

**Statewide On-Call Construction Engineering and Inspection Services
Prequalified List of Consultants for locally administered Local Public
Agency (LPA) Qualifications-Based Selection Contracts**



The H.L. Turner Group, Inc.
27 Locke Road, Concord, NH 03301
603-228-1122

**TURNER
GROUP**



February 2, 2024

Mr. William J. Oldenburg, PE
Assistant Director of Project Development
Chairperson, Consultant Selection Committee

Sent via email: william.j.oldenburg@dot.nh.gov

SUBJECT: Statewide On-Call Construction Engineering and Inspection Services Prequalified List of Consultants for locally administered Local Public Agency (LPA) Qualifications-Based Selection Contracts

Dear Mr. Oldenburg:

The H.L. Turner Group Inc. (TTG), formerly Quantum Construction Consultants, LLC, is very interested in being included on the prequalified list of Statewide Construction Engineering and Inspection (CE&I) Services consultants to be available for Local Public Agencies (LPA's) to short list from in the development of QBS based Agreements in support of locally administered projects. TTG is a highly qualified engineering firm that specializes in providing design, permitting and construction engineering services to municipalities utilizing NHDOT State Bridge Aid funding and many federal funding agencies. We have a long-standing professional relationship with staff of Fieldstone Land Consultants, PLLC for survey and environmental services and S.W. Cole Engineering, Inc. for geotechnical and materials testing services.

Experience and Resources: TTG has the experience, resources, and commitment to provide the LPA's with a successful construction project. Our project team is led by Richard Wolf, Jr., Infrastructure Division Leader, who manages construction engineering and administration of TTG projects. Anna Giraldi, PE, Chief Bridge Engineer, has over 25 years of bridge design and construction experience, and James Bouchard, Senior Project Manager, has over 40 years in the civil, transportation, and environmental disciplines. Our in-house team is cross-trained and has expertise in each area of funding administration and CE&I services. TTG technical staff members include Professional Engineers, a NETTCP QA Technologist, LPA certifications, and NBIS certification.

Goal: Our goal is to provide LPA's with an efficient, experienced and responsive team who is prepared to achieve the expected project outcome and deliver it on schedule. We will work with the LPA's to develop CE&I services that fully support the requirements of their projects.

We are excited about this opportunity to be included on the CE&I Services Prequalified List.

Sincerely,

HL TURNER GROUP INC.

A handwritten signature in black ink that reads "R. Wolf, Jr.".

Richard Wolf, Jr.
Infrastructure Division Leader
rwolf@qcceng.com



Bedford Road experienced frequent roadway over topping. TTG permitted, designed, and provided CE&I Services for the replacement structure.

PROJECT UNDERSTANDING AND APPROACH



TTG's Project Team has extensive experience in construction oversight and inspection of work in progress and take these tasks very seriously so as to render project delivery that is as designed and anticipated, achieves construction goals, is compliant with regulatory permitting conditions, and remains on schedule and within budget.

Our routine approach to construction services is summarized as follows:

Construction Engineering/Oversight

- Contract coordination with the NHDOT Project Manager, Municipality, Contractor and pertinent stakeholders.
- Coordination of Federal Compliance requirements and maintenance of labor records for the project as may be required.
- Coordination of the QA and QC programs in response to Contractor's schedule and weekly look ahead projections.
- Coordination of subconsultants when special expertise is required either on the project or in consultation.
- Resolving any Contractor disputes.
- Management of the submittal process to ensure timely response back to Contractor for maintenance of fabrication and delivery schedules.
- Review of Certificates of Compliance and Buy America Certificates.
- Monitoring the Construction Schedule and coordinating with the Contractor for reconciliation due to unanticipated events or on-site work performance.
- Preparation of Daily Construction Reports with photo documentation and distribution.
- Routine maintenance of Project Records including, but not limited to, Quantity Book/Record Book for installed work for Pay Application purposes, as-built record drawings, testing reports, natural resource/historical resource or NEPA monitoring reports, and SWPPP reports.
- Daily & Monthly maintenance of OFC documents including, but not limited to, bulletin boards, contractor employee sign-in/sign-out sheets, work classification, certified payrolls, employee interviews, OFC field audits, final payment as required for federal funding.
- Identification, notification and processing of Construction Change Orders including Purpose & Need, quantities of work, request for proposals for work not included within contract.
- Identification, notification and processing of issues arising that impact construction schedule.
- Coordination with Contractor for monthly pencil requisition, processing submitted Applications for Payment, including recommendation for payment.
- Preparation of Engineer's Estimate of Balances and Excesses (B&E) as the work progresses with submittal to Client at key milestones, typically 25%, 50%, 75% and 90% project completion.
- Final audit of completed project.
- Preparation and coordination of acceptance of the Final Balancing Change Order for the project.
- Final payment coordination for the project.
- Project closeout documentation.
- Coordination of project record transfer to Client.
- All work shall comply with all applicable Federal, State, and Local laws and regulations.

