

TOWN OF BARRINGTON

Professional Engineering Services
Barrington, NH

February 1, 2021



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** Per the requirements in the request for proposals (RFP), a fee proposal has been provided under separate envelope.*

Section 1





February 1, 2021

Town of Barrington
333 Calef Highway
Barrington, NH 03825
Attn.: Mr. Conner MacIver, Town Administrator

Re: Qualifications for Professional Engineering Services; Barrington, NH

Dear Mr. MacIver,

Milone & MacBroom, Inc. merged with SLR International Corporation (SLR) about a year ago and is now doing business as **SLR**. We are pleased to submit our firm's qualifications to serve as Engineer of Record (EOR) on various Town projects; to assist the Planning Board in review of site and subdivision plans; and to perform general civil engineering services to support Town operations. As a firm of over 200 professionals in the Northeast, we have the expertise and capacity to see a project from preliminary design through construction. We have also served municipal engineer or provided on-call review and engineering services to municipalities throughout New England. We can provide all the anticipated services under this contract in-house, with the exception of surveying services which we will subcontract to Northern Survey and Engineering, who we have a positive history of working with. ***As you know, we are currently providing dam engineering services to the Town for the Richardson Pond Dam.***

We have staff that have the NHDOT Local Project Administration certification. We also have a long-term working relationship with NH DES and have successfully completed a substantial number of environmental assessments, hazardous materials assessments; and dam evaluations and engineering, working closely with NH DES staff.

We are pleased to designate **Michael Zarba, PE** to serve as Project Manager and primary point of contact with the town. Mike is a NH PE, and has over 30 years of experience in civil and municipal engineering in Connecticut, working:

- for a private engineering consultant on roadway and civil/site design as well as municipal site development reviews;
- as a Town Engineer; and
- as a Director of Public Works.

Mike moved to southern Maine and joined SLR in 2019 and serves as our Manager of Municipal Engineering Services for New Hampshire and Maine. ***Mike's unique background in private sector engineering and design, and municipal engineering oversight and design reviews will provide the Town***

with a high level of expertise, experience, and efficiency. Mike will be supported by a wide range of technical staff, primarily from our Bedford, New Hampshire and Portland, Maine offices, to address all review and engineering services that may be required under this contract.

SLR will provide the full range of services to the Planning Board for site plan reviews, including compliance with land use and zoning requirements, as well as compliance and adequacy of:

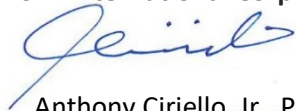
- drainage design, water supply, stormwater management, storm sewer, and waste management
- utility design
- soil designation and erosion control
- landscaping
- wetland delineation and permitting/mitigation
- long-term sediment and erosion control
- traffic analysis and roadway design
- driveway design and permitting
- geotechnical review of information related to structures such as bridges, culverts and retaining walls
- Development of engineering cost estimates to establish surety and construction monitoring
- Advise to the Planning Board to establish the construction bond amount
- Independent observation and monitoring of construction activities
- Attendance at town meetings, as required

We also provide the full range of engineering services that may be required by the Town, as presented in Section 2 of the Qualifications Statement.

We look forward to the opportunity to expand our services offered to the Town of Barrington. Our team will treat each of your assignments with the utmost priority and provide high- level cost efficient services. Should you have any questions or require further information, please do not hesitate to contact Mike Zarba at 207-888-0129 and MZarba@mminc.com.

Sincerely,

SLR International Corporation



Anthony Ciriello, Jr., PE, Vice President
Director of Transportation Engineering



Michael F. Zarba, PE
New Hampshire and Maine Municipal Engineering
Manager

Section 2



STATEMENT OF QUALIFICATIONS

FIRM OVERVIEW

SLR International Corporation's local New England offices were previously known as Milone & MacBroom, Inc., a multidisciplinary consulting firm offering services in the fields of master planning, landscape architecture, engineering, landscape architecture, and environmental science. The firm offered these services for over 35 years before becoming part of SLR.

SLR is a UK-based environmental engineering and consulting firm with over 1,500 employees, delivering advice and technical support on a wide range of strategic and project-specific issues to a diverse base of business, regulatory, and government clients. In the United States, SLR International Corporation has over 400 employees located throughout 34 offices. Our team represents a broad and diverse range of technical and environmental capabilities. SLR's professionals offer a blend of experience incorporating engineers, geologists, planners, remediation specialists, regulatory and compliance specialists, and environmental scientists.

Services offered include the following:

Planning Board Services

SLR offers consulting services directly to local communities and their various departments and commissions, as well as state agencies, on an on-call basis. This service has been found to be advantageous to municipalities that do not have full-time professional staff to provide in-house expertise.

The services provided to land use boards include comprehensive planning, review of subdivision and site plan applications, inland wetland evaluations, and assistance with amendments to regulations/zoning. Our municipal engineering services include assistance in inspecting, designing, and managing public works assignments regarding roadways, bridges, sanitary sewers, and/or drainage facilities. We also provide environmental impact assessments and evaluations. We recognize the importance of understanding the synergy between land use, transportation systems, economic development, and the environment.



MMI has the expertise to review applications and associated materials and prepare reports for the Staff Review Committee and/or Planning Board, and/or other appropriate Board or Town staff. Our reviews of applicants' materials will be focused on ensuring conformance with applicable City Ordinances, land use Board procedures, City regulations, State and Federal regulations, as well as best management practices for engineering, design and construction.

Typical services will include:

- Field inspections of proposed site
- Review of soils information
- Storm water drainage review
- Roadway design review
- Utility layout and design review
- Landscaping review
- Traffic and parking study review
- State and federal permitting
- Land use planning and zoning reviews
- Review of architectural elevations
- Construction inspection and administration

Civil Engineering

Our project team includes civil engineers with an array of backgrounds that include roadway design, stream restoration, flood control, dam safety, site design, bridge, culvert, structural engineering and construction administration. We have also performed subdivision and site plan reviews for municipalities throughout New England. Among our civil engineers are LEED accredited professionals, CPSWQs, and low impact development (LID) specialists. We strive to maintain the most up-to-date knowledge of advanced design processes and to minimize environmental impact in all of our work.

Road Design

SLR has developed an extensive portfolio of road, bridge, and infrastructure improvement projects for municipalities, state agencies, and private developers. With a "Complete Streets" approach, our in-house staff can handle all aspects of transportation improvements, including planning, permitting, conceptual design, environmental assessment, pavement and drainage evaluation, safety considerations, and construction management services. Many of the projects undertaken by the firm have received construction funding from State Departments of Transportation administered programs using FHWA or FTA funding.

Traffic Engineering & Signal Design

Our traffic engineers design pre-timed and actuated traffic signals for installation at isolated intersection control or closed-loop traffic signal systems. These designs have included emergency vehicle and railroad preemption and integration into existing signal systems. Additionally, our staff conducts peer reviews, prepares design standards for communities to reduce the number of driveway openings along major arterial roadways, as well as prepares traffic impact studies to determine what improvements, if any, are required to mitigate the impact of additional traffic on a roadway network system. Our studies have recommended improvements as small as the creation of a left turn bypass lane to the addition of turning lanes and traffic signalization at major intersections.

Transportation Planning

The ability to move - by car, bus, train, plane, bicycle, or on foot - is critical to the functioning of modern society. Whether overcoming traffic congestion in an urban corridor, designing new roadways or bridges, or evaluating roadway safety on rural highways our transportation planners and traffic engineers work together with our clients and the community to develop plans that meet the needs of the traveling public. In all of our efforts, we believe that respect for our communities, our clients, and our employees is a critical component to what we do. To that end, we work with our clients to achieve sustainable designs that meet the needs of the public for both current and potential future conditions. We are proud to be part of the future advancements of the communities in which we live and work. Past projects have included town-wide master planning, TOD studies, multimodal studies, corridor studies, parking studies, neighborhood revitalization studies, traffic and pedestrian circulation improvement studies, parking studies, safety analyses, traffic demand management planning, and bicycle studies.

SLR has developed an extensive portfolio of highway, bridge, and infrastructure improvement projects for municipalities, state agencies, and private developers. With a "Complete Streets" approach, our in-house staff can handle all aspects of a transportation improvements system, including planning, permitting, conceptual design, environmental assessment, pavement and drainage evaluation, safety concerns, and construction management services. Many of the projects undertaken by the firm have received construction funding from State Departments of Transportation administered programs using FHWA or FTA funding.

Streambank Stabilization & Natural Stream Channel Design Guidelines/Fluvial Geomorphology

SLR researched and drafted a white paper and guidelines document on Streambank Stabilization and Natural Stream Channel Design Guidelines for the New Hampshire Department of Environmental Services and Department of Transportation (Schiff et al., 2007). The white paper covers the basic theory of fluvial geomorphology and river restoration that is often drawn upon for applied projects.

The guidelines document not only introduces all of the necessary tools for design of naturalized channel and bank stabilization projects, but also presents a project classification system to help select the appropriate design tools. With the many methods available to the practitioner, the project classification system helps structure project design.

Bridge Design & Inspection

The project team consists of structural, transportation, and civil engineers with extensive experience in bridge evaluation and inspection and in the design of bridge replacement/rehabilitation projects.

Permitting

The firm has prepared environmental permit applications and associated documentation and analysis on a wide variety of projects. Project team members are well-versed in regulatory requirements and state and federal policies regarding environmental resources, wetlands, and floodplain management. We are experienced with the requirements of the National Environmental Policy Act (NEPA), having conducted environmental assessments and impact evaluations on a variety of project types throughout New England, including projects funded by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), U.S. Fish & Wildlife Service, and the Environmental Protection Agency.

Landscape Architecture

The landscape architects at SLR apply artistic principles and technical design standards in order to enhance the built environment and preserve the natural landscape. Our staff provides site planning, predesign programming, creative design concepts with innovative solutions, and construction administration for a variety of landscape architectural projects.



Our professional relationships are built and maintained by involving senior personnel in all aspects of a project. As landscape architects, it is essential that we participate in a collaborative design process from early in the program development and site planning phases through design, permitting, and implementation. We believe participation by all stakeholders throughout the design process results in truly meaningful spaces. Our design philosophy is to create the most elegant, simple, and buildable design solutions that respond to the issues of each site and respect the unique needs of our clients. The depth and capabilities of our highly experienced staff allow the firm to undertake a full range of projects.

Streetscapes & Community Revitalizations

SLR provides the planning, design, and construction support services for downtown revitalizations and sidewalk and streetscape improvements. These projects range from historic town centers that want to strengthen the visual character of their community, urban neighborhoods looking to physically revitalize the area, and industrial communities looking to provide an economic stimulus to the surrounding area.

Community Planning

We offer a wide range of comprehensive community planning services. The firm has been engaged in municipal planning services for over twenty years. From a large in-house planning library to on-line computer connections to the Claritas demographic and business files, the American Planning Association's Planning Advisory Service and the Urban Land Institute for information searches, SLR can immediately access the most up-to-date information. The firm has conducted numerous school redistricting studies, a niche service we offer.



Sustainable Communities Livability Principles

The SLR project team has had extensive experience in assisting municipalities to develop sustainable strategies to enhance the quality of life, particularly in village and downtown environments. Since the early 1990's, SLR has been at the forefront of assisting communities in developing improved streetscapes and accessible means of transportation, including multimodal systems, urban greenways, multiuse trails and rail-trail conversions and, most recently, the planning for transit-oriented development. With our ability to

understand the communities we serve, the SLR project team has assisted our public clients to recognize their inherent characteristics that form the basis for investing in healthy, safe, and walkable neighborhoods: rural, urban, or suburban. We have always put an emphasis on aiding communities in promoting the historical and cultural attributes that make them unique.

Land Use Planning

SLR has considerable experience in land use analysis and creating regulations. We create user-friendly, state-of-the-art regulations, ordinances, and guidance documents. Many of our municipal and regional planning, watershed management planning, and hazard mitigation planning assignments have included a land use inventory component. Our staff is highly skilled in conducting land use inventories through both traditional field reconnaissance and through the utilization of GIS software and databases. Identifying, mapping, and analyzing land use patterns in communities are core functions of the firm.

GIS Mapping

The firm's in-house GIS capability further enhances its data display and analytic capacities.

Stormwater Management

SLR has been a long-term advocate of watershed planning, integrating the management of stormwater quantity and quality with land use development and redevelopment. The firm has designed many stormwater management, water quality control, and drainage projects including open channels, culverts, bridges, dams, detention basins, sediment basins, storm drains, erosion control programs, and created or restored wetlands. We have also completed stormwater management studies for entire municipalities and watersheds. These studies have been used as a framework for developing stormwater regulations and best management practices, taking into consideration the needs of the individual community and watershed.

Wetland Delineation

SLR has in-house wetland delineation, and functional assessment, as well as wildlife and upland vegetation survey and analysis capabilities. Our certified wetland scientists and wildlife biologist have performed comprehensive surveys and field investigations on thousands of acres of undeveloped land, including vernal pool assessments, studies of threatened and endangered species, macro benthic analysis, and functions and values evaluations. The project team has in-house wetland functional assessment, and field survey capabilities utilizing a variety of assessment techniques and established protocols including HEP, HGM, WET, and others.

Utility Engineering

At SLR, we work with our utility clients to develop environmentally friendly solutions that allow for delivery of efficient and reliable services for the communities they serve. With continuing changes to our world's climate and energy needs, clean air and preservation of natural resources remain the key measures of success for any utility project. By integrating our civil engineering, utility design and coordination, water resources engineering, environmental science, and infrastructure design services we are able to seamlessly serve clients in the electric generation, natural gas, power and communication industries.

Construction Administration & Inspection

Our construction support services are an invaluable asset to our major design disciplines, providing the expertise of qualified professionals and field technicians in construction administration and inspection. Our

construction phase services include bidding assistance, periodic site observations, resident engineering, project closeout, and review of contract submittals and payment requisitions. Projects include bridges, roadways, dams, park & recreational facilities, parking lots, bikeways, and subdivisions.

