Scope: The scope of work consisted of preliminary engineering; preliminary, semi-final and final design; and technical specifications for the traffic signal installations associated with the reconstruction of the Griswold and House/Harris Streets intersection. The signal design accommodated the proposed realignment of House Street opposite Harris Street and included video detection, emergency vehicle pre-emption and interconnection with the intersection of Griswold Street at the Route 2 eastbound exit ramp.

Traffic signal design services encompassed a review of existing data and development of intersection capacity and queuing analyses for the intersection of Griswold Street and House/Harris Streets, along with the preparation of traffic flow diagrams.

Preliminary design services entailed the review of data and documents provided by the Town and CTDOT and field visits to identify critical control items. Benesch designed an interconnection and coordination scheme with the intersection of Griswold Street at Bantle Road and the Route 2 eastbound exit ramp. The scheme continues west along Griswold Street to the Naubuc School. Services also included evaluation of Maintenance and Protection of Traffic schemes; preparation of plans and supporting documentation for public meetings; quantity and cost estimates; report preparation; and attendance at coordination meetings with the Town, CTDOT, utilities and other agencies.

Benesch also provided services during construction for the traffic signalization portion of the project. These services included meeting attendance; review of traffic signal and mast arm submittals; responding to Requests for Information; construction observation; final signal inspection; and preparation of record drawings.

Key Issues

- Traffic & safety engineering
- Traffic signal design
- Utility coordination
- Aesthetic enhancements
- CTDOT coordination & project expertise

Dates of Service

2013 - 2017

Project Cost

\$1,000,000

Client Reference

Stephen Braun
Assistant Town Engineer
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033
P: 860-652-7743
E: stephen.braun@glastonbury-ct.gov





Rentschler Field Transportation & Traffic Planning

Connecticut Department of Economic & Community Development and Baystate Environmental Consultants



Background: Benesch was retained by the State of Connecticut's Department of Economic and Community Development, in association with Baystate Environmental Consultants, to provide traffic and transportation planning and analysis services for the proposed 8 million square-foot, mixed-use development, proposed for the Pratt & Whitney property in East Hartford, Connecticut.

Scope: Services included coordination with local officials and analysis of existing condition traffic and transportation issues. Benesch made recommendations for phased improvements to local and state roadway systems that surround the site and prepared implementation schedules and cost estimates.

Key Issues

- Traffic Impact Analysis for EIE for large-scale development
- Peer review of developer's traffic impact analysis
- Coordination with developer / DECD / Town / CTDOT
- Support full development of parcel, resulting in positive economic impact for community

Dates of Service

2005

Project Cost

\$50,000,000

Client Reference

Peter Simmons, PE*
Assistant Director of Project Management
Connecticut Department of Administrative Services
450 Columbus Blvd., Suite 1201
Hartford, CT 06103
P: 860-713-5636
E: peter.simmons@ct.gov

*Mr. Simmons was formerly employed by the Connecticut Department of Economic & Community Development



Willow Street / Main Street / Route 2



Brewer Street / Main Street / Route 2



COST ESTIMATING ACCURACY

GZA prides itself on our proven record of evaluating costs for parkland renovation projects in the Pioneer Valley over the last ten years. GZA's references can speak to our proficiency in preparing accurate cost opinions and helping our clients put grant monies to the best possible use.

In general, we use the following references when scoping projects to meet available budgets and in preparing cost opinions:

- "Site Work & Landscape Cost Data", R.S. Means, current versions, with escalation applied;
- "Construction Cost Index" (CCI), *Engineering News Record*, various historical values;
- Massachusetts Highway Department-Weighted Unit Prices, current versions;
- Specific contractor assistance with difficult or "specialty" work items; and—perhaps most importantly,
- GZA's history and cost database for similar construction work in Massachusetts at large and, specifically, the Pioneer Valley.

When designing a project, it is important to have an accurate understanding of the cost of construction and other project costs so that the project can be designed to take advantage of every available dollar in the budget, while not exceeding the available funds. GZA prepares cost estimates at each stage of the design process, to confirm the cost is in line with the owner's budget. This allows the project owner to change course in a minor fashion (or dramatically) if the design is not compatible with the expected or available budget. The "final" design proceeds to completion with a final cost estimate reflecting those mid-course changes.

In a bidding climate or environment with a limited number of qualified bidders, bid prices can sometimes vary widely. Typically, we recommend including one or more bid alternates to increase the likelihood that a project can be awarded with available funds and without delay.

In the table below GZA presents recent representative projects for which we have full cost information on hand. As you can see, our cost performance on these projects has been exemplary. Many of these projects were funded in part by State and Federal grants.



TABLE 1: COST ACCURACY TABLE

PROJECT	ENG. ESTIMATE	BID DATE	BID PRICE	COMPLETION DATE	FINAL COST	DISCUSSION
STEARNS SQUARE AND DURYE WAY	\$1,550,000	January-18	\$1,068,000	June-19	\$1,589,100	ADDED BID ALTERNATES NOT ORIGINALLY ACCEPTED; ADDED CURBING, LIGHTING, LANDSCAPING
GUNNERY SGT. T.J. SULLIVAN PARK	\$570,100	July-16	\$547,000	June-17	\$574,500	ADDED PAVILLION
NORTH RIVERFRONT PARK	\$1,291,640	October-14	\$1,179,300	November-15	\$1,240,744	CONSTRUCTION COST INCREASED DUE TO: ADDED BID ALTERNATE NOT ORIGINALLY AWARDED (FITNESS COURSE) AND EX. BUILDING FOUNDATION FOUND TO BE INADEQUATE DURING EXCAVATION
BEAUREGARD SCHIAVINA MEMORIAL FIELD	\$742,200	August-17	\$636,600	August-18	\$661,642	ADDED LIGHTING, PAVEMENT, BID ALTERNATE NOT ORIGINALLY ACCEPTED
NATHAN BILL PARK	\$777,080	October-14	\$549,670	January-16	\$748,800	ADDED BID ALTERNATES NOT ORIGINALLY ACCEPTED; ADDED PARKING LOT LIGHTING; ADDED DRINKING FOUNTAIN AND ADDITIONAL PLAYGROUND EQUIP.
MARY TROY PARK	\$538,400	July-14	\$514,000	July-15	\$625,330	200 CY UNSUITABLES; ADDED 20-CAR PARKING LOT



REFERENCES

The references provided below can speak to GZA’s quality and performance for the predominance of similar project work conducted by GZA’s Springfield office over the last five years. Other references for similar work in other municipalities can be provided upon request.

**Franklin County Regional Housing & Redevelopment Authority
Brian McHugh, Director of Community Development**

241 Millers Falls Road
Turners Falls, MA 01376
413-223-5224
bmchugh@fcrhra.org

Dates worked: 2016 - Present

Description of work performed: GZA has worked with Brian McHugh on the redevelopment of a Rutter’s Park, Community Development Block Grant-funded public park project in Montague, MA.