PROJECT UNDERSTANDING AND APPROACH



Pre-Construction Conference

- Mandatory attendees include Client, TTG's Engineer of Record, TTG's Project Manager, TTG's Lead Inspector; Contractor's Principal in Charge, Project Manager, Superintendent, and as applicable for federal funding the NHDOT Office of Federal Compliance.
- Invitees include utility contacts, FHWA contact as may be applicable, NHDOT District contact, and project specific pertinent stakeholder contacts.
- TTG will prepare the Agenda and distribute for discussion.
- TTG conducts the meeting and documents the meeting in a Conference Report.

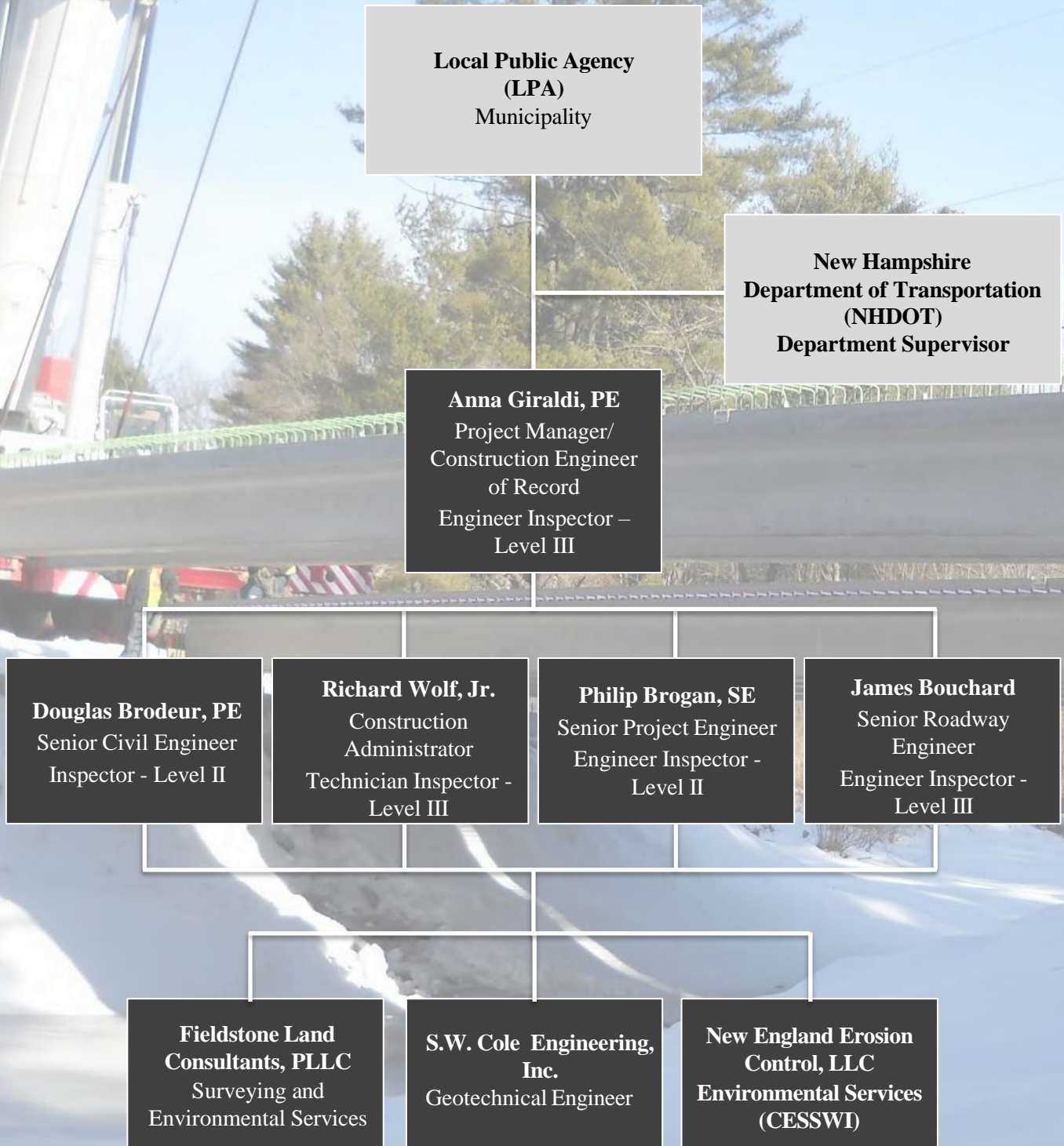
Daily Construction Observation

- Monitor work in progress for compliance and conformance to project drawings and specifications including Special Provisions and Supplemental Specifications.
- Documentation of work installed/constructed.
- Documentation of quantities of work accepted.
- Monitor QA and QC procedures and testing.
- Monitor for compliance with natural resource permit conditions.
- Monitor for compliance with historical permit/NEPA conditions.
- Monitor traffic control to ensure safe work zones.
- Monitoring for Right-of-Way, easement, or land license commitments for the project.
- Preparation of observation reports for project including visitors; weather conditions; on-site work force for Contractor and subcontractors; work progress for the project; discussions with Contractor or visitors, landowners or abutters QA and QC procedures undertaken identification of possible change orders or claims by the Contractor; safety issues for the work, public; identification of work revisions required and accepted by the Contractor.
- Monitoring and documentation of installed work that is non-participating or funded by other agencies for reconciliation with Applications for Payment and project reimbursement.
- TTG possesses all the Personal Protective Equipment (PPE) required to perform Construction Observation.