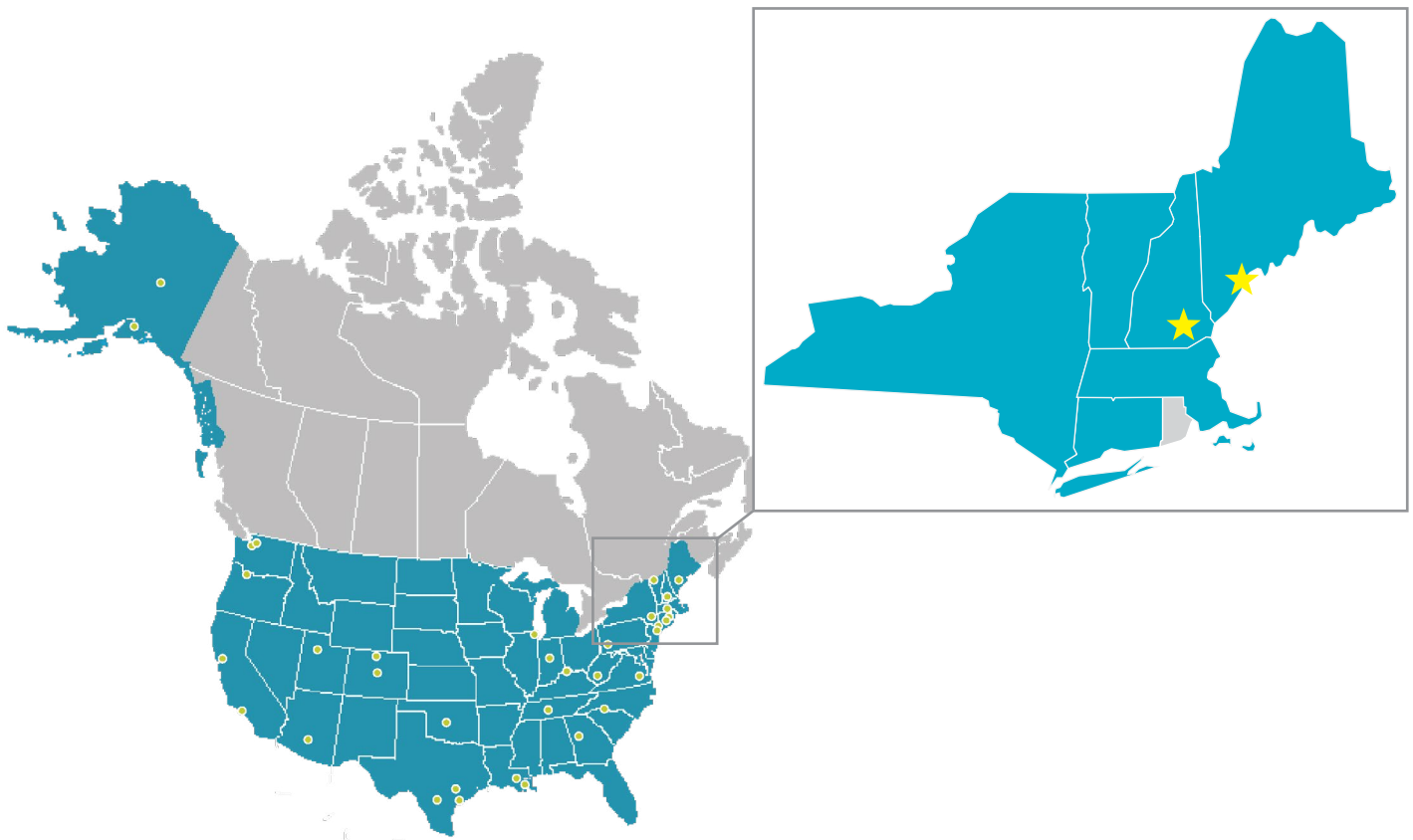
Public Outreach

SLR staff are very experienced in leading successful public participation efforts - from large community charrettes to targeted stakeholder outreach. Our project staff work closely with each client to craft an outreach program that responds to the complexity and the community-specific needs of their projects. We typically employ a combination of outreach methods and track the outcome with the client to ensure that outreach is successful and integrated with the planning process. Our methods combine physical outreach with online/social media to engage the wider community and to provide opportunities for greater transparency, community discussion, and “real-time” information and feedback. SLR is also adept at setting up and conducting user surveys - both in the field (face-to-face) or through digital platforms like Survey Monkey.

Locations

In the United States, SLR has over 400 employees, located in 34 offices. Our team of professionals represents a diverse range of technical and environmental capabilities, including engineers, environmental scientists, geologists, hydrogeologists, and toxicologists.

SLR’s Bedford, NH and Portland, ME offices will provide services for this RFQ.



Subconsultants



Northern Survey Engineering (NORSE) is a full-service boutique surveying firm founded in 2017, dedicated to applying modern solutions to an old profession. Our business model is built around efficiency, responsiveness and mobility, and through that ideology we have developed a unique ability to cover a large service area, effectively reaching the entirety of New England.

They currently have three fully outfitted field crews that are based out of Brunswick, Maine, and mobilize to project locations from Northern Maine to Southern Connecticut daily. Our day-trip area of service is typically in a 3-hour radius, which when centered on our home office in Brunswick extends our coverage across the entirety of Southern Maine and well into Massachusetts, West to beyond the NH border, North to Millinocket and down-east to Mount Desert Island.

Section 3



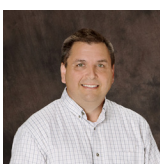
Project Team

The SLR Project Team is shown on the Organization Chart. Key staff designated to our Team are discussed below. Resumes of these key staff follow the Organization Chart.



Anthony Ciriello, Jr., PE, our Infrastructure Sector Lead will serve as Principal-in-Charge for all assignments, overseeing corporate responsibilities and contractual compliance. Tony is a Professional Engineer with more than 25 years of experience in the roadway and civil engineering, including work on the design of improvements to enhance safety and traffic operations for pedestrian and vehicles. He has managed highway design projects throughout New England, many requiring integration of our myriad of niche services and often involving innovative construction practices.

Michael Zarba, PE is a professional engineer with over 30 years of municipal and consultant engineering experience. He has extensive design, management, and administrative work experience in municipal public works and consultant engineering firms. Mr. Zarba has broad knowledge of design, construction, and maintenance of public infrastructure. He has experience specializing in roadway design, municipal site plan revisions, drainage, and building maintenance. Mr. Zarba brings his knowledge of, and experience in, designing, building, and maintaining public works facilities and public infrastructure. He joins our Transportation Engineering Department and maintains a close connection to our Construction Engineering and Inspection team to effectively complete roadway, bridge, utility, and facility type projects.



John Adams, PE, PTOE, will oversee traffic engineering and safety assessments and design tasks. John is a Registered Professional Engineer, and a Professional Traffic Operations Engineer. He also received NHDOT Local Public Agency (LPA) certification. John has over 25 years of experience including roadway and intersection design, traffic signal operations, traffic impact studies. Safety analyses, and transportation planning studies. He is adept at traffic modeling using HCM, Synchro/SimTraffic software. He also has experience in trail design, drainage improvements, and roadway inspection.

Jason Ready, PE, PTOE is a Project Engineer in the firm's Transportation department. He has over 12 years of experience in traffic engineering and municipal planning, including road safety audits, traffic signal management through the creation of new timings and coordination plans using Synchro/SimTraffic, and determination of sign and striping needs for bike and pedestrian traffic. Mr. Ready is proficient in traffic data collection and analysis as well as organization and presentation utilizing GIS. He is also experienced in managing and reviewing transportation planning studies, including complete streets. He would assist in traffic and road infrastructure assignments.



Michael Gagnon, PE, will assist with stormwater, permitting, and cost estimating. Mike is a New Hampshire registered Professional Engineer with over 33 years of experience. Mike has extensive experience on a wide range of projects, including the preparation of feasibility studies, engineering reports, final design, regulatory permitting, and cost estimates. He has been responsible for engineering services associated with many transportation, land

development, and water resource projects throughout New England from inception through construction. He has vast knowledge of local, state, and federal land use and environmental regulations, with several years of project development experience and coordination with local and state agencies, local planning boards, and conservation commissions.

Rebecca Augur, AICP, NCI is an emerging leader in land use and community planning. Ms. Augur offers diverse experience as a consulting, regional, and municipal planner. Her technical skills in zoning regulation development, GIS analysis, and public outreach enhance the capabilities of the firm's Planning Group. She is experienced in a variety of community and school planning projects. Her training and experience, and involvement with the American Planning Association contribute to her deep understanding of the complex demographic, housing, and social factors influencing community plans and decision-making, as well as her ability to facilitate the public planning process.



Charles (Eric) Teale, PE, LSP, LEP has over 33 years of experience in geotechnical and hydrogeological investigations; analysis and design of dewatering methods, building underpinning, pile foundations, dynamic compaction, slope stability, ground stabilization, and braced excavations; construction inspection; laboratory testing; test boring inspection; groundwater modeling; LNAPL and petroleum remediation projects; as well as over 1,500 environmental site assessments (ESAs); and environmental audits. Eric is a licensed engineer in New Hampshire and manages the firm's regional office in Bedford.



Shelley Plude, PE, is a Structural Project Engineer responsible for structural calculations and analysis, preparation of plan sets, existing conditions inspections/reports, structure type study reports and day-to-day project management on a variety of projects including dams, bridges, retaining walls, and roadways. Shelley is a licensed engineer in the state of New Hampshire and has over 8 years of experience. She would assist in the structural analysis of bridges and retaining walls.



Roy Schiff, PE, PhD, will oversee stormwater assessment and management tasks, as well as providing input for the potential application of fluvial geomorphology assessments for sustainable design of highways adjacent to watercourses, and for design of culvert and bridge crossings in flood-prone areas. These assessments are aimed at developing design options for more resilient roadway infrastructure. Roy specializes in river restoration, hydrology and hydraulics, sediment transport analysis, and bridge scour analysis and scour countermeasure evaluation. Roy served as the principal author for: "River Restoration and Fluvial Geomorphology" (2006), and "Guidelines for Naturalized River Channel Design and Bank Stabilization" (2007); both prepared for the New Hampshire Department of Environmental Services and the New Hampshire Department of Transportation. Roy is the principal author of the New Hampshire Guidelines for Naturalized River Channel Design and Bank Stabilization prepared for the NHDES and NHDOT; and was the lead author of the Vermont Standard River Management Principles and Practices, prepared for the Vermont Agency of Natural Resources that established proper river management approaches around roads, bridges, and culverts. Roy offers a unique combination of hydraulics and fluvial geomorphology expertise. Roy served as the Project Manager for the Piscataquog River Watershed Culvert Prioritization Model development for Southern New Hampshire Regional Planning Commission in 2016.

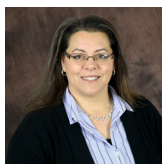


Hannah Ritmiller, EIT is a Project Civil Engineer with experience in the preparation of site plans and AutoCAD drawings for projects in the private and public realm. Based out of the Maine office, she assists with projects throughout New England. Her experience and responsibilities include a broad range of civil engineering project support, from assisting in roadway layout, storm and sanitary sewer design, site grading, and sediment and erosion control measures. She is fluent in the latest Civil 3D and AutoCAD software, and in addition to site civil design, she is typically responsible for the coordination of survey base data and compilation of technical plan sets.



Matthew Sanford, PWS is the firm's US Manager of Ecology with experience in the areas of natural resources and specific expertise in vegetation management, invasive species control, GPS mapping, GIS modeling, biological inventories, water quality monitoring, watershed planning, vernal pool surveys; wetland delineation, assessment, and functions; inland wetland and tidal wetland mitigation; and peer review services.

Carly Picard, CPSI is a Landscape Designer proficient in preparing graphics, 3D models, renderings, and construction documents. She is an accomplished designer who has prepared plans and graphics for a variety of projects across the country including parks, streetscapes, plazas, boardwalks, trails, plantings, pedestrian safety and amenities. She has also developed designs for indoor and semi-tropical landscape designs as well as irrigation designs.

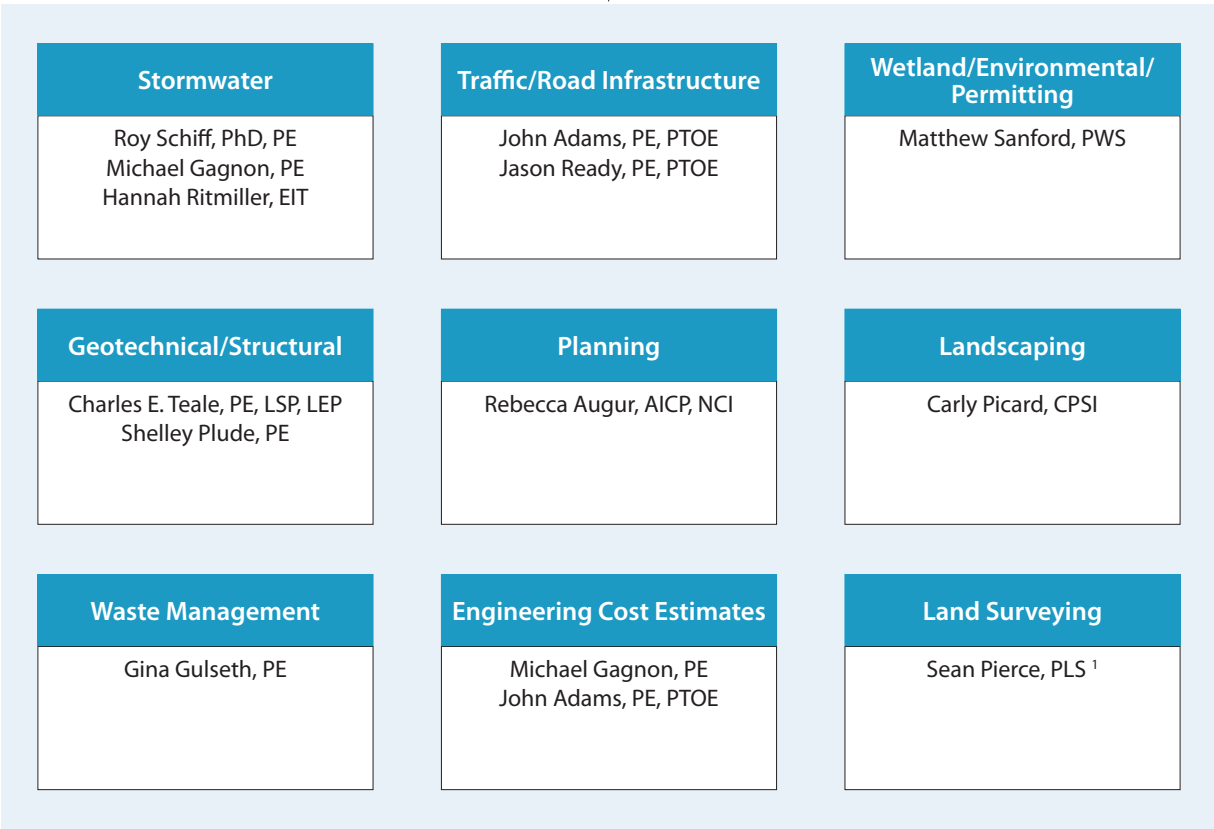


Gina Gulseth, PE has 25 years of experience in engineering and environmental services. Her background consists of project management, environmental field investigations, data analysis, conceptual and engineering design, construction management, and technical evaluations. Ms. Gulseth is knowledgeable of various state regulatory requirements including NHDES, MADEP, MEDEP, VTANR and CTDEP.