**City of Springfield – Department of Parks, Buildings, and Recreation Management
Patrick Sullivan, Executive Director**

200 Trafton Road
Springfield, MA
413-787-6444
psullivan@springfieldcityhall.com

Dates worked: 1993 - Present

Description of work performed: GZA has worked with Mr. Sullivan for over 27 years on approximately 150 assignments ranging from park redevelopment projects to dam inspections, to assistance with grant application and funding efforts.

**Town of West Springfield – Parks and Recreation Department
Victoria Connor, Director**

26 Central Street, Suite 19
West Springfield, MA 01089
413-263-3284
vconnor@townofwestspringfield.org

Dates worked: 2018 - Present

Description of work performed: GZA has worked with Ms. Connor and other Town Department heads on a Master Plan for a Centralized athletic complex connecting the Middle School and High School campuses with Town-owned open space leased to the Irish Cultural Center at 429 Morgan Road.



5 RESUMES



Thomas E. Jenkins, P.E.

Associate Principal

Summary of Experience

Mr. Jenkins is a civil engineer who serves as an Associate Principal and engineer for GZA, with a focus on projects involving natural and water resource protection, development, and restoration. His extensive background has provided both design and construction experience, with wide exposure to all aspects of civil engineering. This experience record has included the design and construction of commercial, industrial and municipal infrastructure systems and their respective components, especially for water conveyance. Other significant project experience includes dam reconstruction especially historic restoration, levee investigations, channel stabilization and improvement works, flood control facilities, freshwater dredging, stormwater systems, water supply facilities, and in-lake recreational structures.

Education

B.S., 1982, Civil Engineering,
Georgia Institute of Technology

Licenses & Registrations

2001, Connecticut,
Professional Engineer, # 22349
1992, Massachusetts,
Professional Engineer, # 36450

Areas of Specialization

- Municipal Park Planning & Development
- Land Development
- Freshwater Hydraulic Dredging
- Freshwater Mechanical Dredging
- Stormwater Management
- Hydrologic/Hydraulic Modeling
- Flood Control and Protection
- Historic Dam Restoration
- Water Resources Engineering
- Construction Cost Estimation

Relevant Project Experience

Principal Engineer, Camp STAR Angelina, Springfield, Massachusetts. GZA provided site civil engineering and landscape architectural services for the development of the new swimming pool, bathhouse, and camp infrastructure project, completed in 2015. The swimming pool includes a zero-entry interface for full accessibility along with multiple waterspray play features interspersed throughout the shallow end. Site development elements include multiple rain gardens and other low impact development practices, water distribution systems for fire protection and domestic supply, sanitary sewage collection and pumping station, new electrical infrastructure for the camp, site lighting, and communications. In addition to the rain gardens, landscape elements include accessible parking and walkways, outdoor seating, picnic grove, and grass pavers for intermittent vehicular access to the bathhouse. The \$1.8M project was funded by the Commonwealth of Massachusetts through the state's Signature Urban Park Program, numerous community businesses, parents and friends of Camp STAR Angelina, and the Springfield Council for Cultural and Community Affairs. Camp STAR Angelina offers inclusive recreational programs for youth and young adults (ages 3-22) with and without disabilities.

Principal Engineer, Development of North Riverfront Park, Springfield, Massachusetts. This new municipal park is located on the shores of the Connecticut River with a direct connection to the Connecticut River Walk and Bikeway. The passive recreation park is adjacent to City property leased by the Pioneer Valley Riverfront Club, a center for rowing, kayaking, canoeing, dragon-boat paddling and biking on the river. The project includes a fitness trail with exercise stations along Riverside Road and the River Walk. GZA's accessible designs feature a new gazebo, trellis overlook adjacent to the river, site lighting, open lawn and turf areas, plantings, benches and picnic tables, and landscape irrigation. Paving was reduced to minimize development impacts and low impact development stormwater management was employed throughout. GZA coordinated closely with the U.S. Army Corps of Engineers to obtain Section 408 approval to modify the adjacent federal flood control works to allow for the connecting ramps to the River Walk and Bikeway atop the Connecticut River levees.



Thomas E. Jenkins, P.E.

Associate Principal

Principal Engineer, Redevelopment of Nathan Bill Park, Springfield, Massachusetts. This park redevelopment project was partially funded by a Community Development Block Grant and featured new parking facilities, a new waterspray playground, improved picnic and pedestrian facilities, rehabilitated basketball courts and tennis courts, irrigation through-out the multi-ballfield park, and a new walking trail providing a 3,000 linear foot loop around the neighborhood park. In addition to the site civil and landscape design services, GZA provided the services of our Licensed Site Professional to allow for construction within an Activities Use Limitation regarding portions of the park previously impacted by solid waste disposal.

Principal Engineer, Restoration of Hydropower at Watershops Pond Dam, City of Springfield, Massachusetts. Mr. Jenkins led this effort to evaluate the technical and financial feasibility of restoring hydropower at this historic municipally-owned structure. In the late 18th century, the U.S. Federal government established the Springfield Armory and began producing muskets, with forging of metal and shaping of wooden stocks taking place at "the Watershops" on the Mill River and the lighter assembly work occurring at the nearby "Hill Shops". The current Watershops Pond Dam was constructed mid-19th century, with hydroelectric power being added in the 1920s. The Armory was decommissioned in 1968 and the City of Springfield assumed ownership of the dam. The proposed hydropower project will assist Springfield in reaching its goals of becoming a greener and more resilient city and will provide clean, renewable energy to the nearby new Elias Brookings School on an everyday basis.

Principal Engineer, New Outdoor Amphitheater at Camp STAR Angelina, Springfield, Massachusetts. GZA provided site and landscape design services and permitting for a new outdoor amphitheater providing intimate seating for up to 200 guests. The amphitheater is fully accessible and inclined walkways provide accessible routes to all three of its levels, surrounding an open fire pit and performance stage. Landscaping features include plantings, site lighting, and pedestrian walkways.

Principal Engineer, Development of Mary Troy Park, Springfield, Massachusetts. GZA provided site civil engineering and landscape architectural design services for this new municipal park, funded through the Commonwealth of Massachusetts Parkland Acquisitions and Renovations for Communities (PARC) grant program in combination with Community Development Block Grant funds. The project redeveloped a vacant brownfields lot into a new neighborhood park adjacent to a new senior center and offers a variety of recreational opportunities to meet the diverse needs of the neighborhood. Site improvements are universally designed to provide engaging features for people of all ages and abilities and exceed ADA accessibility requirements. A series of freestanding play structures and exercise equipment positioned along a central pathway and within pockets encompassed by paved travel lanes allow users to actively engage in recreational amenities within the park. Each pocket area has either a wood fiber or rubberized safety surface that meets safety and accessibility standards. Additional amenities, such as a drinking fountain, trash receptacles, bike rack, benches and LED site lighting aid patrons in their use of the park. Park improvements include a patio area with picnic tables and gaming stations, eight park benches, a sensory garden planting, a waterspray splash pad, playground unit (ages 2-5), swing set, a fit course, lawn areas, new sidewalks, and new lighting. New plantings throughout the park include a variety of dogwoods, crabapple, honey locust, tulip poplar, ginkgo biloba, and a variety of shrubs and perennials (roses, rhododendron, boxwoods, etc.).