ORGANIZATIONAL CHART AND PROJECT TEAM



ORGANIZATIONAL CHART



The H.L. Turner Group Inc. (TTG), formerly Quantum Construction Consultants, LLC, has a long-standing professional relationship with the staff of Fieldstone Land Consultants, PLLC (FLC) and S.W. Cole Engineering, Inc. (SWC). Our Team has successfully partnered together on dozens of permitting and construction projects with varying scopes and has been able to consistently deliver quality services on time and on budget. The trust and open lines of communication we have developed through our long-standing professional relationships help us to identify potential issues ahead of time and make sound decisions to resolve them quickly.

TTG proposes to utilize the following highly qualified team members:

The H.L. Turner Group Inc. (TTG), formerly Quantum Construction Consultants, LLC of Concord, NH

TTG will be the prime consultant responsible for project management and direct coordination for assignments and work efforts for all Construction and Engineering Inspection LPA projects. Since 2003, TTG has designed and performed construction engineering and inspection services for numerous municipal bridge projects funded under the NHDOT Municipally-Managed Bridge Aid Program and completed multiple NH Department of Administrative Services, Division of Public Works Design & Construction (DPW) Statewide Agreement contracts providing design, construction engineering, and inspection services for a variety of project types. All key TTG staff is NHDOT LPA Certified.

Fieldstone Land Consultants, PLLC of Milford, NH

FLC will perform professional land surveying services, if required as part of the design contract. FLC will also provide environmental services, if required, to support the engineering efforts of our Team. TTG has partnered with staff from FLC on numerous successful municipal bridge, roadway, and building design projects and they possess all the certifications required to perform these services.

S.W. Cole Engineering, Inc. of Somersworth, NH

SWC will perform subsurface investigations and geotechnical engineering services, if required. They also will undertake materials testing services during construction, including laboratory tests and field services for soil foundations, concrete construction, steel fabrication, and Hot Mix Asphalt (HMA) and precast concrete plant inspections, if applicable. TTG has worked with SWC on dozens of successful municipal bridge, roadway and building design projects and they possess all the testing certifications required to perform these services.

New England Erosion Control, LLC of Concord, NH

New England Erosion Control, LLC (NEEC) was founded in 2007 by Bruce Gilday, CESSWI, in response to increasing demand for on-site stormwater monitoring for construction activities including various NHDOT sponsored projects. TTG's staff has had a professional relationship with Mr. Gilday for over 25 years. NEEC will perform environmental inspections as required.

Construction Engineering and Inspection Services in Support of LPA Projects	Anna Giraldi, PE	Richard Wolf, Jr.	James Bouchard	Philip Brogan, SE	Douglas Brodeur, PE	Chad Michaud, PE	Andrew Michaud	Michael Ploof, LLS	Christopher Guida	Bruce Gilday
Years of Experience	25	28	45	15	22	24	22	22	22	36
Years with Firm	10	16	14	1	2	22	22	13	13	34
Production, hauling and placement of highway related materials	x	x	x	x	x					
Soil or rock excavations, and soil or rock fill construction	x	x	x	x	x	x				
Roadway base, subbase, and slope construction, including checking line and grade	x	x	x	x	x		x	x		
Drainage work, including pipe and structure installation, ditchline grading, detention/retention area construction, etc.	x	x	x	x	x			x		
Utility construction for sewer, water, electricity, gas, etc		x	x	x	x					
Storm Water Pollution Prevention Plan (SWPPP) review and analysis	x	x	x	x	x				x	x
Erosion control product evaluation	x	x	x	x	x				x	x
Erosion and sediment control Best Management Practices (BMP's)	x	x	x	x	x				x	x
Construction of traffic signs, traffic pavement markings and symbols, and traffic signal installations		x	x		x					
Bridge and building demolition	x	x	x	x						
Paving, resurfacing, pavement repair and rehabilitation		x	x	x	x		x			
Guardrail, fence and other linear barriers	x	x	x	x	x					
Land clearing and landscaping	x	x	x		x					
Bridge substructure, including foundation preparation work, and bridge superstructure work	x	x		x		x	x			
Non-bridge structures such as retaining walls, overhead signs, soundwalls, sidewalks, etc.	x	x	x	x	x	x	x			
Traffic control procedures and devices		x	x		x					
Project Schedule review and analysis including CPM schedules	x	x	x	x	x					
Construction survey layout and verification								x		
Certifications / Training										
NETTCP QA Technologist		x								
Local Public Agency (LPA) Parts 1&2	x	x	x	x	x					
Local Public Agency (LPA) Right-of-Way			x							
OSHA 10-Hour Card	x	x	x	x			x			
NHDOT 2-Day Construction Inspection Training		x					x			
ACI: Concrete Field, Aggregate Testing, Concrete Lab Testing, Concrete Strength Testing Technician							x			
NETTCP HMA Plant Technician, Soils and Aggregate Inspector							x			
Certified Nuclear Densometer Operator							x			
Certified Erosion Sediment and Storm Water Inspector (CESSWI)										x
Certified Wetlands Scientist (CWS)									x	x
Certified Soil Scientist (CSS)									x	
Hazmat Certified (OSHA 29 CFR 1910.120)								x	x	
Certified National Bridge Inspector (FHWA)	x									