Town of Barrington

Principal-In-Charge
Anthony Ciriello, Jr., PE

Project Manager
Michael Zarba, PE



¹ Northern Survey Engineering, LLC

MICHAEL F. ZARBA, PE

Principal Transportation Engineer, Project Manager



YEARS OF EXPERIENCE

- <1 With This Firm
- 30 With Other Firms

EDUCATION

- BS, Civil Engineering
University of Rhode Island

TECHNICAL REGISTRATIONS

- Professional Engineer – ME, NH, CT
- Maine DOT Local Project Administration (LPA) Certification
- Certified CT Tree Warden
- Certified Solid Waste Transfer Station/Volume Reduction Facility Operator - CT

AFFILIATIONS

- American Society of Civil Engineers
- American Public Works Association
- Connecticut Association of Street and Highway Officials
- CT Tree Wardens Association

Mr. Zarba is a professional engineer with over 30 years of municipal and consultant engineering experience. He has extensive design, management, and administrative work experience in municipal public works and consultant engineering firms. Mr. Zarba has broad knowledge of design, construction, and maintenance of public infrastructure. He has experience specializing in roadway design, municipal site plan revisions, drainage, and building maintenance.

Mr. Zarba brings his knowledge of, and experience in, designing, building, and maintaining public works facilities and public infrastructure. He joins our Transportation Engineering Department and maintains a close connection to our Construction Engineering and Inspection team to effectively complete roadway, bridge, utility, and facility type projects.

SELECTED PROJECT EXPERIENCE

- **Hampton NH On-Call Roadway Engineering & Coastal Engineering Services | Hampton, NH**
Serving as Project Manager for a five-year contract including peer reviews, TOD; streetscape, multimodal and complete streets design; bicycle & pedestrian planDing, parking, traffic analysis and studies, traffic signal operations and design, traffic signal inventory & master planning, signal operations, communications and design; roadway, signs and markings design; and development of contract documents, construction phase services, and assistance with identifying and pursuing State and Federal grants, and utilizing and managing grant funding and processes for design and construction.
- **Westbrook Common Revitalization Project | Westbrook, ME**
Lead Civil Engineer for this project which provided the redesign to revitalize the existing Westbrook Common, public space and park. The goal was to increase the use of this vital public space through a public redesign effort and to encourage use by surrounding retail and restaurant uses and to encourage use as community gathering space for neighborhood and Town events. Mr. Zarba focused on site design including site grading, site utilities, relocation of a water main, interfacing with landscaping elements and coordination with PWD, CMP and other Utilities to provide a biddable set of construction plans and specifications. The project is currently out to bid with construction expected in 2021.
- **Stormwater and Road Improvements Outfall 0007 - Moulton Street | Berwick, ME**
Mr. Zarba is serving as Project Manager for this project which will improve the stormwater management system, while incorporating an aesthetically pleasing



and safe design that will reflect the Town's planned use of the parcel for park and greenspace. Over the past five years, the Town of Berwick has undertaken numerous planning and development initiatives to capitalize on the inherent value of the downtown area's location on the Salmon Falls River. As the Town has sought to reduce pollution impacts to the river through the mandated Municipal Separate Sewer Stormwater Systems (MS4) program, it has also invested in riverfront redevelopment with its' purchase of a 3-acre property for a future public park/natural area. The Moulton Street project encompasses both endeavors as it seeks to upgrade stormwater infrastructure and improve the roadway (Moulton Street) associated with Outfall 007 which discharges onto the Great Falls Park property. The Town is seeking integrated solutions to meet stormwater management objectives within the defined project area while addressing its' benchmarks for Low-Impact Development and green infrastructure. This project will also explore treatment alternatives and opportunities to enhance the outfall as a supportive feature of the park's naturalized setting.

- **Civil Engineering Services/Engineer of Record**

He has been responsible for coordination, design, and supervision of construction for public works projects in the largest area town in the state of CT and the largest road network in the state. Projects included roads, bridges, storm sewers, sidewalks, parking areas, and municipal buildings. His responsibilities comprised being in direct responsible charge for the daily operation and management (planning, coordination and supervision) of the Public Works Department, which encompasses the Highway and Vehicle Maintenance Department, Engineering Department, Facilities Maintenance Department and the Transfer/Recycling Center, for the largest town by land mass (64.5 square miles) in the State of CT. Duties such as management and oversight of all contracts and Grants with state and federal agencies and those associated with federally declared disaster events requiring immediate infrastructure repairs damaged by floods, winds, snow, heavy rains, and other natural disasters also fell under his purview. In addition, he was responsible to prepare, oversee and direct the engineering design and permitting activities for all roadway construction, bridge replacement, facility renovation, dam improvement, and Transfer Station projects.

- **Asset Management for Roads and Facilities**

Mike has implemented, managed and maintained software programs in both Stamford and New Milford to assist in the long term maintenance of both roadway infrastructure, commonly known as Pavement Management Systems (PMS) and Facility (i.e. building) assets. Inventorying, documenting and updating infrastructure conditions is essential in developing a fair and cost effective program to preserve, maintain and improve capital assets within available budgets. He established the use of, populated data for, and routinely used these programs to document and report the on-going maintenance activities and improvements to insure decision makers had the most current and up to date information when making funding decisions.

- **Peer Review for Various Land Use Agencies**

As Director of Public Works and Town Engineer for New Milford, CT for 18+ years Mike served as the Professional Consultant to all the Land Use boards for site plan review and engineering consultation and was a non-voting member of the New Milford Planning Commission. Part of his daily duties were to perform land use review services for the Zoning, Planning and Inland Wetland Commissions and sit on the Towns Development Services Team (DST) to assist developers and engineers navigate the land use permitting process. He reviewed commercial and residential development plans to ensure consistency with town regulations and ordinances and presented detailed written reports and comments to the various Regulatory Commissions. His work would routinely include:

- review of storm water drainage design, including retention and detention basins, for compliance with regulations and proper design storm sizing,
- traffic safety for both on-site activities and for off-site impacts to adjacent streets and intersections,
- ensure proper design and adequate on site utilities (water, sewer, gas, electric, etc) are supplied for the uses proposed
- review of the adequacy and compliance with various zoning regulations, including lot size and frontage, parking layout, impervious coverage allowances, landscaping requirements, lighting design, refuse and recycling issues, loading zone and truck turning requirements, and ADA and accessible route issues.

ANTHONY A. CIRIELLO, JR., PE

Sector Lead, Infrastructure



YEARS OF EXPERIENCE

- 26 With This Firm
- 1 With Other Firms

EDUCATION

- BS, Civil Engineering
University of Connecticut

TECHNICAL REGISTRATIONS

- Professional Engineer - CT
- Maine DOT Local Project
Administration Certification

AFFILIATIONS

- Member, Design-Build Institute of
America (2011)
- Associate Member to the Board of
Directors for Call-Before-You-Dig

Mr. Ciriello is our Infrastructure Sector Lead driving growth within the business while staying connected to clients and projects. He offers a strong background in infrastructure-related projects including highway and bridge construction and rehabilitation, interstate resurfacing and widening projects, traffic engineering, and utility construction projects including coordination, design, and approvals for rail crossings. He oversees the firms' state, municipal, and federally funded transportation design and planning projects in accordance with Federal Highway Administration, State Departments of Transportation, and AASHTO standards. Prior to joining SLR, Mr. Ciriello worked as a construction engineer on heavy highway projects for a substantial contracting firm.

SELECTED PROJECT EXPERIENCE

- **Hampton NH On-Call Roadway Engineering & Coastal Engineering Services | Hampton, NH**
Principal-in-Charge for an On-Call Highway Engineering and Coastal Engineering contract. MMI is currently working on its first assignment which involves a combination of highway, stormwater, and coastal planning and design to complete the Meadow Pond / King's Highway Flood Mitigation Study.
- **Pleasant Pond Road Bridge over Collins Brook | Frankestown, NH**
Principal-in-Charge for the design of a 22-foot wide by seven foot high by 30-foot long bridge. The firm performed all necessary design and load rating calculations for the structure. The design was developed with consideration of foundation design parameters established by the project team's geotechnical engineers. The structure was built with little temporary and permanent impacts to the watercourse.
- **Western Avenue Reconstruction & Signalization (MassDOT Project No. 607773) | Westfield, MA**
Responsible for overseeing this roadway reconstruction and widening project along Western Avenue and approximately 2.7 miles to the Urban Minor Arterial that serves the Westfield State University (WSU) Campus, Stanley Park recreational area, the Highland Elementary School, and residential areas. The project requires careful coordination with the utility companies for relocation of overhead facilities and installation of new water and sewer facilities. The design team also evaluated the undergrounding of overhead utilities within proximity to the university.
- **On-Call Engineering Services | Scarborough, ME**
Principal-in-Charge for on-call engineering services to the Town of Scarborough. Projects under this contract have included Dunstan Corner Intersections, Review of Oak Hill Signalized Intersection, and Traffic Signal Equipment Inventory.



JOHN Q. ADAMS, PE, PTOE, IMSA II

Principal Transportation Engineer



YEARS OF EXPERIENCE

- 9 With This Firm
- 17 With Other Firms

EDUCATION

- BS, Civil Engineering
University of Connecticut

TECHNICAL REGISTRATIONS

- Professional Engineer - ME, CT, NH
(in progress through reciprocity)
- Professional Traffic Operations
Engineer, ITE
- Maine DOT Local Project
Administration (LPA) Certification
- NH DOT Local Project
Administration (LPA) Certification
- IMSA Level 2 Traffic Signal /
Engineering / Construction
Technician

AFFILIATIONS

- Institute of Transportation
Engineers, New England Section
ITE, Board of Directors - Director
- Maine Association of Planners
- Maine Better Transportation
Association

Mr. Adams has over 25 years of engineering experience including roadway and intersection design, traffic signal design and coordination, design of signal system communications architecture, operation of traffic signal systems via signal management software, corridor studies, and traffic impact safety and planning studies. He is also adept at traffic modeling using HCM, Synchro/SimTraffic software. Mr. Adams additionally has experience in trail design, drainage improvements, bridge, roadway and traffic signal inspection.

SELECTED PROJECT EXPERIENCE

- **Hampton NH On-Call Roadway Engineering & Coastal Engineering Services | Hampton, NH**
Serving as Project Manager for a five-year contract including peer reviews, TOD; streetscape, multimodal and complete streets design; bicycle & pedestrian planDing, parking, traffic analysis and studies, traffic signal operations and design, traffic signal inventory & master planning, signal operations, communications and design; roadway, signs and markings design; and development of contract documents, construction phase services, and assistance with identifying and pursuing State and Federal grants, and utilizing and managing grant funding and processes for design and construction.
- **On-Call Municipal Traffic Peer Review**
Mr. Adams has been retained by several Maine communities to assist municipal staff and planning boards in the review of proposed development applications. The traffic peer reviews have ranged from smaller residential and commercial developments to large multi-use retail, residential, and commercial uses. Some of the communities that John has assisted include; Gorham, South Portland, Westbrook, and Turner. He recently assisted the City of Westbrook with the proposed Dirigo Plaza development, an approximately 500,000 square foot mixed-use development, with 40 study intersections in Westbrook and Portland, and several million dollars of proposed off-site improvements to intersections and roadways to mitigate impacts.
- **On-Call Traffic Engineering, Signalization and Analysis | Lewiston/Auburn, ME**
Served as Project Manager and was tasked with the creation of a traffic signal and communications master plan for the ATRC area. The work involved an inventory of the traffic signals, followed by specific recommendations for future upgrades to the signal system, including; signal equipment, detection, ADA, and creation of a redundant regional communications network (with redundant ring structure). MMI, with its project partner IBI group, produced a plan of the future needs for the Lewiston/Auburn traffic signals and the fiber optic network to ensure redundancy of communications.