Principal Engineer, New Elias Brookings School, Springfield, Massachusetts. Mr. Jenkins was lead engineer and project manager for all site environmental, geotechnical, civil engineering, and landscape design for this new \$22M elementary school in an urban setting. Site design included all utilities, grading and earthwork, parking and bus circulation, playfields, play structures, school garden, extensive site retaining walls, and pedestrian circulation and plaza areas. Due to the site's urban history, GZA provided direction to the City in proceeding with an early site preparation program to remove, condition, and replace 5,000 CY of environmentally-impacted urban fill prior to releasing the project for general bids. The old Brookings school was destroyed by a June 2011, tornado. Under Mr. Jenkins' direction, GZA also performed rapid deployment geotechnical and site civil engineering services to help the City of Springfield establish a new 45,000 sq.ft. temporary school facility open within 12 weeks of the tornado.



Anja Ryan Duffy, PLA

Landscape Architect

Summary of Experience

Mrs. Duffy is a registered landscape architect with over thirteen years of professional experience in designing, planning, and construction phase administration. Her role as a landscape architect within GZA has been to provide project management, develop landscape master plans, facilitate in public participation, and prepare construction documents and technical specifications. Her broad technical knowledge allows her to successfully manage interdisciplinary projects for both the public and private sector clients. Mrs. Duffy's work focuses on "low impact design" strategies, with an emphasis on sustainable land redevelopment and ecological restoration practices.

Education

B.S., 2005, Landscape Architecture,
University of Massachusetts- Amherst

Licenses & Registrations

- 2011, Connecticut, Registered Landscape Architect, #1198
- 2012, Massachusetts, Registered Landscape Architect, #4000
- 2017, Rhode Island, Registered Landscape Architect, #0647
- 2019, State of New Hampshire, Registered Landscape Architect, #00177

Areas of Specialization

- Site Design
- Planting Plans
- Construction Phase Services
- Cost Estimation
- Graphic Design

Relevant Project Experience

PUBLIC PARKS

Stearns Square & Duryea Way, Springfield, Massachusetts. Mrs. Duffy developed the master plan for the restoration of Stearns Square, a historical park, and the redevelopment of Duryea Way, a pedestrian alley way within downtown Springfield. The two parcels and Worthington Street, which separates the parcels, were designated by the City's Planners to become the focal point of downtown's new cultural district. Mrs. Duffy's work involved conducting meetings with various public and private stakeholders, in effort to gain a clear vision and consensus for the new cultural district. Mrs. Duffy's plan featured expanded City sidewalks that are to be used for outdoor dining, an improved Stearns Square including restoration of a historical fountain created by Augustus Saint-Gaudens, and a fully reconstructed pedestrian alley way featuring space for outdoor dining, public art, and performance. Mrs. Duffy prepared construction documents and performed construction phase services for the renovation of the historic Stearns Square located in downtown Springfield, and renovation of a pedestrian alley, known as Duryea Way with historic significance because it is adjacent to the site where the first Duryea gasoline powered automobile was invented. The project also included street and sidewalk improvements, including curb bumps for outside dining.

Project Landscape Architect, North Riverfront Park, Springfield, Massachusetts.

Mrs. Duffy was the lead landscape architect for a 1.3 million-dollar park development project along the Connecticut River in Springfield. The new park is situated around the Pioneer Valley Riverfront Club and features ample area for assembly of rowers and their various row boats (shells), pavilion, picnic areas, river rock masonry retaining walls and overlook areas, connection to adjacent bike trail, fitness trail, landscaping and parking.

Project Landscape Architect, Clifford A. Phaneuf Environmental Center, Springfield, Massachusetts.

Mrs. Duffy was the lead landscape architect for the redevelopment of an environmental center located within Forest Park, 700+ acre public park in Springfield. The LEED-accredited project included environmentally sensitive site development techniques such as handling stormwater from the site and building in a series of raingardens, specifying local materials, and designing a planting design using all native drought tolerant plant species. Mrs. Duffy was the project manager for this GZA project, and managed a team of civil engineers, environmental scientists, and



Anja Ryan Duffy, PLA

Landscape Architect

geotechnical engineers who provided their services for utility layout, permitting, and slope stabilization analysis. The building and site were designed and constructed to fully comply with the Americans with Disability Act recommendations, including an accessible kayak launch and fishing platform onto Porter Lake. The project was completed in Spring of 2016, and now is enjoyed as a year-round environmental education center for the City's public schools.

Project Landscape Architect, New Elias Brookings School, Springfield, Massachusetts. Mrs. Duffy was lead landscape architect for the site design of a new elementary school. Mrs. Duffy worked closely with GZA civil engineers, project architects, and the client throughout the design process. Mrs. Duffy was responsible for laying out the site, including an 80-car parking lot, playing field, accessible playground, assembly plaza, accessible walkways, vegetable garden and resilient/drought tolerant landscaping.

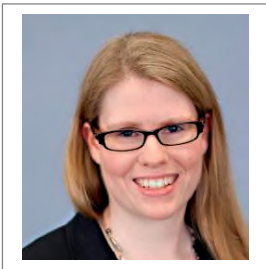
Project Landscape Architect, Camp STAR Angelina, Springfield, Massachusetts. Mrs. Duffy provided design services for the development for a universally accessible day camp. Mrs. Duffy was responsible for final site design and construction document production for the construction of an access road, site surrounding a new pool house and swimming pool, low-impact development stormwater management system consisting of infiltration trenches and rain gardens, fully accessible multi-level amphitheater and fire pit, and associated native landscaping.

Walking Trails at Fresh Meadow Swamp, Wallingford, Connecticut. (2009) Mrs. Duffy developed a conceptual site design for 2.6 miles of walking trails on a 68-acre parcel of open space for Wallingford's Department of Planning and Zoning. Her design is based on her own site visits and the analysis of the plant and wildlife communities by a GZA biologist. The site design enhances the existing site's ecology, cultural features, topography, views, and orientation. The walking trails were designed as mowed paths, gravel paths, and wetland boardwalks. The plan involved highlighting unique points-of-interest along the path system, such as scenic overlooks from wooded promontories, secluded farm ponds, butterfly meadows, unique glacial rock out cropping, and an old apple orchard. Mrs. Duffy developed a cost estimate for the proposed work and an illustrative site master plan for the town's public approval process.