Town of Antrim, NH

Donna Hanson
Interim Town Administrator
(603) 588-6785
townadmin@antrimnh.gov



- Cutler Shop Dam, NHDES Dam #D009012
- White Birch Point over Great Brook, Br. No. 134/088, NHDOT #14846
- Bridge Inspection and Repair CIP
- North Main Street over Miller Brook, Br. No. 172/088, NHDOT #15255
- Old North Branch Road over North Branch River, Br. No. 130/149, Federal #X-A000(927), NHDOT #14944
- Depot Street over Contoocook River, Br. No. 184/071, NHDOT #15349A
- Water Street over Great Brook, Br. No. 178/069, NHDOT #15350
- Depot Street over Relief (Slab), Br. No. 183/071, NHDOT #14941
- Depot Street over Relief (Arch), Br. No. 181/071, NHDOT #14940
- West Street over Great Brook, Br. No. 173/075, NHDOT #29468
- Gregg Lake Dam CIP, NHDES Dam #D009003
- High Street over Great Brook, Br. No. 174/070, NHDOT #14942
- Town Hall Tower, Structural Repairs

Town of Merrimack, NH

Dawn Tuomala, PE
Public Works Director
(603) 424-5137
dtuomala@merrimacknh.gov



- Wasserman Heights Detention Pond Dam
- Conservation Drive Retaining Wall Construction
- Twin Bridges Park, Replacement Pedestrian Bridge over Baboosic Brook
- Naticook Road Drainage Study
- Amherst Road Culvert Replacement
- Steep Street Drainage System Repair
- Turkey Hill Road Drainage Study
- Wire Road over Baboosic Brook, Br. No. 098/174, NHDOT #15839
- McGaw Bridge Road over Baboosic Brook, Br. No. 116/137, NHDOT #13923
- Bean Road over Baboosic Brook, Br. No. 072/155, NHDOT #29736
- Bedford Road over Baboosic Brook, Br. No. 113/159, NHDOT #15841
- Souhegan River Pedestrian Trail, A(004)357, NHDOT #40300
- US Route 3 over Baboosic Brook, Br. No. 118/135, NHDOT #29174
- Stowell Road Covered Bridge Roof Replacement
- Pedestrian Bridge Evaluation over Souhegan River, Br. No. 112/115
- US Route 3 over Baboosic Brook FEMA BRIC Funding Benefit Cost Analysis

Town of Richmond, NH

Susan Harrington
Town Administrator
(603) 239-4232
Susan.Harrington.richmond@gmail.com



- Fay Martin Road over Tully Brook Br. No. 160/071, NHDOT #21190
- Tully Brook Road Bridge over Tully Brook Br. No. 155/066, NHDOT #29056
- Whipple Hill Road over Roaring Brook Br. No. 065/083, NHDOT #29055





ANNA GIRALDI, PE

Project Manager/Construction Engineer of Record

agiraldi@qcceng.com | (603) 228-1122 | quantum-cc.com

EXPERTISE

- Construction Engineering and Administration
- Bridge Design
- Bridge Rehabilitation
- Hydrologic and Hydraulic Studies

EDUCATION

Georgia Institute of Technology
Civil Engineering BS | MS

PROFESSIONAL REGISTRATION

Maine..... #17114
New Hampshire . #14411
Vermont #018.0135095

CERTIFICATIONS

- NHDOT LPA Parts 1 and 2 Cert. # 1289
- Certified National Bridge Inspector, FHWA
- OSHA 10 Hour

CONTINUING EDUCATION

- Accelerated Bridge Construction (ABC)
- Precast and Prestressed Products



27 Locke Road
Concord, NH 03301

PROFESSIONAL EXPERIENCE

Ms. Giraldi has over 25 years of in-depth and diverse civil and structural experience in engineering design, construction administration and observation. Her roles have included bridge rehabilitation, bridge replacement, hydrology and hydraulic analyses, as well as the development and implementation of engineering plans for projects. She has developed numerous types of projects from schematic design to completion during construction. Most of Ms. Giraldi's experience is with municipal and NHDOT state projects.

REPRESENTATIVE PROJECTS

NHDOT#15841 Bedford Road over Baboosic Brook, Merrimack, NH
Replacement of a severely undersized and deteriorated 21-foot pipe arch bridge with a 90-foot span steel girder bridge on integral abutments. Roadway approaches were raised several feet to eliminate overtopping. Provided engineering support during construction.

NHDOT #15815 Old Route 110 over Upper Ammonoosuc River, Dummer, NH
Replacement of a deficient 65-foot span steel beam bridge with an 80-foot span steel girder bridge founded on spread footings. Close coordination with the St. Lawrence & Atlantic Railroad was necessary due to the west abutment being located within the railroad right-of-way. Provided support during construction.