JASON READY, PE, PTOE, PTP, IMSA II

Associate Transportation Engineer



YEARS OF EXPERIENCE

- 3 With This Firm
- 11 With Other Firms

EDUCATION

- BS, Civil Engineering
University of Maine

TECHNICAL REGISTRATIONS

- Professional Engineer - ME
- Professional Traffic Operations Engineer (PTOE)
- Professional Transportation Planner (PTP)
- Maine DOT Locally Administered Project (LPA) Certification
- NHDOT Local Public Administration (LPA) Certification
- IMSA Level 2 Traffic Signal Technician, 2021
- IMSA Level 2 Traffic Design / Engineering Technician, 2021
- IMSA Level 2 Traffic Signal Construction Technician

AFFILIATIONS

- Institute of Transportation Engineers, Maine Chapter secretary/treasurer/webmaster

Mr. Ready is an Associate Transportation Engineer in the firm's Transportation department, previously working for 11 years at the Androscoggin Transportation Resource Center (ATRC), the Lewiston / Auburn, Maine Municipal Planning Organization (MPO). He has over 13 years of experience in road safety audits, traffic signal management, traffic engineering and municipal planning. Mr. Ready enjoys transportation planning studies with an emphasis on complete streets, alternatives analysis, and the creation of traffic signal coordination plans. Mr. Ready is proficient in traffic data collection and analysis as well as organization and presentation mapping utilizing GIS software.

SELECTED PROJECT EXPERIENCE

- **Moulton Street - Roadway, Sidewalk, and Stormwater System Improvements | Berwick, ME**
Project Manager for this ongoing municipal project which replaces the existing roadway pavement resurfacing, replace and upgrade sidewalks, curbing, and the stormwater management system.
- **PACTS Regional Traffic Management System Operational Maintenance | Portland, ME**
Providing traffic engineering services to PACTS and the City of Portland, including inventorying, traffic modeling, and implementation of traffic signal timing on Commercial Street at the intersections of Center Street and Union Street.
- **Brewer Regional Traffic Management System - Wilson Street | Brewer, ME**
Providing traffic engineering services, including inventorying and traffic modeling, to the City of Brewer in their upgrade of traffic controller hardware and communication systems updates to signal timing on Wilson Street.
- **ATRC Intelligent Transportation System Plan**
Providing traffic engineering services for recommendations to the traffic signals in Lewiston, Auburn, Lisbon, and Sabattus for future implementation of ITS projects.
- **ATRC On-Call Signal Services**
Providing traffic engineering services including data collection and signal system programming and implementation.
- **Washington Avenue Communications & Traffic Signal Improvements | Portland, ME**
Performed inventory of existing signal equipment and communications infrastructure, assisted with design plans and specifications for equipment and communications upgrades for the eight project intersections.



MICHAEL R. GAGNON, PE

Principal Civil Engineer



YEARS OF EXPERIENCE

- 9 With This Firm
- 27 With Other Firms

EDUCATION

- BS, Civil Engineering
Roger Williams University

TECHNICAL REGISTRATIONS

- Professional Engineer - MA, CT, NH
- National Council of Examiners for Engineering and Surveying (NCEES) Certification

AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers Section (BSCES)

Mr. Gagnon brings over 30 years of diverse project experience with the preparation of feasibility studies, engineering reports, construction drawings, regulatory permits, technical specifications, and cost estimates. Mr. Gagnon has been responsible for engineering services associated with many transportation, land development, and water resource projects throughout southern New England from inception through construction. He has expertise in stormwater management design and hydraulic modeling. He has vast knowledge of local, state, and federal land use and environmental regulations, with several years of project development experience and coordination with local and state agencies including MassDOT, MassDEP, CTDEEP, local planning boards, and conservation commissions. Mr. Gagnon has managed many small- to medium-sized projects that include technical and fiscal responsibilities, client communications, supervision of support staff, and coordination with outside consultants.

SELECTED PROJECT EXPERIENCE

- **On-Call Engineering Services | West Springfield, MA**
Project Manager overseeing this on-call contract with the town to provide engineering services. Services include survey, civil, structural, traffic, environmental, water resources engineering, transportation planning, landscape architecture, bid assistance, and construction administration.
- **Massabesic Lake Dam | Manchester, NH**
Prepared a wetland permit application and supporting documentation with the New Hampshire Department of Environmental Services Wetlands Bureau for the rehabilitation of a high-hazard dam owned by the Manchester Water Works. Massabesic Lake provides water supply for the City of Manchester and several surrounding Towns.
- **Chicopee Riverwalk | Chicopee, MA**
Senior Engineer responsible for the preparation of design drawings, environmental permits, and supporting documentation for design review submissions to MassDOT for a 1-mile segment of multiuse trail along the Chicopee River. The proposed trail was designed to generally follow a former rail line with design improvements as required to create a useable trail width while providing stability to the adjacent slopes. The project also included a challenging trail connection to the City Parks Department Facility along a steep embankment that required retaining walls with a switchback alignment in order to achieve ADA access to the project corridor.

REBECCA AUGUR, AICP, NCI

Principal Planner



YEARS OF EXPERIENCE

- 10 With This Firm
- 7 With Other Firms

EDUCATION

- MA, Regional Planning
University of Massachusetts
- BA, International Studies
Marlboro College

TECHNICAL REGISTRATIONS

- Certified Planner, American
Institute of Certified Planners
(AICP), 2007
- National Charrette Institute

AFFILIATIONS

- President, Connecticut Chapter
American Planning Association
(CCAPA)
- Member, Chapter Presidents
Council of the American Planning
Association
- Member, Connecticut Economic
Development Association

Ms. Augur is an emerging leader in land use and community planning. Ms. Augur offers diverse experience as a consulting, regional, and municipal planner. Her technical skills in zoning regulation development, GIS analysis, and public outreach enhance the capabilities of the firm's Planning Group. She is experienced in a variety of community and school planning projects. Her training and experience, and involvement with the American Planning Association contribute to her deep understanding of the complex demographic, housing, and social factors influencing community plans and decision-making, as well as her ability to facilitate the public planning process.

SELECTED PROJECT EXPERIENCE

- **Derby Zoning Revisions | Derby, CT**
Researched, analyzed and drafted planned development district regulations for the City's downtown core to enable a more flexible and streamlined design and permitting process to assist in revitalization.
- **Brookfield Comprehensive Zoning Regulation Revision | Brookfield, CT**
Managed 16-month process to comprehensively revise regulations and permitting processes, including extensive public involvement, technical research and writing. New regulations were adopted in late 2018.
- **West Street Corridor Zoning Analysis | Southington, CT**
Identified development opportunities and constraints, conducted area-specific buildout analyses, and made recommendations regarding regulating access management, rezoning, and design guidelines.
- **Village Center Zoning | Marlborough, CT**
Worked with the Planning, Zoning, and Economic Development Commissions of Marlborough to create a new zoning district and regulations to foster the development of a mixed-use, pedestrian friendly town center. The regulations are a hybrid of form and use based codes that include standards for site design, streets and sidewalks, architecture, and landscaping.
- **Sustainable Communities Challenge Planning Grant Application | Okeechobee County, FL**
Assisted in the preparation of a grant application to the U.S. Departments of Housing and Urban Development and Transportation for planning work associated with a potential large-scale outdoor recreation/commercial development on Lake Okeechobee.

CHARLES E. TEALE, PE, LSP, LEP

Principal Geotechnical Engineer, New Hampshire Office Manager, Geotechnical



YEARS OF EXPERIENCE

- 2 With This Firm
- 32 With Other Firms

EDUCATION

- Degree of Engineer in Civil Engineering
George Washington University
- ME, Civil Engineering
Rensselaer Polytechnic Institute
- BS, Civil Engineering
Clarkson College of Technology

TECHNICAL REGISTRATIONS

- Professional Engineer - CT, MA, ME, NH, VT
- CESSWI Certification
- Licensed Environmental Professional - CT
- Licensed Site Professional - MA

Charles Teale, PE, LSP, LEP has extensive expertise in subsoil investigations and foundation design including field investigations for geotechnical and dam projects which have included slope stability analysis and design, detailed dam investigation studies, vertical and horizontal bearing capacity analysis for both shallow and deep foundation systems, seepage analysis and subdrainage design, implementation of geotechnical problems by solution on computers, soil laboratory testing, testing of soil improvement methods and field inspections and testing. Prepared numerous analyses and designs for new dams and repairs to existing dams.

SELECTED PROJECT EXPERIENCE

- **Richardson Pond Dam Improvements | Barrington, NH**
Serving as Project Manager for geotechnical and dam engineering associated with improvements for the Richardson Pond Dam.
- **Market Basket Store | Manchester, NH**
Mr. Teale performed geotechnical engineering and hydrogeologic services for this new 100,000± square foot supermarket which consisted of numerous test borings and test pits, and soil laboratory testing for design of Rammed Aggregate Pier supported spread footing foundations and Helical Pier supported grade beams and pile caps. Additionally Mr. Teale provided environmental assessment services due to former site use as a railroad depot.
- **Durham Public Library | Durham, NH**
Mr. Teale performed geotechnical engineering design-phase services for this proposed two story, wood framed, slab on grade building with partial basement to be attached to the north side of an existing brick and wood building. Given site conditions, Mr. Teale provided foundation recommendations and subdrainage design including underpinning guidance for the new addition building so as not to adversely affect the adjacent existing structure.
- **River Road Embankment Failure, Connecticut River | Lyme, NH**
Substantial river bank slope failures occurred on April 30 to May 1, 2011 along the west side of River Road where it is adjacent to the Connecticut River. The slope failures occurred in several areas over a 1,000± foot distance for a portion of River Road just south of North Thetford Road. The flood level rose to within a few feet of the road level (the grade of River Road varies from about EL 398± to EL 400±), and that the river level receded relatively quickly. The failure occurred in the interior (and straight) portion of an obtuse bend (southeast, the south, then southwest flow) in the river. Mr. Teale performed geotechnical engineering services for the Town of Lyme and slope stability analyses in order to develop slope reconstruction alternatives. Various slope configurations, armor types and construction details have been provided to the Town for their consideration.



SHELLEY PLUDE, MS, PE

Senior Structural Engineer



YEARS OF EXPERIENCE

- 9 With This Firm

EDUCATION

- MS, Structural Engineering
University of Connecticut
- BS, Civil Engineering
University of Connecticut

TECHNICAL REGISTRATIONS

- Professional Engineer - CT, ME, NH

As a Senior Structural Engineer, Ms. Plude is responsible for structural calculations and analysis, preparation of construction documents, existing conditions inspections/reports, structural type studies, and day-to-day project management on a variety of projects including bridges, retaining walls and bulkheads, pedestrian facilities, and dams and fishways. While completing her master's at the University of Connecticut, she served as a graduate research assistant responsible for conducting research in the field of damage detection as a part of the bridge health monitoring program.

SELECTED PROJECT EXPERIENCE

- **Replacement of Marion Avenue Bridge over Humiston Brook (LOTICIP Project No. L131-0003) | Southington, CT**
Provided project management and structural design services for the replacement of the Marion Avenue Bridge over Humiston Brook. Funded by LOTICIP, the existing steel girder superstructure and stone abutments will be replaced with a 16-foot precast concrete box culvert and precast wingwalls utilizing accelerated bridge construction for a two week road closure.
- **West Main Street Bridge over Moyer Creek | Frankfort, NY**
Structural Engineer for the design of a replacement bridge over Moyer Creek. The current bridge is in poor condition structurally, and is hydraulically undersized. The hydraulic modeling analysis was complicated by the presence of a dam located downstream of the bridge, which had an influence on the hydraulic performance of the proposed replacement bridge. Bridge replacement scenarios were analyzed with and without the removal of the downstream dam.
- **Lamoille Union School District Dam Rehabilitation | Hyde Park, VT**
Provided design and engineering services for the replacement of the Lamoille Union School District Dam. Prepared detailed structural calculations and construction documents for the replacement of the existing spillway at the Lamoille Union High School campus.
- **Lane Street Bridge over Means Brook (CTDOT Project No. 126-171) | Shelton, CT**
Provided structural engineering design for the superstructure components and performed a detailed bridge load rating using AASHTOWare Bridge Rating Software. Other tasks included the development of structural plans and details for this project under the CTDOT Federal Local Bridge Program.



ROY SCHIFF, PhD, PE

Principal Water Resource Engineer & Scientist



YEARS OF EXPERIENCE

- 15 With This Firm
- 2 With Other Firms

EDUCATION

- PhD, Stream Restoration & Aquatic Ecosystems
Yale School of Forestry & Environmental Studies
- MS, Environmental Science & Engineering
University of Washington
- BS, Engineering
University of Rochester

TECHNICAL REGISTRATIONS

- Professional Engineer - VT
- Certified Soil Evaluator University of Massachusetts

AFFILIATIONS

- American Rivers
- American Society of Civil Engineers (ASCE)
- American Water Resources Association (AWRA)
- Trout Unlimited (TU) MadDog Chapter

Dr. Schiff specializes in river and floodplain restoration, geomorphic and habitat assessment, flood mitigation, hydrology and hydraulics, transportation resilience, and sediment transport analysis. In addition to applied restoration work such as channel creation, bank stabilization, and dam/levee removal, he has been involved in several research projects across Vermont and the region evaluating the economic impacts of living in floodplains, drafting best engineering practices to reduce future flood risks, improving protocols for habitat assessment, and creating guidelines for channel restoration. Other experience includes dam removal, dam failure analysis, culvert design, bridge scour analysis, floodplain management, and biomonitoring.

SELECTED PROJECT EXPERIENCE

- **Dartmouth College Crew Dock Improvements | Hanover, NH**
Led project to improve crew dock area including replacing deteriorated access drive, dredging eroded gravel from the river, installing stormwater controls, and expanding the dock structure. Assisted with data collection, design, permitting, and construction oversight. Assisted with state and federal permitting, construction documents, bid-phase services, and construction oversight.
- **Moosilauke Ravine Lodge | Hanover, NH**
Designed stormwater improvements following a damaging flood at a mountain lodge. Performed hydrologic analysis, evaluated alternatives, and prepared design plans.
- **Ahead of the Storm Project | Hinesburg & Charlotte, VT**
The Lewis Creek Association and partners have spearheaded an intertown relationship to increase awareness and feasibility of site-specific Optimal Conservation Practices aiming to address both water quality and flood resilience. Assisted with project management, data collection, design, and implementation as well as evaluating alternatives for managing runoff and protecting water quality.
- **Stormwater Feasibility Study and Analysis | Swanton Village, VT**
Performed review of existing stormwater calculations to understand treatment volumes and pollutant loads. Performed field assessment and alternatives analysis to identify stormwater retrofits to treat piped runoff before discharging to the Mississquoi River. Assisted with design and reporting.
- **Hampton Flood Control Study | Hampton, NH**
Project Manager responsible for performing technical oversight for all of the tasks. Roy developed model boundary conditions, evaluated model results, and identified flood mitigation alternatives.