Project Landscape Architect, 1916 Remembrance Garden, Springfield, Massachusetts. Mrs. Duffy developed a landscape master plan for the development of a 1916 Remembrance Garden for the City of Springfield. Her client, the City Parks Department, commissioned Mrs. Duffy to create colorful perspective renderings of her proposed work and used it to promote the project and generate funding. The project was constructed in-house by City employees and donated services. The project was dedicated in the Spring of 2016 on the centennial of the 1916 Easter Rising event. The garden is the first of its kind in the U.S. but was part of big movement internally to pay tribute to the 1916 Easter Rising in Dublin, Ireland.

Project Landscape Architect, Clifford A. Phaneuf Environmental Center, Springfield, Massachusetts. Mrs. Duffy was the lead landscape architect for the redevelopment of an environmental center located in a 785-acre public park in Springfield. The LEED-accredited project included environmentally sensitive site development techniques such as handling stormwater from the site and building in a series of raingardens, specifying local materials, and designing a planting design using all native drought tolerant plant species. Mrs. Duffy was the project manager for this GZA project, and managed a team of civil engineers, environmental scientists, and geotechnical engineers who provided their services for utility layout, permitting, and slope stabilization analysis. The building and site were designed and constructed to fully comply with the Americans with Disability Act recommendations, including an accessible kayak launch and fishing platform onto Porter Lake. The project was completed in Spring of 2016, and now is enjoyed as a year-round environmental education center for the City's public schools.

Project Landscape Architect, Fort Warren at Georges Island, Boston, Massachusetts. Mrs. Duffy developed designs for new granite landscape steps, seating areas, and erosion repairs at Fort Warren, a civil war-era bastion on Georges Island in the Boston Harbor. The fort is now owned, maintained, and programmed by the Massachusetts's Department of Conservation and Recreation as a public park. Her work included the preparation construction drawings and specifications for public bid, and preparation of cost estimates, as well bid-phase and construction-phase support.



Jennifer R. Mackey Burke, P.E., CPSWQ®, LEED Green Associate

Senior Project Manager / Water Resources Engineer

Summary of Experience

Ms. Burke serves as a GZA Senior Project Manager and Water Resources Engineer in the office in Springfield, Massachusetts. Her assignments include supporting work for office engineering projects and responsibility for planning, coordination and operation of various projects for which she is project manager. These projects include development and implementation of water quality sampling programs, hydrologic/ hydraulic modeling of steady and non-steady flow applications, development of environmental planning documents (MEPA, CEPA, NEPA), stormwater-related permitting and program support, watershed studies, dam engineering inspections, engineering analyses, construction phase services, and on-site construction monitoring activities.

Relevant Project Experience

STORMWATER PERMITTING

Project Manager, Orange Municipal Airport Industrial Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasure (SPCC) Plan, Orange, Massachusetts. Prepared industrial SWPPP to comply with EPA NPDES requirements for Airport and assisted in SPCC preparation. Project included field review, record review, interviews and stormwater drainage system review, documentation of existing conditions, SWPPP and SPCC preparation.

Engineer, NPDES Phase II Permitting Assistance, Town of Milford, Massachusetts.

Provided multi-year compliance activities for Town of Milford for their NPDES Phase II Small MS₄ program. Ms. Burke was responsible for developing a Stormwater Management Plan and Illicit Discharge Detection Program for the Town. Program also included field investigations to identify/GPS locate all stormwater outfalls, generating a master list of detention basins/BMPs, and tailoring Town program to address specific system deficiencies. Also included was a public education program (educational materials and presentations) and implementation of an illicit discharge detection program with sampling and identification of outfalls.

Engineer, Town of Easthampton 604b grant, NPDES Phase II Services, Easthampton, Massachusetts.

Provided engineering services on project which was funded by a 604(b) grant. This project involved field location and documentation of 140+ outfalls town-wide, dry weather outfall sampling, laboratory testing, and data compilation/ analysis with a goal of identifying illicit discharges and cross connections in the existing Town stormwater system. Potential cross connection/illicit discharge areas were identified and prioritized and recommendations made to the Town for future sampling efforts. Summarized Phase II requirements and suggested BMPs to insure future compliance.

Engineer, Construction SWPPPs for Sgt. Sullivan, North Riverfront Park, Emerson Wight, Camp STAR, Rebecca Johnson, Marshall Roy, Nathan Bill, and DeBerry Parks, Springfield, Massachusetts. Developed Construction SWPPPs for municipal parks projects within the City of Springfield. Consulted on stormwater aspects of plans for parks.

ENVIRONMENTAL PLANNING DOCUMENT PREPARATION / PERMITTING / GRANTS

Project Manager, Watersheds Pond Federal Lands to Parks (FLP) Stewardship Report, Springfield, Massachusetts. Developed FLP Stewardship Report for continued

Education

B.S., Civil Engineering, Lafayette College
M.S., Environmental Engineering,
University of Massachusetts- Amherst

Licenses & Registrations

2007, Professional Engineer,
Connecticut, # PEN.0025483
2010, Professional Engineer,
Massachusetts, #48584
2011, LEED® Green Associate,
#10677898
2013, Certified Professional in
Stormwater Quality (CPSWQ®), #0939
2018, Certified MVP Provider, MA

Areas of Specialization

- Environmental Permitting
- Stormwater Services
- Water Resources Services
- Hazard Vulnerability and Resilience



Jennifer R. Mackey Burke, P.E., CPSWQ®, LEED Green Associate

Senior Project Manager / Water Resources Engineer

compliance with FLP program for Watershops Pond. Project included review of historical documents, deeds, and mapping, field review for existing conditions documentation, and developing responses to required information to National Park Service.

Project Manager, Springfield Parks 6(f) Conversion Project, Springfield, Massachusetts. Developed public facility and parkland conversion applications and supporting graphics and materials for three parks in City. Developed EA for NEPA compliance for one public facility application process. Coordinated with MA EEA DCS and NPS to facilitate application approval process.

Project Manager, Western Connecticut State University Master Plan EIE, Stormwater Master Plan, and STC Permit, Danbury, Connecticut. Assisted in EIE development, conducted field review of stormwater system and campus layouts, prepared drainage sections for STC permit and managed and prepared Stormwater Master Plan for University and CT DPW use in obtaining Flood Management Certification for Master Planning activities. Worked as part of a multi-disciplinary team to identify existing issues at the campuses and outline potential impacts of proposed future Master Plan development. Stormwater Master Plan required compiling historic drainage plans, conducting field review to observe system, and preparing hydrologic watershed level modeling for two campuses, looking at past, present, and proposed future conditions to present need for detention and stormwater treatment as part of future development.