ADDITIONAL EXPERIENCE

NHDOT #14633H Federal #AC-A004(376) I-93 Widening, Manchester
NHDOT #15684 Charcoal Road over Charcoal Brook, Dublin
NHDOT #16175 Pelham Road over Second Brook, Hudson
NHDOT #22892 2nd NH Turnpike over South Branch of the Piscataquog, River Francestown
NHDOT #15764 Woodward Hill Road over Brennan Brook, Francestown
NHDOT #15762 Juniper Hill Road over Brennan Brook, Francestown
NHDOT #13698 Bean Hill Road, Northfield
NHDOT #14944 Federal Project #X-A000(927) Old North Branch Road over North Branch River, Antrim
NHDOT #14928 FEMA-1695-DR-NH Old Marlborough Road over Charcoal Brook, Dublin
NHDOT #21190 Fay Martin Road over Tully Brook, Richmond
NHDOT #14940 14941 Depot Street over Reliefs, Antrim
NHDOT #14846 FEMA-1610-DR NH White Birch Point Road over Great Brook, Antrim
NHDOT #15255 North Main Street over Miller Brook, Antrim
NHDOT #14839 Federal Project #X-A000(567) Winnepesaukee River Trail, Northfield
City of Manchester Bridge Repairs, Manchester



RICHARD WOLF, JR.

Construction Administrator

rwolf@qcceng.com | (603) 228-1122 | quantum-cc.com

EXPERTISE

- Construction Administration
- Bridge Design & Construction
- Project Management
- Structural Observation
- Existing Conditions Reports
- Building Construction
- Building Renovation

EDUCATION

New Hampshire Technical Institute *Architectural Engineering Technology AS*

CERTIFICATIONS

- NETTCP QA Technologist Certification #461
- NHDOT LPA Parts 1 and 2 Cert. # 1292
- OSHA 10-Hour Card
- NHDOT 2-Day Construction Inspection Training

CONTINUING EDUCATION

- FHWA UHPC Bridge Connections for Prefabricated Bridge Elements
- Accelerated Bridge Construction (ABC)



27 Locke Road
Concord, NH 03301

PROFESSIONAL EXPERIENCE

Mr. Wolf has more than 25 years of experience providing construction administration and construction observation services on a variety of education, transportation, commercial, industrial, municipal and state projects. Projects have included new bridges and roadways, rehabilitation of bridges, new buildings, building renovations, and site work. Mr. Wolf is experienced utilizing a variety of building materials and he is proficient in all aspects of project management and construction administration duties relating to the construction and rehabilitation of bridges, roadways, site work, dams, buildings and much more.

REPRESENTATIVE PROJECTS

NHDOT #26762 Willow Street over Beaver Brook, Pelham, NH

Provided part-time construction engineering and inspection services for the replacement of a 39-foot span steel beam bridge with a 104-foot span steel beam bridge on integral abutments.

DPW #80985R Salt Storage Building, Pinkham Notch, NH

Construction engineering and inspection services for a 4,400 square foot salt storage building with 20' tall above grade side walls. Provided part-time inspections of reinforced concrete, wood framing, and pre-fabricated wood roof truss installation and roof diaphragm to verify conformance with the plans and specifications.

ADDITIONAL EXPERIENCE

- NHDOT #15255 North Main Street over Miller Brook, Antrim
- NHDOT #14944, Federal Project #X-A000(927) Old North Branch Road over North Branch River, Antrim
- NHDOT #29468 West Street over Great Brook, Antrim
- NHDOT #15350 Water Street over Great Brook, Antrim
- NHDOT #15349A Depot Street over Contoocook NHDOT River, Antrim
- NHDOT #14940, 14941 Depot Street over Reliefs, Antrim
- NHDOT #14846, FEMA 1610-DR NH White Birch Point Road over Great Brook, Antrim
- NHDOT #13923 McGaw Bridge Road over Baboosic Brook, Merrimack
- NHDOT #15839 Wire Road over Baboosic Brook, Merrimack
- NHDOT #29736 Bean Road over Baboosic Brook, Merrimack
- NHDOT #15841 Bedford over Baboosic Brook, Merrimack
- NHDOT #26762 Willow Street over Beaver Brook, Pelham
- NHDOT #14842 High Road over North River, Lee
- NHDOT #15403, Federal Project #X-A000(928) High Haith Road over Squam Lake Canal, Center Harbor
- NHDOT #40617 Pleasant Valley Road over Heath Brook, Wolfeboro
- DPW 80985R Salt Storage Building, Contract C, Milan



JAMES BOUCHARD

Senior Roadway Engineer

jbouchard@qcceng.com | (603) 228-1122 | quantum-cc.com

EXPERTISE

- Construction Administration
- Roadway Design
- Drainage Design
- Historic Masonry Bridges
- Project Management

EDUCATION

University of Maine
Civil Engineering BS

CERTIFICATIONS

- NHDOT LPA Parts 1 and 2 Cert. # 1117
- NHDOT LPA Right-of-Way
Maine DOT Local
Project Administration

CONTINUING EDUCATION

- FHWA UHPC Bridge Connections for Prefabricated Bridge Elements
- Project Management
- Water Supply & Treatment
- Water Utilization Policy
- Stormwater Management
- Traffic Calming Measures
- Transportation Planning
- Wastewater Treatment



27 Locke Road
Concord, NH 03301

PROFESSIONAL EXPERIENCE

Mr. Bouchard has over 40 years of experience in administering and managing construction projects of very diverse aspects including municipal and state roadway improvements, reconstruction and realignment; intersection improvements; bridge rehabilitation and replacement; historical bridge preservation; transportation alternative programs including recreational trails, paths and sidewalks; and all aspects of water and wastewater utility infrastructure. In addition, Mr. Bouchard has coordinated construction activities with private utility relocations; contaminated soils, water and vapor encounters during construction; and overseen historical and archaeological construction requirements. Construction funding administration has included NHDOT SBA & SHA; FHWA; NDHES SAG and SRF, EPA CWSRF; FEMA; USDA Rural Development; CDBG and EDA grants.