HANNAH A. RITMILLER, EIT

Project Civil Engineer, Civil/Site Reviews



YEARS OF EXPERIENCE

- 5 With This Firm

EDUCATION

- BS, Civil Engineering
Virginia Polytechnic Institute &
State University

TECHNICAL REGISTRATIONS

- Engineer-in-Training
- MaineDOT LPA Certified

Ms. Ritmiller is a Project Civil Engineer with experience in the preparation of site plans and AutoCAD drawings for projects in the private and public realm. Based out of the Maine office, she assists with projects throughout New England. Her experience and responsibilities include a broad range of civil engineering project support, from assisting in roadway layout, storm and sanitary sewer design, site grading, and sediment and erosion control measures. She is fluent in the latest Civil 3D and AutoCAD software, and in addition to site civil design, she is typically responsible for the coordination of survey base data and compilation of technical plan sets.

Her public sector experience includes work for institutional clients like Yale University, Choate, and Loomis Chaffee Schools as well as municipalities from Maine to Connecticut.

SELECTED PROJECT EXPERIENCE

- **Cooks Corner Connector Road | Brunswick, ME**
Civil Engineer assisting with preliminary and final design services for the proposed Connector Road between Admiral Fitch Avenue and Route 24 Connector Road. Design of sidewalk layout and roadway storm drainage system.
- **York Village Revitalization Project | York, ME**
Provided assistance in the preparation of preliminary design plans focusing on street realignment, including sidewalk, street lighting, storm drainage, infrastructure and streetscape improvements.
- **Biddeford Parking Garage | Biddeford, ME**
Currently providing site engineering services for a proposed parking garage in downtown Biddeford, Maine. Design of site parking, building placement, sidewalk layout, and stormwater management.
- **Rockland Public Landing | Rockland, ME**
Assisted in preparing design plans and cost estimating including sidewalk, site lighting, and storm drainage infrastructure.
- **Seawall Conceptual Design | Northport, ME**
Assisted in preparing design plans and cost estimating.
- **Confluence Park | Montpelier, VT**
Assisted in preparing conceptual design plans and cost estimating for riverfront park and bike path.

MATTHEW J. SANFORD, PWS

US Manager of Ecology



YEARS OF EXPERIENCE

- 20 With This Firm
- 1 With Other Firms

EDUCATION

- MS, Wetland Biology
Southern Connecticut State University
- BS, Natural Resource Management (Magna Cum Laude)
University of Connecticut

TECHNICAL REGISTRATIONS

- Certified ACOE Wetland Delineator
- Certified Professional Soil Scientist
- Professional Wetland Scientist

AFFILIATIONS

- Board of Directors of the Connecticut Association of Wetland Scientists (CAWS) - Former President, Former Vice President
- Society of Wetland Scientists
- Association of Massachusetts Wetland Scientists
- Connecticut Entomological Society

Mr. Sanford is the firm's US Manager of Ecology with experience in the areas of natural resources and specific expertise in vegetation management, invasive species control, GPS mapping, GIS modeling, biological inventories, water quality monitoring, watershed planning, vernal pool surveys; wetland delineation, assessment, and functions; inland wetland and tidal wetland mitigation; and peer review services.

SELECTED PROJECT EXPERIENCE

- **Dartmouth College - Trescott Road & Oak Hill Solar Array Site Feasibility Study | Hanover, NH**
Delineated USACE wetlands and waters of the US within several parcels totaling more than 400 acres. Completed desktop review of existing site conditions. Both field and graphically wetland delineations were completed on eight project sites on campus. Vernal pool surveys were completed during the spring to confirm presence of obligate vernal pool breeding species. Compiled base mapping using LIDAR imagery, wetland boundaries, vernal pool boundaries, and Hanover zoning buffers to help the college determine potential solar array sites.
- **Eversource Solar | Hadley, MA**
Delineated bordering vegetated wetlands and watercourses. Completed vegetation surveys within the wetlands and uplands on site. Developed a list of functions and values for the wetland communities on the parcel. Reclassify existing stream classifications in accordance with MA regulations. Prepared wetland delineation report to support regulatory permit application. Completed Request for Determination of Applicability and prepared Notice of Intent filing for the construction of a new solar facility.
- **Chicopee Riverwalk Phase II | Chicopee, MA**
Delineated bordering vegetated wetlands and watercourses along proposed greenway in accordance with Chicopee wetland regulations. Performed identification and mapping of invasive plant vegetation along the corridor using Global Positioning Systems and developed an invasive species management plan to manage said species. Completed Notice of Intent for local Conservation Commission.
- **Mill Pond & Frog Pond Restoration | Rockport, MA**
Assisted in the preparation of MillBrook Meadow and Mill Pond restoration master plan. Developed dredging plans for Mill Pond and Frog Pond including littoral shelf restoration plans. Prepared and obtained approval for USACE PCN GP No. 7, MADEP 401 WQC, and Rockport Conservation Commission permit applications.



CARLY PICARD, PLA, CPSI

Associate Landscape Architect



YEARS OF EXPERIENCE

- 3 With This Firm
- 10 With Other Firms

EDUCATION

- BS, Landscape Architecture
Colorado State University

TECHNICAL REGISTRATIONS

- Professional Landscape Architect
- MA
- Certified Playground Safety
Inspector, National Recreation
and Park Association

Ms. Picard is a Associate Landscape Architect proficient in preparing graphics, 3D models, renderings, and construction documents. She is an accomplished designer who has prepared plans and graphics for a variety of projects across the country including parks, streetscapes, plazas, boardwalks, trails, plantings, pedestrian safety and amenities. She has also developed designs for indoor and semi-tropical landscape designs as well as irrigation designs. Ms. Picard is also an experienced project manager.

SELECTED PROJECT EXPERIENCE

- **Moon Brook Impoundment Modification | Rutland, VT**
Assisted in before and after visualizations that helped stakeholders understand design alternatives.
- **Mill Pond Dam Removal | Colchester, VT**
Prepared before and after visualizations that helped stakeholders understand proposed dam removal affects.
- **Chicopee River Business Park | Chicopee, MA**
Provided conceptual site design and graphics to communicate the development potential of undeveloped parcels in Chicopee, MA. The intent of the graphics was to assist future planning and marketing efforts.
- **Lower Main Street Roadway Redesign & Streetscape Project | Bridgton, ME**
Prepared section perspective renderings for the client and town to understand the final concept. Provided landscaping plans and specifications which detail the landscaping improvements including vegetation locations and using flexi-pave material in the tree lawns for easier maintenance requested by the client.
- **Westbrook Common Revitalization | Westbrook, ME**
Created graphics for project marketing and the outreach campaign to gather community input and ideas. Helped prepared concept plan renderings and lastly, provided the construction grading plans for the preferred option.
- **Cook's Corner Connector Road | Brunswick, ME**
Prepared design development graphics including rendered plans, materials board, and drainage details to show the client and town the proposed improvements highlighting how the innovative drainage system works with planting wells. Prepared construction plans including lighting and landscaping.

GINA L. GULSETH, PE

Principal Environmental Scientist



YEARS OF EXPERIENCE

- 1 With This Firm
- 25 With Other Firms

EDUCATION

- BS, Geological Engineering
BS, Geology and Geophysics
University of Wisconsin - Madison

TECHNICAL REGISTRATIONS

- Professional Engineer - ME, NH
- 40-hour OSHA Health and Safety
8-hour
- SHA Supervisory Training
- First Aid/CPR Certified
- Society of American Military
Engineers
- NH Bar Environmental Section
- NH Environmental Business
Council
- New England Women in Energy
and the Environment

Gina Gulseth, PE brings 25 years of experience in engineering and environmental services to SLR. Her background consists of project management, environmental field investigations, data analysis, conceptual and engineering design, construction management, and technical evaluations. Ms. Gulseth is knowledgeable of various state regulatory requirements including NHDES, MADEP, MEDEP, VTANR and CTDEP.

SELECTED PROJECT EXPERIENCE

PREVIOUS EXPERIENCE

- **Source Evaluation and Remediation, Former Concord Cleaners Facility | Concord, NH**
This project involved the use of a membrane interface probe to investigate under the slab of a former dry-cleaning facility to collect data to estimate the mass of residual chlorinated solvent contamination above state standards. The project utilized 3-D visualization software to estimate the volume and mass of contamination to assist in a detailed engineering cost estimate for remediation of the Site.
- **Public Water Supply Treatment, Prolyn Apartments | Pelham, NH**
This project required development and implementation of a pilot test and design of a full-scale treatment system for PFAS and 1,4-dioxane above state standards in a public water supply system for residents in an apartment complex. Ms. Gulseth was responsible for project management and implementation, including pilot system sampling and monitoring and establishing breakthrough curves for the proposed remedial system.
- **Former AFFF PFAS Site Investigation | Londonderry, NH**
Ms. Gulseth was responsible for developing sampling strategy and protocol to evaluate PFAS impacts in soil at a former tire pile fire that was extinguished with aqueous film forming foam (AFFF). Reporting included evaluation of analytical results through comparison to various state standards in soil and conceptual development of a remediation strategy, including an engineering cost estimate.
- **Residual Source Evaluation and Remedial Design, Confidential Client | White River Junction, VT**
Ms. Gulseth was responsible for developing and implementing field investigations that included the use of membrane interface probe drilling techniques and FROG-4000 on-site analytical testing for the presence of residual chlorinated solvent contamination in soil.

Sean P. Pierce, PLS

President

Years with firm: 3



Mr. Pierce has over 13 years of professional experience in the surveying industry with a broad focus area ranging from residential & commercial development, to large-scale energy infrastructure. He is a graduate of the University of Maine, with a Bachelor of Science degree in Survey Engineering Technology. Sean resides in Maine and has worked for local and national survey and survey/civil firms. He is experienced in boundary, topographic, infrastructure and transmission line surveys. Recently Mr. Pierce has focused on incorporating the latest in precision mapping technology into survey project workflows, including Unmanned Aerial System Mapping & High Definition Terrestrial Laser Scanning.

Project Experience:

Until Epping Expansion (NH):

(June 2018, On-Going, Surveyor of Record, Project Manager)

Total project oversight including the management of survey crews completing a limited right-of-way retracement survey over a 4.5 mile stretch of State-owned highway, and full ROW topographic survey for the design of a proposed gas main. Compilation of data utilizing Autocad Civil 3D and preparation of a comprehensive deliverable.

Education:

University of Maine, Orono, ME
Bachelor of Science
Survey Engineering Technology
2010

Nutmeg Solar ALTA/NSPS Land Title Survey (CT):

(August 2018 – December 2018, Surveyor of Record)

Total project oversight including the management of survey crews completing a perimeter boundary survey for over 200 acres, topographic survey to locate all existing improvements, and integration with public LiDAR data. Compilation of data utilizing Autocad Civil 3D and preparation of a comprehensive deliverable.

Registrations:

Professional Land Surveyor:

Maine #2517 (exp. 12/31/19)
Massachusetts #53106 (exp. 6/30/20)
Connecticut #70470 (exp. 1/31/20)
New Hampshire #1032 (exp. 8/31/21)
Vermont #132645 (exp. 9/30/20)

Poverty Mountain Solar Array (MA):

(November 2018-December 2018, Surveyor of Record, Project Manager)

Total project oversight including the management of survey crews completing a perimeter boundary survey of the large forested lots totaling 360 acres, topographic survey to supplement UAV LiDAR, and survey-grade wetland location. Compilation of data utilizing Autocad Civil 3D and preparation of a comprehensive deliverable.

FAA 1A Unmanned Aerial Vehicle

Sodom Road Solar Array (MA):

(November 2018, Surveyor of Record, Project Manager)

Total project oversight including the management of survey crews completing a perimeter boundary survey of the 100-acre forested lot, topographic survey to supplement UAV LiDAR, and survey-grade wetland location. Compilation of data utilizing Autocad Civil 3D and preparation of a comprehensive deliverable.

Section 4



On-Call Roadway & Coastal Engineering Services

Hampton, NH

CLIENT

Town of Hampton
Hampton, NH

Services Provided

- Roadway & Highway Engineering
- Stormwater Design & Management
- Coastal Planning & Engineering

SLR was selected by the Town of Hampton, NH to provide On-Call Engineering Services for a period of five years. Services will include:

Highway/Roadways: Including; peer reviews, TOD; streetscape, multi-modal and complete streets design; bicycle & pedestrian planning, parking, traffic analysis and studies, traffic signal operations and design, traffic signal inventory & master planning, signal operations, communications and design; roadway, signs and markings design; and development of contract documents, construction phase services, and assistance with identifying and pursuing State and Federal grants, and utilizing and managing grant funding and processes for design and construction.

Coastal Engineering: Including hydraulic modeling, structural design, coastal permitting, sea level rise and adaptation studies, tidal wetland and river restoration, tide gate design, coastal structures (piers, docks, jetties, revetments, and breakwaters), public waterfront accessibility, utility and transportation infrastructure relocation, and habitat restoration and sustainable shoreline design, preparing federal/state coastal funding applications and management of grant funds for planning, design and construction projects.

The first assignment involves a combination of highway, stormwater, and coastal planning and design to complete the Meadow Pond / King's Highway Flood Mitigation study. This study will analyze the existing impacts from sea-level rise, increase in frequency and intensity of storms, tidal influences, existing floodplain conditions and storage, as well as existing restriction from bridge outlet structures and stormwater management systems, and will propose phased improvements to reduce the frequency and intensity of flooding currently experienced by residents in this coastal neighborhood of Hampton.