LAKE AND POND WORK / WATERSHED INVESTIGATIONS

Project Manager, City Hall Ponds Dredging and Restoration, Newton, Massachusetts. Developed construction plans and specifications and secured permits for a dredging/restoration project at City Hall Ponds. Project is a three-lobed impoundment on City Hall grounds which was originally designed by the Olmsted Brothers in the 1930s. Project permitting included Notice of Intent preparation for local Conservation Commission and MA DEP, 401 Water Quality Certification for MA DEP, Section 404 permit application for Army Corps of Engineers, submission of a Project Notification Form to MHC as the site is National Register Listed.

Project Manager, Fulton Park Ponds Dredging Feasibility and Watershed Study, Waterbury, Connecticut. Developed sediment and nutrient loading calculations, conducted field review of the watershed and contributing pollutant/sediment sources, and interviewed City personnel relative to winter sanding practices in support of a watershed study and proposed dredging project. Prepared a dredging feasibility report with concept level dredging and park restoration plans and developed conceptual level structural best management practices to retrofit stormwater systems in problem areas and reduce sediment inputs to the Fulton Park Ponds system.

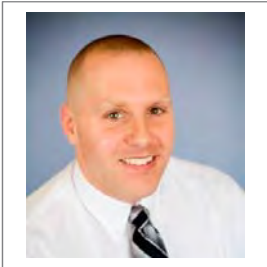
SITE CIVIL ENGINEERING / STORMWATER RELATED SERVICES / WATER QUALITY STUDIES

Project Manager, Dickinson Street and Tiffany Street Washout Investigations, Springfield, Massachusetts. Conducted field investigation of two roadway stream crossing sites to determine cause of flooding and washouts in the area. Project included hydrologic and hydraulic drainage system modeling, camera investigation of drainage system pipes and structures, review of historical plans, and recommendations report for City of Springfield including options for remediation and preliminary cost estimates. Project highlights included identification of sewer system cross connection/leak into stormwater system, identification in the field of two failed outfalls which were resulting in system overtopping, and identification of undersized drainage systems.

DAMS / FLOOD CONTROL AND MITIGATION / HAZARDS REVIEW AND RESILIENCE

Project Engineer, Milford Multi-Hazard Mitigation Plan Update, Milford, Massachusetts. Ms. Burke supported this project to develop an update to the Town's Multi-Hazard Mitigation Plan that included an updated assessment of hazard risk and risk mitigation strategies. The completed plan will be consistent with the Federal Emergency Management Agency's 44 Code of Federal Regulations (CFR) Part 201.6 and the Commonwealth of Massachusetts' mitigation priorities. Ms. Burke provided graphical and mapping support and assisted with plan development.

Project Engineer, FEMA Pre-Disaster Mitigation (PDM) Grant Applications, Multiple Projects, Springfield, Massachusetts. Prepared four PDM Grant Applications for projects within the City of Springfield, provided information used for Benefit-Cost Analysis. Projects included culvert improvement projects, a dam improvement project, and a slope stability related project.



Steven T. D'Ambrosio, P.E.

Project Manager

Summary of Experience

Mr. D'Ambrosio is a project manager and site civil professional engineer with over 18 years of experience. His responsibilities included overseeing the technical and financial operation of various projects for which he is assigned to manage, as well as providing technical support to projects under the supervision of others. His project record includes site design and permitting for development of both residential and commercial properties, sanitary sewer system design, hydrologic and hydraulic modeling, stormwater system design, utility coordination, roadway layout and design, and the design and permitting for freshwater dredging. Mr. D'Ambrosio is also a key contributor to GZA's in-house planimetric and topographic survey efforts including site surveys, wetland delineation surveys, and lake and pond bathymetric surveys using both Total Station electronic survey equipment and Global Positioning System (GPS) equipment.

Relevant Project Experience

Project Engineer, Johnson Memorial Hospital Subsurface Sewage Disposal System, Stafford Springs, Connecticut. Prepared construction plans and specifications for a 50,000 gallon/day pressure-dosed subsurface sewage disposal system (SSDS) servicing a 92-bed hospital and 180-bed assisted living facility. The SSDS is comprised of two duplex pump stations, multiple actuated valve chambers, a 5,000-gallon screening tank, a 15,000-gallon septic tank, and 11,880 linear feet of leaching trench. The stepped leaching trenches span approximately 4.2-acres of an existing hillside and are installed in imported fill to maintain separation from mounded groundwater. Obtained permits for system construction from CTDEEP and participated in multiple site visits during construction as the engineer-of-record to observe contractor's work. The SSDS is scheduled to be fully permitted and operational in October of 2018.

Project Manager, North Riverfront Park, Springfield, Massachusetts. Prepared construction plans and specifications for the decommissioning and replacement of a failing septic system at the City-owned North Riverfront Park along the banks of the Connecticut River. Design included installation of a new low-pressure sanitary pump station, flushing manhole, and two separate low-pressure service lines connected to an existing gravity sewer manhole.

Project Engineer, Porter Lake Skate House, Springfield, Massachusetts. Provided engineering design for a sanitary sewer duplex grinder pump station as part of the rehabilitation and expansion of the "ECOS" (Environmental Center for Our Schools) day camp facility in Springfield's Forest Park.

Project Engineer, Camp STAR Angelina, Springfield, Massachusetts. Provided engineering design for a sanitary sewer duplex grinder pump station as part of the rehabilitation and expansion of the former "Camp SECO" in Springfield's Forest Park.

Project Manager, Bella Vista Estates, East Longmeadow, Massachusetts. Provided site design and permitting services for a 30-lot residential subdivision on a 44-acre parcel. Site design included 3,700 LF of roadway, with associated sanitary sewer, water, gas, telecommunication, and stormwater management system, complete with

Education

B.S., 2000, Civil and Environmental Engineering, University of Massachusetts-Amherst

Licenses & Registrations

2007, Professional Engineer, Massachusetts, #46916
2010, Professional Engineer, Connecticut, #27641

Areas of Specialization

- Land Development / Site Design
- Hydrologic / Hydraulic Modeling
- Water Resources Engineering
- Freshwater Dredging
- Stormwater Management
- Sanitary Sewer System Design
- Peer Review Services
- Construction Observation
- Planimetric & Bathymetric Survey



Steven T. D'Ambrosio, P.E.

Project Manager

3,800 LF of new drainpipe, four (4) detention basins, and multiple underground infiltration systems. The project was approved by both the local Planning Board and Conservation Commission, and successfully met the requirements of the MassDEP Stormwater Management Standards.

Project Engineer, 990 Housatonic Avenue, Bridgeport, Connecticut. Provided site design and permitting services for a 19,500 SF Vehicle Maintenance Facility for the City of Bridgeport. Worked alongside a team of surveyors, MEPs, structural engineers, and building architects to provide the City with a comprehensive set of Contract Plans and Specifications. Project tasks included layout of building and facility parking, design of vehicular flow through the site, site grading, stormwater management, utility coordination, sediment and erosion control, and landscape architecture.