REPRESENTATIVE PROJECTS

McGaw Bridge Road over Baboosic Brook, Merrimack, NH

Supported construction engineering efforts for replacement of a deteriorated jack arch bridge. A new 42-foot span, steel beam bridge with an exposed concrete deck with stainless steel reinforcement with concrete abutments founded on bedrock was constructed. Due to its historic nature, the project required extensive coordination with cultural resource agencies for Section 106 mitigation during design and construction.

NHDOT #13698 Bean Hill Road, Northfield, NH

Reconstruction of 6300 LF of urban/rural roadway including in-place pavement reclamation, base gravels reinforcement, new closed drainage systems within roadside drainage swales, slip lining of a 72-inch culvert and superelevation of roadway curves and installation of pavements.

ADDITIONAL EXPERIENCE

NHDOT #15255 North Main Street over Miller Brook, Antrim
NHDOT #15349A Depot Street over Contoocook River, Antrim
NHDOT #14940 14941 Depot Street over Reliefs, Antrim
NHDOT #15839 Wire Road over Baboosic Brook, Merrimack
NHDOT #29174 US Route 3 over Baboosic Brook, Merrimack
NHDOT #15841 Bedford Road over Baboosic Brook, Merrimack
NHDOT #26762 Willow Street over Beaver Brook, Pelham
NHDOT #14842 High Road over North River, Lee
NHDOT #40617 Pleasant Valley Road over Heath Brook, Wolfeboro
NHDOT #15403 Federal Project #X-A000(928) High Haith Road over Squam Lake Canal, Center Harbor
NHDOT #14846 FEMA 1610-DR NH White Birch Point Road over Great Brook, Antrim
NHDOT #14944 Federal Project #X-A000(927) Old North Branch Road over North Branch River, Antrim



PHILIP BROGAN, SE

Senior Project Engineer

pbrogan@qcceng.com | (603) 228-1122 | quantum-cc.com

EXPERTISE

- Bridge Design
- Dam Design
- Hydraulic and Hydrologic Modeling
- Construction Inspection

EDUCATION

University of New Hampshire
Civil Engineering
 BS | MS

PROFESSIONAL REGISTRATION

New Hampshire.....#14789
 New York#95961

CERTIFICATIONS

- OSHA 30-hour
- NHDOT LPA Parts 1 and 2

CONTINUING EDUCATION

- Accelerated Bridge Construction (ABC)
- Ultra High-Performance Concrete (UHPC)
- Steel Bridge Design
- H&H Modeling
- Dam Construction Inspection



27 Locke Road
 Concord, NH 03301

PROFESSIONAL EXPERIENCE

Mr. Brogan has 15 years experience in civil and structural engineering. His design experience includes integral abutment bridges, steel girder bridges, slab bridges, bridge joints and bearings, retaining walls, roadside structure foundations, riprap, dam sluice gates, and a concrete dam spillway. He has been involved in the design and review of numerous bridge design and rehabilitation projects, including plan development/review, project coordination, public participation, and construction submittal review. In addition to design, Mr. Brogan has load rated numerous bridges including box culverts, steel girder bridges, a slab bridge, and a multi-span concrete rigid frame. He has experience in hydrologic and hydraulic analysis including HydroCAD, HEC-RAS 2D, SRH 2D, and CFM 3D modeling software. In the dam world, he has completed seepage and slope stability analyses, soil filter design, and construction inspection. He has also coordinated with natural and cultural resource agencies and completed wetland, shoreland, and dam reconstruction permitting processes.

REPRESENTATIVE PROJECTS

NHDOT 15864 US Route 302 & NH Route 113 over Conway Lake Outlet, Conway, NH

Responsible for design of integral abutment 120' steel girder bridge using 3-phase construction. Calculated project quantities, reviewed construction submittals, and completed a load rating of the proposed structure. The narrow construction phases required careful consideration of cofferdam placement and construction procedures on a high-traffic roadway.

NHDOT 14749, Replacement of bridge carrying NH Routes 16 & 25 over the Lovell River, Ossipee, NH

Modified HEC-RAS 1D model and finalized hydraulic report. Designed simple span 97' skewed steel girder integral abutment bridge including integral abutments, steel piles, UHMW-PE bearings, steel girders, concrete bridge deck, approach slabs, sleeper slabs, and pre-compressed foam expansion joints. Also coordinated plan preparation, calculated bridge item quantities, and completed a bridge load rating and NHDOT Form 4.