On-Call Engineering Services

Scarborough, ME

CLIENT

Town of Scarborough
Scarborough, ME

SLR is providing on-call engineering services to the Town of Scarborough. A sampling of projects under this on-call contract include:

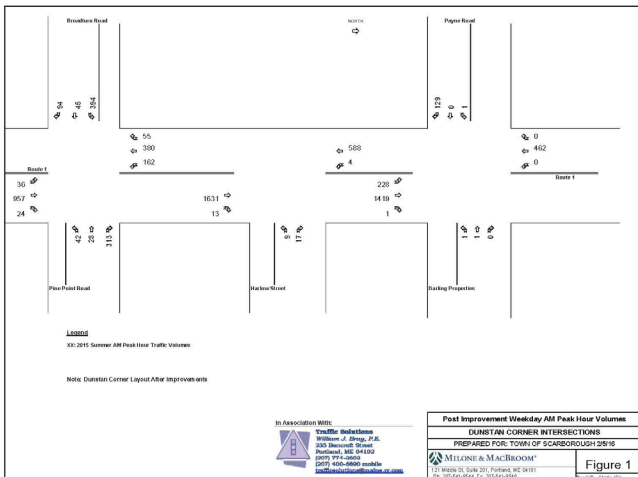
Services Provided

- Transportation Planning & Traffic Engineering
- Highway Design & Complete Streets
- Value Engineering

Dunstan Corner Intersections: Assisted the town’s Engineering and Public Works Department with review and analysis of the appropriate traffic adaptive system for the Dunstan Corner intersections. This work consisted of the review and analysis of the traffic volumes and patterns for the three signalized intersections on Route 1 at Payne Road, Harlow Street, and Pine Point Road, development of a decision matrix and vendor questionnaire (following the FHWA system engineering process), development of appropriate RFQ to be sent to potential traffic adaptive system vendors, assistance with the selection of the best traffic adaptive system to meet the unique conditions of Dunstan Corner, and finally, assistance with the final inspection, system turn-on and implementation, and ongoing maintenance and management of the system.

Review of Oak Hill Signalized Intersection: Completed review of current existing conditions at the Oak Hill intersection; completed write-up of summary memo noting existing issues and potential recommendations for improvement to traffic operations.

Traffic Signal Equipment Inventory: Performed an inventory of all of the Town’s traffic signals. Thirty-three traffic signals were inventoried.



On-Call Engineering Services

Springfield, MA

CLIENT

City of Springfield Department of Public Works
Springfield, MA

Services Provided

- Feasibility / Site Design & Engineering
- Transportation Planning & Traffic Engineering
- Water Resources / Stormwater / Permitting
- Environmental / Hazardous Materials / Materials Testing
- Structural Engineering
- Highway Design & Complete Streets
- Planning & Grant Writing
- Value Engineering
- Community Involvement
- Disaster Planning & Flood Control
- Construction Management & Inspection

SLR is providing on-call engineering services to the City of Springfield. A sampling of projects completed under this on-call contract include:

Complete Streets Prioritization Plan: SLR was contracted to complete a prioritization plan for a Tier 2 submission to the Massachusetts Department of Transportation Complete Streets Department. The goal of this Complete Streets Prioritization Plan is to create a framework for identifying key projects for implementation that will help the City cultivate a built environment where the choice to walk, bike or use transit is both convenient and safe. Developing such a successful multi-modal environmental takes a concerted effort from decision makers and key stakeholders to remove barriers, create supportive public policies, educate and implement the necessary infrastructure. The City has made progress in this regard through the development of the Pedestrian and Bicycle Complete Streets Plan.

Transportation Engineering Planning Study: Berkshire Avenue at Cottage Street: SLR was contracted to provide a technical memorandum summarizing the traffic assessment for the intersections of Cottage Street and Berkshire Avenue and Harvey Street and Berkshire Avenue. Capacity Analyses were included for both the existing and future traffic volumes. Conceptual plans were developed and a cost estimate was completed. Other tasks included the development of a Functional Design Report, Road Safety Audit, Project Need Form and Project Initiation Form.

ROAD SAFETY AUDIT

Traffic Planning for Intersection Improvements –
Cottage and Harvey Streets at Berkshire Avenue
City of Springfield, Massachusetts

August 29, 2016

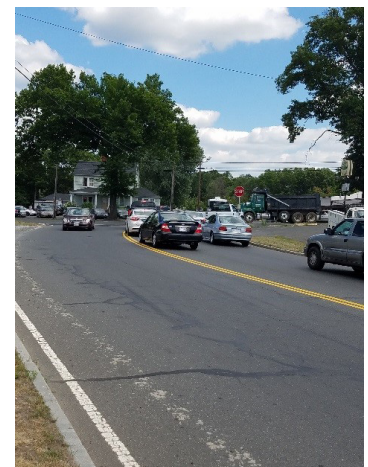
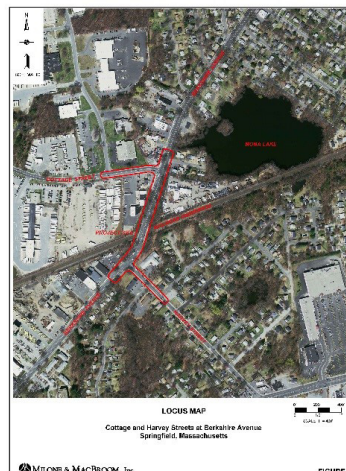
Prepared For:
MassDOT



City of Springfield



Prepared By:
Milone & MacBroom, Inc.
1350 Main Street, Suite 1012, Springfield, MA 01103



On-Call Engineering Services

Enfield, CT

CLIENT

Town of Enfield
Enfield, CT

Services Provided

- Planning
- Survey
- Engineering
- Permitting
- Structural Inspection
- Landscape Architecture
- Environmental
- Construction Administration



The firm has provided on-call engineering services to the Town of Enfield since 2010. A sampling of projects completed under this on-call contract include:

- **Enfield Roads Reconstruction:** Designed 18 roadways funded under a \$20 million bond package and provided full-time construction administration services. The project assignment included roadway reconstruction and paving, sidewalk and intersection improvements, and incidental work such as resetting structures, pavement markings, and maintenance and protection of traffic.
- **Freshwater Pond Streetscape Improvements:** Provided survey, design, and regulatory permitting for approximately 1,400 feet of streetscape improvements including removal and reconstruction of existing multi-use trail, implementation of root protection, installation of ornamental lighting and provision of park benches, trash receptacles, and other amenities.
- **Armed Services Memorial Design Concept Planning:** Performed feasibility study and design of a memorial at two locations on the town green, with services including the development of two alternate memorial concepts, a conceptual site plan and conceptual memorial sketches (including elevations, thumbnail perspectives, etc.).
- **Former CT Valley Oil Property Pre-acquisition Due Diligence Investigations:** Conducted a Phase I Environmental Site Assessment (ESA) for the parcel located at 325 Hazard Avenue in Enfield, Connecticut. The Phase I identified areas of potential environmental concern associated with past land usage. Milone & MacBroom recommended and performed a Phase II Environmental Site Assessment that involved the collection of soil and groundwater samples from the areas of potential environmental concern. The results were communicated to the Town of Enfield on an expedited basis.
- **Shannon Drive/Kelly Drive Drainage:** Completed design and permitting activities associated with a project originally initiated by Town Engineering. Project included development of contract documents for construction of a stone access road and proposed drainage structures, piping, and a riprap channel to mitigate existing erosion.

On-Call Engineering Services

South Windsor, CT

CLIENT

Town of South Windsor
South Windsor, CT

Services Provided

- Survey
- Engineering
- Wetland Delineation
- Hydraulic Analysis
- Permitting
- Construction Administration



The firm provided on-call services to the Town of South Windsor in support of their Town-wide Road and Drainage Projects Program. Assignments under this contract have included:

- **Replacement of the Graham Road Culvert.** This project required design and development of bid documents to replace twin 48-inch concrete pipes and associated headwall with twin 42-inch diameter culverts.
- **Full depth reconstruction of 3,800 feet of Sand Hill Road from Route 194 to Route 74.** The design included widening the paved surface to provide bike lanes on each side and safety improvements at the high-accident intersection of Sand Hill Road and Route 194.
- **Construction phase services for the rehabilitation of Buckland Street.** This ARRA funded project included milling and paving in addition to sidewalk and intersection improvements and the firm was responsible for all material testing, quantity verification, and completion of paperwork consistent with both ARRA and CTDOT requirements.
- **Safe Routes to School Design Improvement at Orchard Hill Elementary School.** Design work included new crosswalks, sidewalks and walkways, handicap ramps, radar speed signs, signage improvements, and intersection safety improvements.
- **Safe Routes to School Design Improvement at Eli Terry Elementary School.** Design work included review of existing conditions on nearby roadways and walkways, inspection and design of repairs for the Eli Terry path including a footbridge over the Hop River, and recommendations for sidewalk reconstruction, handicap ramps and signage.
- **Avery Street Reconstruction.** Preparation of contract documents for the reconstruction of Avery Street. The project begins at the intersection of Gray Road and extends northerly along Avery Street to a point approximately 400 feet north of Woodland Drive, a total distance of approximately 2,100 feet. The project includes full-depth pavement reconstruction, installation of a new storm drainage system and replacement of two cross culverts.

Pleasant Pond Road Bridge over Collins Brook

Francestown, NH

CLIENT

Hanson Pipe & Precast
Charlotte, NC

Services Provided

- Bridge Design
- Construction Administration

SLR provides structural engineering and design services to Hanson Pipe & Precast, a leading manufacturer of precast concrete box culverts and arch culverts, on a consistent basis. On behalf of Hanson Pipe & Precast, the firm designed a vehicular bridge and developed complete shop drawings for the precast concrete culvert, footing, and wingwalls for Pleasant Pond Road Bridge over Collins Brook.

The bridge is 22-foot wide by seven foot high by 30-foot long. The firm performed all necessary design and load rating calculations for the structure. The design was developed with consideration of foundation design parameters established by the project team's geotechnical engineers. The structure was built with little temporary and permanent impacts to the watercourse.

The bridge was designed in accordance with AASHTO LRFD Bridge Design Specifications 2008 and New Hampshire Department of Transportation Bridge Design Manual.



Streambank Stabilization & Natural Stream Channel Design Guidelines

State of New Hampshire

CLIENT

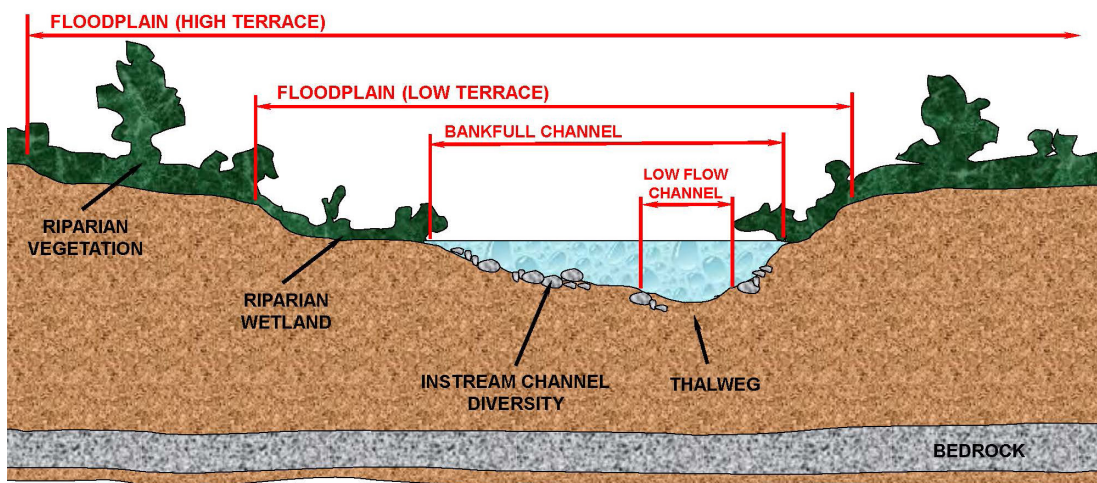
State of New Hampshire
Department of Environmental Services

Services Provided

- Preparation & Research

The firm researched and drafted a white paper and guidelines document on *Streambank Stabilization and Natural Stream Channel Design Guidelines* for the New Hampshire Department of Environmental Services and Department of Transportation (Schiff et al., 2007). The white paper covers the basic theory of fluvial geomorphology and river restoration that is often drawn upon for applied projects.

The guidelines document not only introduces all of the necessary tools for design of naturalized channel and bank stabilization projects, but also presents a project classification system to help select the appropriate design tools. With the many methods available to the practitioner, the project classification system helps structure project design. The document includes an extensive glossary and numerous links to tools available on the Internet. The guidelines document is intended for practitioners, regulators, municipal officials, members of non profits, and others with some experience in naturalized channel design and bank stabilization projects.



Willowdale Fish Passage & River Restoration

Ipswich, MA

CLIENT

American Rivers
Glastonbury, CT

The Ipswich River is a coastal basin located in northeastern Massachusetts between Boston and the New Hampshire border. It is a low gradient river in glaciated moraine terrain, with a gradient of 115 feet in 40 miles. The Willowdale Dam is composed of a stone masonry spillway with flashboards, end walls, and short earth embankments. The 100-foot-long spillway stands 7 feet above the downstream riverbed, but had an exposed face of only 3 feet due to tailwater.

Services Provided

- Fish Passage Design
- Water Resources Engineering

SLR Consulting was retained by American Rivers to evaluate numerous fish passage options including dam removal, creation of a bypass channel, and construction of a rock ramp.