Project Engineer, New Elias Brookings School, Springfield, Massachusetts. Designed the stormwater management system for a new 38,000 SF school building on 3.9 acres of land. Design included approximately 1,230 LF of new drain pipe, twenty inlets, two underground detention facilities, and a rain garden. The proposed stormwater management system connects to the City's aging existing infrastructure and had to mitigate both peak flow rates and peak volume to below existing conditions.

Project Manager, 118-122 Elm Street, Enfield, Connecticut. Provided site design and permitting services for a 7,750 SF retail building on a 0.89-acre parcel. Project tasks included layout of building and facility parking, site grading, stormwater management, utility coordination, sediment and erosion control, and landscape architecture. The project included a high-level stormwater overflow connection to a CTDOT-owned stormdrain. Permits were successfully obtained from the local Planning & Zoning Commission and CTDOT, and the project was constructed in December 2014.

Project Manager, Old Farm Road Subdivision, Ludlow, Massachusetts. Provided civil site design services for a 15-lot residential subdivision on 21-acres. Tasks included the design and layout of a 1000 LF roadway, complete with stormwater management design and fire protection cistern. The stormwater management design incorporated 1,150 LF of new drainpipe and one detention basin and was in full compliance with the MassDEP Stormwater Policy.

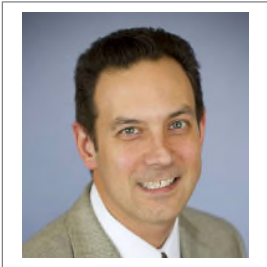
Project Manager, Southview Estates, Ludlow, Massachusetts. Mr. D'Ambrosio provided civil site design services for a 168-unit condominium project on an 81-acre parcel of undeveloped land. GZA's design included the layout of approximately 7,500 LF of roadway, with sanitary sewer, public water distribution, 7,000 LF of new drainpipe and four detention basins. GZA was successful in acquiring local approval of the project, which is currently starting its second phase of construction.

Project Manager, MicroTest, Agawam, Massachusetts. Provided civil site design services for a 15,000 SF expansion to an existing manufacturing facility. Responsibilities included site grading and utility layout, a redesign of the existing parking lot, the layout and circulation of a new 32 space parking lot, utility connection, and stormwater management design in full compliance with the MassDEP Stormwater Management Policy.

Project Engineer, The Gardens of Wilbraham, Wilbraham, Massachusetts. Mr. D'Ambrosio designed the stormwater management system, in full compliance with the MassDEP Stormwater Management Policy, for a 204-unit active adult community in Wilbraham, MA. The system components included over 7,000 linear feet of stormdrain pipe and four stormwater management basins.

Project Engineer, Hadley Corner Retail Center, Hadley, Massachusetts. Performed the hydraulic and hydrologic analysis of the proposed stormwater management system for a 325,000 SF retail development complex. Adjusted the stormwater management design, which included over 3,000 LF of drainpipe and two detention basins, as needed to comply with the MassDEP Stormwater Management Policy.

Project Manager, 971 East Columbus Avenue, Springfield, Massachusetts. Provided site design and permitting services for the redevelopment of an 8,000 SF business zoned property in downtown Springfield. Site design included grading, parking lot layout, and utility connection.



Guy P. Dalton, P.E., LSP, LEP

Associate Principal / Office Manager

Summary of Experience

Mr. Dalton is an Associate Principal with over 28 years of experience on environmental site investigations, remedial action and closure projects. His roles in these projects have been in project management, remedial technology review, pilot testing, and selection, permitting, public participation, agency coordination, report writing, technical analysis, safety and cost estimating. He has been involved in numerous large scale RCRA, MA MCP and CT RSR permitting, site investigation, remediation and closure efforts throughout the Northeastern United States, Michigan and Idaho. He also provides environmental support services to construction contractors. His broad knowledge of many technical elements allows him to successfully manage large-scale interdisciplinary and complex projects that are required to comply with state and federal environmental requirements, while always keeping in mind the client's goals and objectives. He has functioned as GZA's Springfield, MA office Environmental Health and Safety (EH&S) Coordinator and is currently the GZA Springfield Office Manager.

Relevant Project Experience

Senior Project Manager, Michelin N.A., Inc., Site Investigation, Remediation, Closure & Redevelopment, Former Uniroyal Tire Factory, Chicopee, Massachusetts.

Senior Project Manager and Site Safety Officer for a project involving the characterization, remediation, and redevelopment of an 18-acre former tire-manufacturing facility Brownfield site. This work required building decommissioning and asbestos abatement (by others), and infrastructure rehabilitation. Mr. Dalton implemented USEPA Toxic Substances Control Act (TSCA) and MassDEP Massachusetts Contingency Plan (MCP) assessment and remediation plans for polychlorinated biphenyl (PCB), petroleum hydrocarbon and metals-impacted soils, sediments, concrete, and drainage system components, and volatile organic compound (VOC)-contaminated groundwater and has worked with site owners and potential developers on plans for the reuse of the property. The project has involved completing three in-situ chemical oxidation (ISCO) groundwater injection efforts to treat free- and dissolved-phase petroleum residuals using RegenOx. It has also involved concrete, asphalt, and soil removal activities; PCB transformer removals; and drainage system sediment removal actions, which included the operations of a permitted, temporary, on-site wastewater treatment system and excavation dewatering and treatment systems. Mr. Dalton acted as Supervisor for numerous permit-required confined space entries performed to characterize drainage system structures and electrical equipment vaults under a USEPA-approved TSCA Cleanup Plan. The project has also included the closure of four deep groundwater production wells, the removal of three underground storage tanks (USTs), the construction of a TSCA cap, and both ecological and human health risk assessments.

Senior Project Manager, Phase I and II Environmental Site Assessments and/or Hazardous Building Materials Surveys, Various Clients and Sites in Massachusetts and Connecticut. Senior Project Manager for Phase I and II ESAs and HBM surveys in MA and CT for DevelopSpringfield, HAP Housing, the City of Springfield, the City of Holyoke, North American Self Storage, Wide World of Indoor Sports, Blackinton

Years at GZA

10

Education

B.S., 1988, Environmental Engineering,
Syracuse University

Licenses & Registrations

1994, Professional Engineer,
Vermont, #018-0006618
2000, Professional Engineer,
New Jersey, #24GE04267400
2007, Underground Storage Tank
Closure and Subsurface Evaluation
License, New Jersey, #454363
2008, e-RAILSAFE Badge: e-
VERIFILE.COM, Inc., #653822101477
2009, Licensed Environmental
Professional, Connecticut, #498
2010, Certified USEPA Lead-Based Paint
Renovator
2013, Licensed Site Professional,
Massachusetts, #1450

Areas of Specialization

- MA MCP & CT RSR Compliance
- Environmental Site Assessments (incl. ASTM Phase I & II ESAs)
- Remedial Alternatives Evaluation
- Pilot Test & Remedial Systems Design & Implementation
- Site Remediation & Closure
- Brownfields Assessment, Cleanup & Redevelopment
- Environmental Permitting
- Contractor Support Services



Guy P. Dalton, P.E., LSP, LEP

Associate Principal / Office Manager

Mill/Broder, LLC, New Bedford Airport, Fitchburg Airport, Bowditch & Dewey, LLP, Northeast Realty Leasing & Management Co., Webster Bank, Confidential Capital Advisors, North American Self Storage Group, the United Methodist Church, the CT DCS, and Housing Enterprises, Inc. of Enfield, CT. Phase I ESA's were performed in general accordance with the guidelines described in ASTM Standard Practice E 1527-2013 for Phase I Site Assessments while Phase II ESA's were performed in accordance with CTDEEP RSR and MassDEP MCP guidance and regulations.