ADDITIONAL EXPERIENCE

NHDOT #16312, Bridge Replacement NH Route 145 over Bishop Brook, Stewartstown

NHDOT #29776 Bridge NH Route 26, Dixville

NHDOT #15755 Deck Replacement of I-93 Exit 33, Lincoln

NHDOT #40395 US Route 4 over Smith River, Danbury

NHDOT #15907 Bridge Replacement NH Route, Warner

NHDOT #15880 Rehabilitation of 3 Bridges over I-89, Lebanon

NHDOT #22312 Rehabilitation of 22 Bridges on I-93, Franconia-Littleton

NHDOT #40404 Rehabilitation of 8 Bridges on I-93, Thornton-Woodstock

NHDOT #28903 Rehabilitation of 4 Bridges on NH Route 101, Candia-Raymond



DOUGLAS V. BRODEUR, PE

Senior Civil Engineer

dbrodeur@ttgae.com | (603) 228-1122 | hlturner.com

EXPERTISE

- Land Development Design & Engineering
- Land Use Regulations/Permitting
- Construction Oversight & Contract Administration
- Interdisciplinary Coordination
- Utility Design

EXPERIENCE

General: 23 years
Project: 23 years

EDUCATION

University of New Hampshire
Civil Engineering, BS

PROFESSIONAL REGISTRATION

- Massachusetts..... PE #56168
- New Hampshire..... PE #12986
- NHDES SDS 1619(Septic)
- SIT 605
- NCEES Record ID 21-654-50

AFFILIATIONS

- ASCE: American Society of Civil Engineers
- NSPE: National Society of Professional Engineers
- NCEES: National Council of Examiners for Engineering & Surveying
- GSOWA: Granite State On-site Wasterwater Association
- F&MA
- American Red Cross



27 Locke Road
Concord, NH 03301

PROFESSIONAL EXPERIENCE

Mr. Brodeur has over 20 years of experience as a civil engineer and project manager. He is skilled in project management permitting, civil/site design, hydrologic and hydraulic studies of water sheds, and construction management and oversight. He's worked on a variety of projects including commercial and industrial site plans, residential apartment complexes and subdivisions, retail outlet malls, roadways, natural gas pipelines and flood remediation studies.

REPRESENTATIVE PROJECTS

Merrimack Premium Outlets, Merrimack, NH

Design engineer assigned to prepare plans and specifications for a 12-building, 560,000-square-foot retail outlet mall. Permitting work included preparation of documents for NHDES Alteration of Terrain, Wetlands Dredge & Fill, Approval for Construction of a Dam, and Sewer Connection approvals. Design work encompassed hydrologic and hydraulic computations, stormwater management reports, grading, and roadway analysis, storm sewer, sanitary sewer, and other utility designs.

Lower Bay Road, Sanbornton, NH

Chief engineer assigned to a 1.1-mile full road redesign, funded by the NHDOT state aid highway program, which was originally a state class II right-of-way and accepted as a class IV rural highway by the Town of Sanbornton upon completion. Responsibilities included landowner negotiation and acquisition of temporary and permanent easements, drafting the planning and engineering report per NHDOT requirements, project drawing and job specifications, permitting including NHDES wetlands dredge and fill and comprehensive shoreland protection approvals, preparation of bidding documents and assisting the town with contractor selection, and oversight of construction work for quality and budget management.

The Northern Electric Transmission System, New Hampshire

Project Manager in charge of route planning and land and right-of-way acquisition work for an electric transmission project. The program was proposed to create a new connection between Hydro-Québec's world-class hydroelectric resources and the New England "power pool" that supplies electricity to all customers in the region—including New Hampshire. After several years of legal battles, Eversource Energy canceled the project in 2019.

Vermont Gas Systems Addison County Natural Pipeline, Addison County, VT

Project manager in charge of QA/QC of all design and construction documents and all permitting efforts for a 43-mile natural gas transmission main from Williston to Middlebury Vermont, with an additional planned 20-mile lateral main to the International Paper factory in Ticonderoga New York. Work included 15 miles of pipeline co-located within DOT right-of-way, landowner negotiations and easement acquisition, 7 railroad crossings, and a 1-mile horizontal direction bore under Lake Champlain.

The following subconsultant representatives have actively participated on numerous TTG projects:

Fieldstone Land Consultants, PLLC:

Michael D. Ploof, LLS – Surveyor/ Project Manager/ Partner

Education: University of New Hampshire, Thompson School of Applied Science, Associates of Applied Science, Civil Engineering Technology // Registrations – NH LLS #946, O.S.H.A. Hazardous Materials Technician (29 CFR 1910.120) current Received the NHLSA “Outstanding Survey Technician Award,” December 2001

Mr. Ploof applies over 20 years of surveying experience to his position as an Owner / Partner of Fieldstone Land Consultants, PLLC. He is responsible for overseeing all aspects of Survey Operations, and is primarily involved with project proposals, contract negotiations, marketing, boundary & plan review, and survey personnel management. Mr. Ploof also continues to manage land development and construction related projects, coordinating field and office work, state and federal permitting, and representing clients before municipal boards.

Christopher A. Guida, C.S.S., C.W.S. – Certified Soil & Wetland Scientist / Partner

Education: University of New Hampshire, Bachelors of Science, Water Resource Management, // Registrations – NH Certified Wetland Scientist #53, NH Certified Soil Scientist #91, NHDES Licensed Subsurface System Designer #1401, NH Certified Septic Evaluator #18, Massachusetts Certified Soil Evaluator #13488, U.S. Army Corps of Engineers Wetland Delineator Certification, O.S.H.A. 40 Hour HAZWOPER Certification

Mr. Guida applies over 20 years of environmental science experience to his position as an Owner/Partner of Fieldstone Land Consultants, PLLC. He is responsible for overseeing all aspects of environmental services offered by Fieldstone Land Consultants, PLLC. He interacts daily with a wide variety of clients, contractors, state and local officials. Mr. Guida is responsible for managing, scheduling and conducting all phases of project development, including marketing, field work, design, and project presentations to governing authorities.