Dartmouth College ADA Accessible Swimming Docks

Hanover, NH

CLIENT

Dartmouth College
Hanover, NH

Services Provided

- Civil Engineering/Site Design
- Permitting
- Landscape Architecture
- Construction Administration

SLR was retained by Dartmouth College to design and assist with permitting for a new student seasonal swimming dock located on campus on the river bank of the Connecticut River. The project included an alternatives analysis to improve safety of the dock and establish an ADA accessible access path. The dock was moved a short distance downstream to be more sheltered from the river current and debris. A switchback access path of pervious concrete was constructed, along with an extensive revegetation of the dock area and riverbank. A velocity and temperature monitoring station were set up to observe swimming conditions and to close the dock when safe swimming thresholds were exceeded.

Permit applications were prepared and submitted to the U.S. Army Corps of Engineers, the New Hampshire Department of Environmental Services, the New Hampshire Department of Safety, the New Hampshire Department of Historic Preservation, the Hanover Planning Board, and Hanover Zoning Board of Appeals.



Dartmouth College Riverfront Master Plan

Hanover, NH

CLIENT

Dartmouth College
Hanover, NH

Services Provided

- Survey & Mapping
- Master Planning
- Water Resources Engineering
- Stormwater Management
- Vegetation Planning
- Landscape Architecture
- Public Outreach

SLR was retained by Dartmouth College to create a master plan for its frontage on the Connecticut River, the gateway to the college’s campus. The primary goal was to naturalize the riverfront area was in a degraded state, while at the same time improving recreational uses and enhancing riparian habitat. Understanding existing site uses and future needs was critical to the project. One of the most challenging riverfront issues was the integration of structures in a manner that embraced the natural environment and riverfront aesthetics.

Our work resulted in development of a Near-Term and Long-Term Master Plan for waterfront amenities and was the result of a collaborative process with the many riverfront stakeholders at Dartmouth College, in addition to the Town of Hanover, and the New Hampshire Department of Environmental Services.

Public outreach and community engagement were critical elements of the consensus-building process.

This work led to the design and construction of ADA accessible swimming docks.



Culvert Prioritization Model: Aiding Communities in the Selection of Priority Restoration Projects

Southern New Hampshire

CLIENT

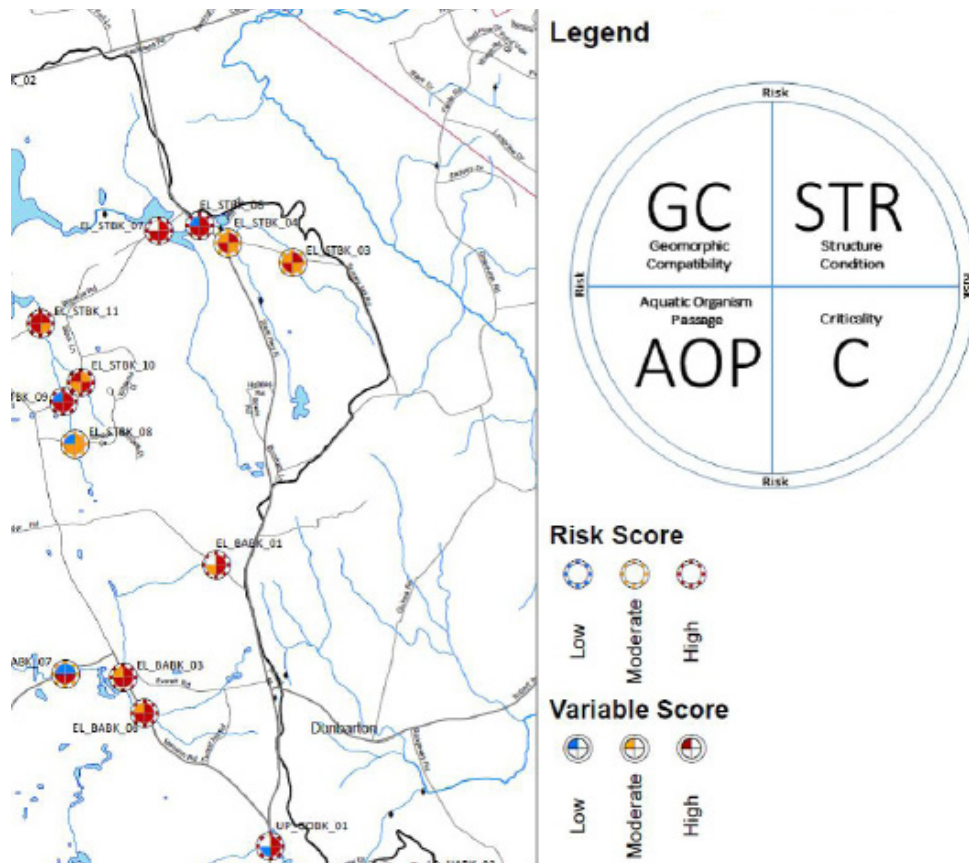
Southern New Hampshire Planning Commission

Services Provided

- Screening
- Resiliency
- Public Outreach

The Southern New Hampshire Planning Commission, in association with New Hampshire Department of Transportation, retained SLR to screen culverts in the Piscataquog River watershed for risk. The screen draws on existing data to evaluate geomorphic compatibility, structural condition, aquatic organism passage, structure criticality, and ultimately risk. Local data can also be entered into the model to screen structures.

The tool has been developed to provide towns with a decision-support tool to guide capital planning and maintenance on their roads. Test runs of the model were performed with three pilot towns to create a prioritized list of projects. The screening tool has been set up with flexibility to draw on the best available data and be readily transferrable to other watersheds in the state and region.



Trescott Road & Oak Hill Solar Field Site Feasibility Study

Hanover, NH

CLIENT

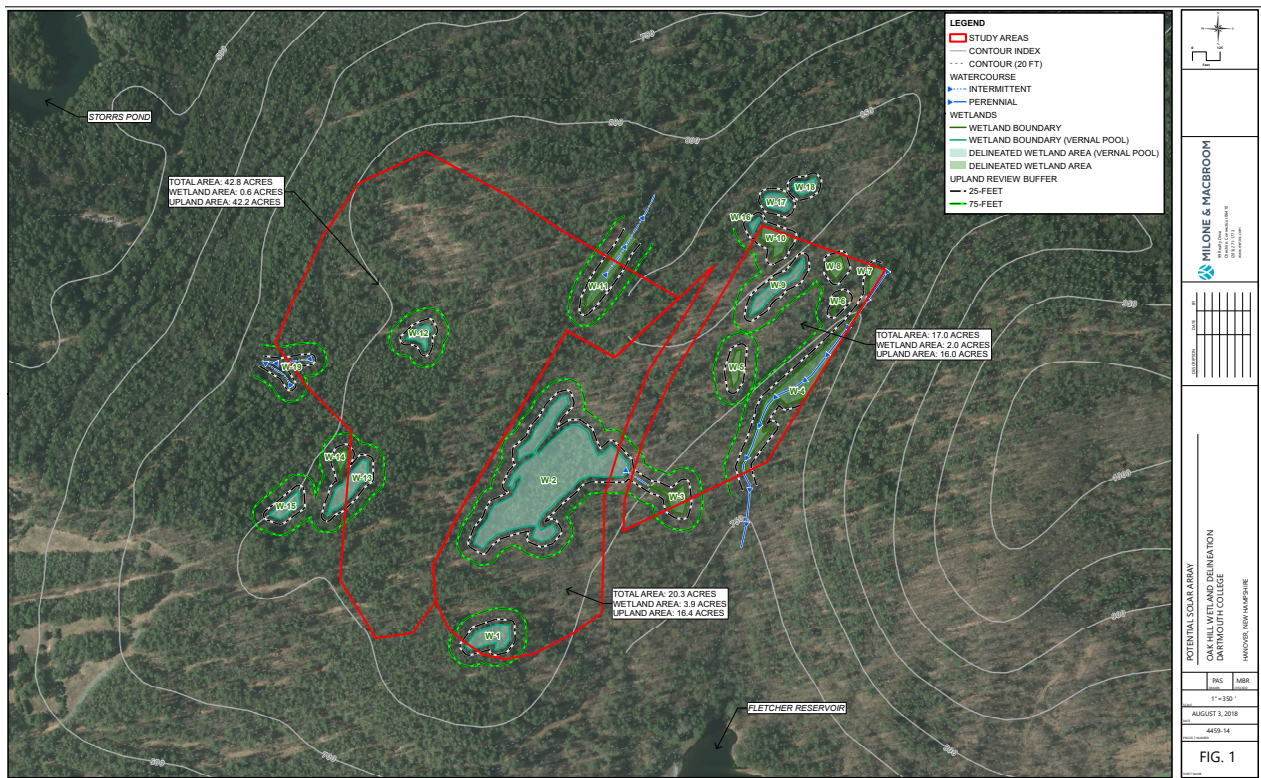
Dartmouth College
Hanover, NH

Services Provided

- Survey & Mapping
- Wetland Delineation
- Vernal Pool Surveys
- Regulatory Permitting Consultation

SLR was retained by Dartmouth College to assess several hundred acre parcels located along Trescott Road in Hanover, New Hampshire. The site assessments included a desktop review of available natural resource GIS information including National Wetland Inventory, NRCS web soil survey, and NH GRANIT GIS layers. LIDAR mapping was obtained through GRANIT and parcel boundaries were gathered from the Town of Hanover GIS mapping. Wetland and watercourse delineations in accordance with the USACE wetland delineation methodology was completed on the parcels. In addition vernal pool surveys were conducted as part of the site assessment. These vernal pool surveys were conducted during the spring months while obligate vernal pool species were active. SLR compiled all of the data collected and prepared a base map that depicted site constraints including the Hanover zoning regulatory buffer areas. Our field investigations were summarized in a report.

Evaluation of the parcels is still ongoing by the college.



Former Beebe Rubber Company

Nashua, NH

CLIENT

The Anagnost Companies
Manchester, NH

Services Provided

- Environmental Site Assessment
- Long-Term Monitoring

This former car parts manufacturer had experienced a significant release of trichloroethylene (TCE) to soil and groundwater. TCE impacted groundwater has migrated across numerous downgradient properties with little attention since the TCE source area remained on site virtually unabated. After the property was granted Brownfields status, the project team developed an in-situ chemical oxidation plan to remediate the TCE impacted unsaturated overburden soils. Prior to implementation of remediation, we prepared an Analysis of Brownfield Cleanup Alternatives/Remedial Action Plan (ABCA/RAP) followed by preparation of a Site-Specific Quality Assurance Project Plan (SSQAPP) that was approved by the NHDES and the EPA. Upon completion of two rounds of in-situ chemical oxidation using sodium persulfate and a lime catalyst, the TCE concentrations were reduced to below the S-2 Risk Based value per the NHDES "Risk Characterization and Management Policy" (RCMP). Currently, we are working with the NHDES in obtaining a "Contained-Out Determination" pursuant to the New Hampshire Hazardous Waste Rules (Env-Hw 100-1100). Once approved, the soil will be excavated and disposed of at the Four Hills Landfill in Nashua, thus allowing the placement of new compacted structural fill and the construction of low-income residential apartment buildings.



Former Johnson & Johnston Facility

Hampstead, NH

CLIENT

Southern NH Commons, LLC
Atkinson, NH

Services Provided

- Environmental Site Assessment
- Long-Term Monitoring

This former facility consists of two lots comprising approximately 7.8 acres that previously used the buildings for the manufacturing and warehousing of laminated aluminum/copper sheets for the electronics industry. Degreasing compounds, including 1,1,1-trichloroethane (1,1,1-TCA) and trichloroethylene (TCE), were utilized in the former manufacturing processes. Manufacturing operations and the storage of hazardous materials at the property ceased in 2003, with the buildings subsequently used for warehousing purposes. The facility was regulated as a NH Full Quantity Generator (FQG) of hazardous waste (RCRA ID # NHD980909451). Subsequent investigations identified the presence of 1,1,1-TCA; TCE; and 1,4-dioxane in groundwater initially exceeding Ambient Groundwater Quality Standards criteria. Additional explorations, including 200-foot-deep bedrock monitoring wells, identified the presence of 1,4-dioxane at low levels in the bedrock aquifer. Long-term groundwater monitoring under a GMP has demonstrated a slow but discernible decline in contaminant concentrations. The current recycling facility that operates on site was able to continue operations without remediation.



California Fields Landfill

Boscawen, NH

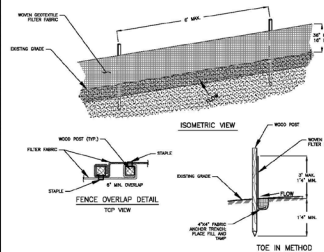
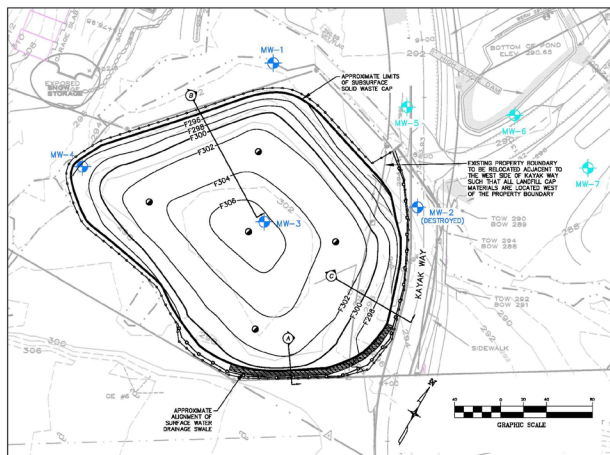
CLIENT

Cityside Development, LLC
Manchester, NH

Services Provided

- Environmental Assessment Services
- Remedial Landfill Closure
- Long-Term Monitoring

Performed numerous investigations relating to this landfill that contains leather trimmings and scraps that were placed prior to 1978 by the former Brezener Tanning Corporation and later by Allied Leather Corp. The landfill was originally capped with 2± feet of silty sand overlain by 1± foot of loam and grass vegetation. Up to 12± feet of leather trimmings and scraps mixed with sand exist within the landfill underlain by glacial till deposits. At depth below the leather trimmings and scraps, subsurface soils and groundwater have been impacted predominately by chromium, a byproduct of the former tanning operations. We designed the landfill closure cap in accordance with NHDES Solid Waste rules Env-Sw 100-2000 to include a 40-mil HDPE welded membrane. Following successful closure of the landfill, we prepared the GMP application and the Activity and Use Restriction (AUR) documents as required by Env-Or 600.