Senior Project Manager, Dolben Company, Inc., Site Assessment, Remediation and Closure, Springfield, Massachusetts.

Senior Project Manager for a project involving the notification to MassDEP and subsequent assessment and MCP response actions related to three releases to indoor air, groundwater and soil at this residential apartment complex facility. In addition to soil and groundwater assessment, risk characterization and the preparation of an MCP Downgradient Property Status (DPS) Submittal and a Permanent Solution Statement for the groundwater and soil releases, this project also involved the assessment of indoor air via a vapor intrusion assessment that included the assessment of indoor and sub-slab air and the preparation and implementation of an MCP Immediate Response Action (IRA) Plan to address an MCP Condition of Substantial Release Migration (SRM) into residential indoor air. This involved the piloting, design, installation and O&M of a sub-slab depressurization system (SSDS) to reduce indoor air concentrations of chlorinated solvents (primarily perchloroethylene, PCE or "perc") and the preparation and submittal to MassDEP of IRA Status and Remedial Monitoring Reports.

Senior Project Manager, Eversource Energy, Former MGP Site Assessment and Remediation, Framingham, Massachusetts.

Senior Project Manager for a project involving on-going assessment and remediation of this former MGP site, including groundwater and surface water monitoring, test pit investigations of an abandoned former Open Tar Well, capping of areas with tar seeps in an active trucking company yard, and preparation of an MCP Phase II Scope of Work for review/approval by MassDEP that included both on-site and off-site investigations of soils, groundwater, surface waters and wetland soils and sediments. The project also involved the preparation of presentations and cost estimates for the Phase II activities and potential remedial options for the Client.

Senior Project Manager, PCC Airframe Products, Groundwater Monitoring, Remedial System O&M and MCP Reporting, Holden, Massachusetts. Senior Project Manager for a project involving on-going groundwater monitoring of three release areas, monitoring and O&M of a free product (cutting oil) recovery system, and preparation and submittal of semi-annual MCP monitoring and status reports.

Senior Project Manager, Mass MOCA, Various MCP Support Services, North Adams, Massachusetts. Senior Project Manager for projects involving various MCP response actions including the preparation and implementation of Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) in areas of the Site covered by an AUL for various facility improvements. The projects also included the preparation and submittal to MassDEP of an AUL Amendment to remove worker limitations for the basements of two Site buildings, based on improvements made to those buildings and observed by GZA, which saved our client significant costs by not having to hire OSHA Hazwoper trained workers for subsequent construction activities in those areas.

Senior Project Manager, National Grid, Former Electrical Substation and Maintenance Facility Assessment and Closure, Fall River, Massachusetts. Senior Project Manager for a project involving groundwater and soil assessment activities, the preparation and implementation of a Release Abatement Measures (RAM) Plan for the removal of mercury-impacted soil and capping of PCB-impacted asphalt and soil, and the preparation and submittal to MassDEP of a Permanent Solution Statement and Activity and Use Limitation (AUL) to close out the Site under the MCP.

Senior Project Manager, DevelopSpringfield, UST Removal Projects, Springfield, Massachusetts. Senior Project Manager for two projects involving the removal oversight, monitoring and subsequent impacted soil removal for two underground storage tanks (USTs) from a former automobile service station and a former residential property. One project required notification to MassDEP of a reportable release and the subsequent implementation of a RAM Plan to address the remediation of fuel oil impacted soils.

Stephen R. Ulman, PE, PTOE

Senior Traffic Engineer

Steve Ulman has a unique blend of traffic signal system hardware and intersection design experience. Prior to joining Alfred Benesch & Company (Benesch), he served as a signal systems engineer with Automatic Signal Division, a Mark IV Company. Steve has utilized his computer expertise to write several custom programs for traffic engineering applications. He has also assisted in the customization of Benesch's AUTOCAD environment for use in roadway and traffic design.

During his tenure with Automatic Signal—a leading manufacturer of traffic signal controllers—Steve designed intersection control systems, controller cabinets, and special sequence logic and system integration strategies. He assisted customers throughout the country in meeting sequencing and systems coordination needs and in interfacing Automatic Signal equipment with computerized signal systems. Steve also participated in the research and development of the company's plans and specifications to develop computerized signal systems.

Steve Ulman has served in Project Management and Project Engineering roles for traffic capacity and parking analyses, evaluation of existing signal equipment, and design of traffic signal and geometric improvements at intersections throughout Connecticut and Massachusetts. He has experience using signal system analysis programs and has analyzed numerous signal systems—existing and proposed—in conjunction with various projects.

Development/Facilities/Parking Projects

Tanger Outlet at Foxwoods – Mashantucket, CT

Senior Traffic Engineer: Steve provided traffic engineering services for this 360,000 SF retail development. Benesch met the client's aggressive design schedule by providing feasibility services for building location and access, along with survey and highway/roadway design. Site design included storm drainage design/analysis; sanitary sewer, water and electric/communication services; utility relocation featured designs, which made provisions for continuous operations of existing facilities. Benesch coordinated with Connecticut Light & Power (CL&P) and the Mashantucket Pequot Tribal Nation (MPTN) for relocation of two main electrical feeds to the casinos. Water, gas, and sewers were also relocated as part of the project. Wetland and Natural Resources, along with Land Use permits, were secured with MPTN. Benesch also provided construction administration services for the project. Winner of 2016 Connecticut Society of Civil Engineers Planning ACE Award and Connecticut Building Congress Project Team Award.

The Haven Waterfront Development – West Haven, CT

Senior Traffic Engineer for this up-scale shopping center, which includes 65 stores and six (6) restaurants in the first phase. The project is located along Long Island Sound just south of New Haven. Steve conducted traffic impact analyses for 12 intersections surrounding the site to facilitate a review of the development by the Town and CTDOT's Office of State Traffic Administration (OSTA). Designs will include surface parking, as well as parking below the building. The building is required to be elevated due to the floodplain, making additional garage parking feasible. The design will include improvements to Elm Street (Route 122) to support the development, including the intersection of the new site drive and First Street.