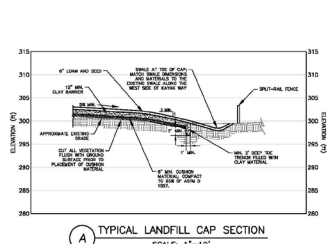


SILT FENCE DETAIL
NOT TO SCALE

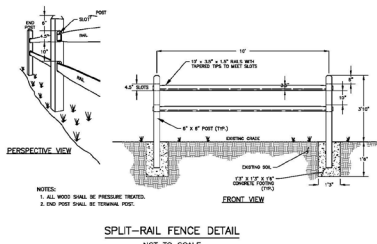
- GENERAL NOTES:**
- FIELD AND LABORATORY TESTING OF LANDFILL CAP MATERIALS SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY IN ACCORDANCE WITH THE PROCEEDING AND THESE SPECIFICATIONS SHALL BE USED FOR UNDERSTANDING TESTING PROCEDURES.
 - CLAY BARRIERS AND COVERED MATERIALS SHALL BE PLACED IN MAXIMUM 12 HOUR LIFTS AND COMPACTED TO A MINIMUM DRY DENSITY OF 115%.
 - THE CLAY BARRIER LAYER SHALL BE A MINIMUM OF 12 INCHES THICK AND THE MATERIAL SHALL HAVE A DRY DENSITY OF 115% OR GREATER.
 - THE CLAY BARRIER LAYER SHALL BE A MINIMUM OF 12 INCHES THICK AND THE MATERIAL SHALL HAVE A DRY DENSITY OF 115% OR GREATER.
 - THE SATURATED HYDRAULIC CONDUCTIVITY OF THE CLAY BARRIER MATERIAL SHALL NOT EXCEED 1 X 10⁻¹⁰ CM/SEC.
 - FIELD SAMPLES OF THE CLAY BARRIER MATERIAL FOR PERMEABILITY TESTING SHALL BE OBTAINED VIA A SILENT TUBE IN ACCORDANCE WITH ASTM D5957.
 - THE CUSTOMER MATERIAL LAYER SHALL BE A MINIMUM OF 12 INCHES THICK AND THE MATERIAL SHALL MEET THE SPECIFICATION OF M900 TOP SOIL - (REGULAR BROWN) (CONV.).
 - THE SLOPE OF THE PROPOSED LANDFILL SHALL BE 2H:1V OR FLATTER. THE SLOPE AT THE TOP OF THE PROPOSED LANDFILL SHALL BE 2H:1V.
 - WASTE LEATHER REMAINS WITHIN THE LIMITS OF THE PROPOSED LANDFILL CAP PREPARED AS SHOWN HEREON SHALL BE REMOVED AND PLACED ON TOP OF THE LANDFILL PRIOR TO PLACEMENT OF THE CAP MATERIALS.
 - EXISTING LANDFILL LAYERS SHALL BE CUT BACK TO EXPOSED TO EXPOSE THE REMAINING SLOPE PLACING EXCAVATED WASTE LEATHER ON TOP OF THE LANDFILL PRIOR TO PLACEMENT OF THE CAP MATERIALS.
 - ALL EXISTING UNDESIRABLE WELLS ARE TO BE PROTECTED AND REPAIR FUNCTIONAL.
 - PERMEABLE FOR THE METHANE WELLS SHALL MEET THE FOLLOWING SPECIFICATION REQUIREMENTS:
- | SIZE (IN) | PERMEABILITY (Darcy) |
|-----------|----------------------|
| 6.0" | 100 |
| 4.0" | 10 |
| 2.0" | 1 |
| 1.0" | 0.1 |
- LANDFILL SHALL MEET THE SPECIFICATION OF M900 TOP SOIL - (CONV.).
 - GRADE BEES SHALL BE ABOUT 5% BELOW THE ALL CONTAINING TO THE REQUIREMENTS OF M900 SPECIFICATION 844.2.1.1. ALL BEES SHALL BE ABOUT 5% BELOW THE ALL CONTAINING TO THE REQUIREMENTS OF M900 SPECIFICATION 844.2.1.1.
- CONSTRUCTION SEQUENCE:**
- REMOVE ALL WASTE LEATHER ENCOUNTERED BEYOND THE LIMITS OF THE PROPOSED LANDFILL CAP TO THE TOP OF THE LANDFILL.
 - REMOVE ALL EXISTING UNDESIRABLE WELLS AS SHOWN HEREON.
 - EXPOSE LANDFILL CAP OF ALL INCLINATION DOWN TO EXPOSED SURFACE LEVEL. NO DOUBTING SHALL BE PERFORMED.
 - PLACE AND COMPACT A MINIMUM OF 8" LAYER OF COVERED MATERIAL.
 - PLACE A MINIMUM OF 12" LAYER OF CLAY BARRIER MATERIAL.
 - PLACE A MINIMUM OF 12" LAYER OF M900 TOP SOIL.
 - REMOVE EXISTING CONTROL MEASURES AND RESTORE ESTABLISHED AREAS TO PRE-CLOSURE CONDITIONS.

TABLE 1: FIELD AND LABORATORY TESTING PROTOCOLS

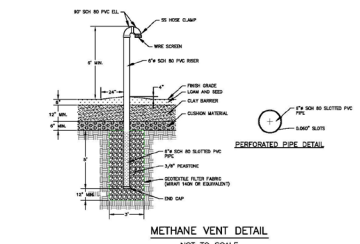
MATERIAL	TEST DESCRIPTION	TEST DESCRIPTION FREQUENCY		TEST METHOD	REQUIREMENTS	PERFORMANCE CRITERIA
		FIELD	LABORATORY			
CLAY BARRIER	PERMEABILITY	1	1	ASTM D5957	1.0E-10	1.0E-10
CLAY BARRIER	DENSITY	1	1	ASTM D1557	115%	115%
CLAY BARRIER	MOISTURE CONTENT	1	1	ASTM D2216	20%	20%
CLAY BARRIER	HYDRAULIC CONDUCTIVITY	1	1	ASTM D5957	1.0E-10	1.0E-10
CLAY BARRIER	FIELD PERMEABILITY	1	1	ASTM D5957	1.0E-10	1.0E-10
CLAY BARRIER	FIELD DENSITY	1	1	ASTM D1557	115%	115%
CLAY BARRIER	FIELD MOISTURE CONTENT	1	1	ASTM D2216	20%	20%
CLAY BARRIER	FIELD HYDRAULIC CONDUCTIVITY	1	1	ASTM D5957	1.0E-10	1.0E-10



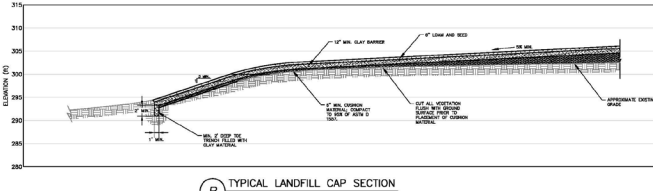
A TYPICAL LANDFILL CAP SECTION
SCALE: 1"=10'



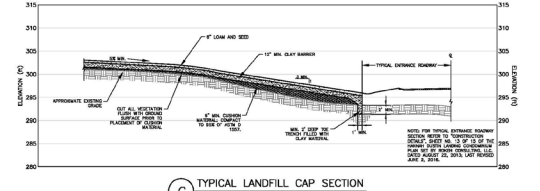
SPLIT-RAIL FENCE DETAIL
NOT TO SCALE



METHANE VENT DETAIL
NOT TO SCALE



B TYPICAL LANDFILL CAP SECTION
SCALE: 1"=10'



C TYPICAL LANDFILL CAP SECTION
SCALE: 1"=10'

3000\33\3304 Haman-Bustin\33048 Landfill Closure\Proposed Drawings\Proposed Solid Waste Cap.dwg



Stinson Park Redevelopment

Nashua, NH

CLIENT

Crimson Properties, LLC
Nashua, NH

Services Provided

- Environmental Services
- Remedial Excavation

This Asbestos Disposal Site (ADS) property was previously owned by the Roman Catholic Diocese of Manchester and operated the site as the Saint Stanislaus Hall recreational facility. We performed Geoprobe investigations and developed a work plan pursuant to Env-Sw 2100 for relocation and burial of asbestos waste materials. The construction work was performed by certified ADS workers under our ADS License #200. A surface area of about 7,200-square-feet was disturbed, asbestos was relocated and then reburied with a new engineered surface cap.



Section 5



References

01 Hampton On-Call Engineering Services

Name: Mr. Chris Jacobs, PE, LS, Deputy Director of Public Works

Address: The Town of Hampton, 100 Winnacunnet Road, Hampton, NH 03842

Phone: (603) 929-5925

Email: cjacobs@town.hampton.nh.us

02 On-Call Peer Review Services / Downtown Gorham Traffic Signals, ADA, and Communications Improvements Project, MaineDOT WIN 23591.00, Contract Documents Completed February 2019

Name: Thomas Poirier, AICP, Director of Community Development

Address: Town of Gorham, 75 South Street, Gorham, ME 04038

Phone: (207) 222-1620

Email: tpoirier@gorham.me.us

03 Scarborough On-Call Services

Name: Ms. Angela Blanchette, PE, Town Engineer / Mr. Jay Chace, Town Planner

Address: Town of Scarborough, Maine, 259 U.S. Route 1, PO Box 360, Scarborough, ME 04070

Phone: (207) 730-4089 / (207) 730-4041

Email: ablanchette@scarboroughmaine.org / jchace@scarboroughmaine.org

Section 6



Firm Performance

Internal Quality Assurance & Control Program

Recognizing that in some cases, despite everyone's best intentions, things may go wrong, SLR has adopted a structured internal review and quality control program.

As is customary with all projects, a Principal of the firm will serve as the Principal-In-Charge and will be responsible for project oversight to ensure quality control. A Senior Licensed Project Manager is also assigned to ensure that adequate staff and resources are assigned to the project and that schedules and budgets are adhered to.

While every design project is managed by a senior licensed professional with specific training, expertise, and experience, a separate internal and independent review of each project is provided by one of the partners of the firm or a designated reviewer prior to any project proceeding beyond the semifinal design stage.

Our Project Managers are trained to use a Project Management Plan (PMP) on all of our projects. This methodology ensures the success of the three-way relationship between scope, budget, and schedule. Elements of the PMP include a communication plan with the client, a quality control plan, a financial management plan, and procedures on handling changes to the scope.

Recognizing that Quality Control procedures are critical to the success of any project, SLR has adopted this structured internal review and quality control program.

Constructability reviews are held at least twice during the design process with the project team and an independent reviewer, usually the head of the Construction Administration Group, to ensure compatibility with customary construction methods and standards.

By strict adherence to this internal review process and the opportunity to identify, discuss viable alternatives, and remedy design issues, concerns, and conflicts before preparing the final design and construction documents, SLR has been successful in avoiding all claims for "errors and omissions" against the firm.

The firm also participates in DPIC Professional Liability Education Programs and all licensed professionals are regularly tested to ensure that they are current with the latest trends in Professional Liability. Our construction engineering and inspection personnel are also trained in "claims avoidance" and construction arbitration procedures.

Ability to Accomplish the Work in the Required Time

SLR has maintained a successful track record in meeting our client's scheduling needs with high-quality services. Our first priority on any assignment is to coordinate and communicate with our clients to determine their project requirements and scheduling needs. SLR, with every substantial project, will develop a (PMP) Project Management Plan and assemble its personnel in project teams based on the nature of the assignment and its specific requirements. At critical points where the schedule or workload intensifies, additional staff assignments are made that are consistent with the level of work required.

Litigation

Lawsuit: Wayne Cook vs Daniel Shapiro et al

Date: 2019

Description: MMI is an additional named party in a landowner suit against the town. MMI provided third party review of engineering plans for a proposed development on behalf of the town.

Status: Dismissed

Lawsuit: City of New Haven Vs Milone & MacBroom, Inc

Date: 2020

Description: MMI is named in a lawsuit related to installation of sheet piles on a tidal project.

Status: Ongoing

Public Liability Claim: Splash Car Wash

Date: 2020

Description: Car wash owner built from approval documents, claimed engineer's errors on configuration.

Status: Settled

Public Liability Claim: Guilford Athletic Field

Date: 2018

Description: Five party settlement for synthetic turf field shrinkage.

Status: Settled

Lawsuit: Trucano Construction Company v. Daniel Rex McNair, et al

Date: 2016-2017

Description: In February, 2016 SLR International Corporation was named as a defendant in an action filed in Juneau (Alaska) Superior Court entitled, Trucano Construction Company v. Daniel Rex McNair, et al. The case involved a 2009 soil remediation project in Pt. Heiden, Alaska, that was conducted by Weston Solutions on behalf of the United States Air Force. SLR played a small role in the project, performing one day of soil sampling at the Pt. Heiden site, acting as a contractor to DMC Technologies (who in turn was a contractor to Trucano Construction, who in turn was a contractor to Weston). SLR, through its insurance counsel, vigorously defended the case, which it believed was without merit and that SLR was named largely because upstream contractors (DMC) were insolvent. The case was settled and fully resolved in February 2017 for a nominal amount, primarily to avoid the expense of further litigation.

Status: Settled

Section 7



Conflicts of Interest

SLR does not have any known conflicts of interest or appearance of impropriety relating to other current clients of the firm. If any future conflicts arise, SLR will notify the Town and provide procedures on how to resolve such conflicts.



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