Highways & Roadways

Allen Street/Bicentennial Highway Roadway Circulation Improvements – Springfield, MA

Senior Traffic Engineer: Benesch prepared planning and design documents for roadway and circulation improvements to the Allen Street and Bicentennial Highway Corridor. Steve provided client coordination and participated in stakeholder meetings for the project. He also analyzed existing traffic movements and volumes along the 3,000 foot project corridor.

Education

BEEE – Manhattan College

Years of Experience: 42

Registrations and Certifications

Professional Engineer: CT
(#0018591), MA (#48468)

Professional Traffic Operations
Engineer (PTOE) Certificate No:
2699

Stephen R. Ulman, PE, PTOE

Senior Traffic Engineer

(cont.)

The planning phase also included surveys, significant data gathering, an inland wetlands review, and conceptual design to determine project scope, impacts, traffic volumes and analyze existing traffic movements. Services were performed under Benesch's On-Call contract with the City.

Professional Affiliations

Institute of Transportation Engineers

Central Street Corridor Improvements – Springfield, MA

Senior Traffic Engineer for this gateway roadway reconstruction and realignment project located in an urban neighborhood. Steve conducted a Traffic Study, provided traffic engineering services, and prepared construction cost estimates for the project. He designed two (2) signalized and eight (8) stop-controlled intersections. The project also includes the conversion of Hickory Street from one-way westbound to a two-way roadway and the conversion of Rifle Street between Central Street and Allen Street from a two-way roadway to a one-way roadway southbound.

CTDOT Reconstruction of Route 195 – Merrow Road – Tolland, CT

Senior Traffic Engineer: Benesch designed a new, 28-foot span bridge, which carries a widened roadway over the Skungamaug River and corrects hydraulic inadequacies which were present in the old structure. The project also included designs for additional travel lanes along the north- and south-bound sides of Route 195 and the addition of a right-turn lane at the intersection of Route 195 and the eastbound off ramp of I-84. Three new traffic signals, pavement markings and signing were installed to improve safety, along with 1,000 LF of new sidewalk. Steve provided traffic design services for the addition of a right-turn lane at the intersection of Route 195 and the eastbound ramp of I-84; and three (3) new traffic signals. He also prepared construction cost estimates and provided design services during construction. Services were performed in accordance with CTDOT Design and Manual Standards.

Edison Road Extension – Orange, CT

Senior Traffic Engineer: Benesch provided design and construction inspection services for this 2,300 foot roadway extension project. Designs included widening at the Marsh Hill Road end to accommodate left- and right-turn lanes, and the relocation of the driveway from the former Bindley-Western property from Marsh Hill Road to the extension. The new, two-lane roadway is 40 feet wide with a 10-foot shelf on each side. A new storm drainage system, sanitary sewer, and water service was installed within the right-of way. Survey, local and state environmental permitting, public involvement and construction inspection services were also provided. Steve provided traffic engineering and design services during construction and prepared construction cost estimates for the project.

Elm Street Elm Street/Kings Highway Intersection Improvements – West Springfield, MA

Senior Traffic Engineer: Steve prepared Construction Documents for the reconstruction of the intersection of Elm Street and Kings Highway. The project included the horizontal and vertical realignment of the intersecting roadways, traffic signal installation, as well as curb, sidewalk and storm drainage improvements. The Massachusetts Highway Department oversaw the project. Services were provided under Benesch's On-Call Contract with the Town.

Elm Street Pedestrian & Parking Improvements – West Springfield, MA

Senior Traffic Engineer: Steve developed numerous alternatives to improve safety and traffic flow through this vibrant business district. Alternatives focused on sidewalk materials, traffic calming devices, landscaping, lighting, new sidewalk locations, and roadway striping. A presentation outlining the alternatives was made to the Town's Traffic Safety Commission and area business owners. Services were provided under Benesch's On-Call Contract with the Town.

Stephen R. Ulman, PE, PTOE

Senior Traffic Engineer

(cont.)

Fairfield Hills Streetscape Improvements – Newtown, CT

Senior Traffic Engineer: Steve is providing traffic engineering services associated with the design of streetscape improvements at the Fairfield Hills Municipal Complex. The STEAP Streetscape grant-funded project marks the Town's first forays into the implementation of the Municipal Complex's Campus Master Plan. The scope of work includes survey, layout and grading, reconfiguration of two intersections, lighting, new plantings, sidewalks, and construction services.

Newtown Pedestrian Improvements Project – Newtown, CT

Senior Traffic Engineer for this Connecticut Department of Transportation (CTDOT) funded pedestrian improvement project. The Scope of Work includes survey, site/civil and traffic engineering, environmental documentation, public involvement and construction inspection services.

Main Street Reconstruction & Streetscape Improvements - Springfield, MA

Senior Traffic Engineer: Benesch prepared designs for the reconstruction of 4,500 feet of roadway, sidewalk replacement, new street lighting, new traffic signals, and new pedestrian crosswalks from Gridiron Street south to Bliss Street in Springfield's downtown area. Steve designed intersection improvements at five (5) locations as part of this assignment. ADA/AAB Compliant Curb ramps and sidewalks with brick accent bands are featured in the design. Services were provided under Benesch's On-Call Contract with the City.

Route 2 Roadway & Corridor Improvements – Mashantucket, CT

Senior Traffic Engineer: Benesch prepared designs for the widening, relocation and reconstruction of Route 2 from just south of Route 214, northward to Route 164, a distance of two (2) miles. Steve conducted a Traffic Simulation Study; secured State Traffic Commission Approval; and provided traffic analysis and design services for geometric improvements and traffic signal upgrades to five (5) intersections, servicing the Foxwoods Casino complex. He also coordinated with the client; prepared construction cost estimates; provided design services during construction; and participated in public hearings and public outreach efforts. The project received Engineering Excellence Awards from the American Council of Engineering Companies (ACEC), the Connecticut Society of Civil Engineers (CSCE), and the Connecticut Building Congress (CBC).

Route 20 & Post Office Park Roadway – Wilbraham, MA

Senior Traffic Engineer: Steve provided roadway and traffic design services for the installation of two (2) new traffic signals and associated roadway improvements at the Intersection of Route 20 and Post Office Park. The signalization and roadway improvements were warranted due to the growth of the commercial park and to provide a relocated and safer entrance to the Spec Pond Recreational area located adjacent to the Post Office Park area.

Route 82 & 85 Spot Safety Improvements – Salem/Montville, CT (OLD Project)

Senior Traffic Engineer: Steve provided traffic engineering services, including three (3) signals and the design of right/left turn lanes for 15 intersections as part of this assignment. The Scope of Work also includes roadway modifications; addition of travel shoulders along each route; environmental permitting; drainage improvements; surveying; preparation of approximately 100 right-of-way maps, and designs for retaining walls and three (3) replacement bridges. Benesch also prepared a Roundabout Study, which was used to address capacity, safety and accident history issues along the corridor.

Professional Affiliations

Institute of Transportation Engineers