S.W. Cole Engineering, Inc.:

Chad Michaud, P.E. Executive Vice President, Chief Operating Officer, Senior Geotechnical Engineer
Education University of Maine B.S. Civil Engineering PE Registrations NH, ME, CT, RI, & T.

As Senior Geotechnical Engineer, Chad oversees a staff of geotechnical engineers providing coordination of subsurface investigations and geotechnical design and specifications. He has extensive experience with numerous NHDOT municipally managed LPA bridge projects.

Andrew Michaud Construction Services Manager, Office Manager

Education University of Maine B.A. Communications Certifications Numerous ACI, ICC, NETTCP, & OSHA.

Andrew has managed and performed materials testing on more than 20 NHDOT LPA projects since 2009. He has a strong understanding of the NHDOT Quality Assurance Program for Municipally Managed federal Aid Projects, the acceptance criteria and the QA testing procedures provided in the document.

New England Erosion Control, LLC:

Bruce A. Gilday, CSS, CWS, CESSWI

Education: Montana State University, Civil Engineering, 1985 Professional Certifications: NH CWS #88, NH Joint Board of Natural Scientists; NH CSS #12, NH Joint Board of Natural Scientists; NH CESSWI #381 Special Training: Certified 1989 ACOE Federal Manual (University of Massachusetts); Certified 1987 ACOE Federal Technical Report (University of New Hampshire); Certified Erosion and Sediment Storm Water Inspector (IECA)

APPLICABLE WORK EXPERIENCE



APPLICABLE WORK EXPERIENCE



Bedford Road over Baboosic Brook NHDOT #15841 | Merrimack, NH

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, Aerial Utility Relocation Design and Coordination, Budget Management, Project Meetings, QA/QC, Project Closeout.

This 90-foot span steel girder bridge on integral abutments replaced a severely undersized and deteriorated CMP. Work included the replacement of a 12-inch water main supported between the girders. Approximately 1100 linear feet of the roadway was reconstructed including elevating the roadway 6.5 feet to mitigate overtopping. This reconstruction included a 300-foot sheet pile retaining wall to accommodate the elevated profile within 25 feet of the existing brook. Traffic control was an on-site single lane detour road and bridge that utilized temporary traffic signals.

TTG coordinated the temporary and permanent relocation of aerial utilities to maintain the amended construction schedule. TTG developed aerial relocation plans and scheduled numerous meetings with the aerial utility companies and project stakeholders during the construction process. Additionally, in response to utility delays, we coordinated the redesign of the superstructure to feature partial depth precast concrete deck panels versus full depth cast-in-place deck to maintain the amended schedule.

Pleasant Valley Road over Heath Brook NHDOT #40617 | Wolfeboro, NH

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, Aerial Utility Coordination, Budget Management, Project Meetings, QA/QC, Project Closeout.

The existing Municipal Redlist twin culverts were replaced with a 28-foot span prestressed concrete butted deck beam superstructure founded on steel H-piles with concrete cap and butterfly wingwalls. The abutting wetlands, deemed prime wetlands by the Town, and one parcel was under conservancy management thereby posing sensitivity issues for construction. As the existing road is a dead-end road servicing 1200 parcels, a temporary single lane, signalized detour road and bridge was constructed on the prime wetlands. TTG coordinated the construction of the temporary detour road with the local Conservation Commission with very positive results upon its removal. Additionally, TTG coordinated with the Town and the local conservancy for the temporary relocation of aerial utilities onto the conservancy lands. As construction ensued, the conservancy and the Conservation Commission desired the preservation of an exemplary bull pine tree, requiring TTG to coordinate the redesign of the stormwater vegetated treatment swale with the local agencies and the NHDES Wetlands Bureau.

APPLICABLE WORK EXPERIENCE



Old Route 110 over Upper Ammonoosuc River NHDOT #15815 | Dummer, NH

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, Railroad Coordination, Budget Management, Project Meetings, QA/QC, Project Closeout.

The bridge replacement structure is an 80-foot span steel girder superstructure founded on concrete abutments. The west approach to the bridge is located within the Saint Lawrence & Atlantic Railroad (SL&A) right-of-way and an active railroad line requiring extensive coordination for construction activities and schedule. Excavation for the west abutment, encountered a buried stone retaining wall for the railroad tracks and a large rubble pile of cut masonry blocks that prohibited the installation of proposed shoring to stabilize the railroad during construction. TTG championed a redesign with the project stakeholders including NHDOT and SL&A and oversaw construction of an approach that allowed for construction to continue on an amended time schedule.

The onset of Covid-19 forced a travel suspension for the Vermont construction company requiring TTG to re-coordinate the construction schedule and make additional revisions to the Town's Agreement with the SL&A.

West Street over Great Brook NHDOT #29468 | Antrim, NH

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, Municipal Water Department Coordination, Budget Management, Project Meetings, QA/QC, Project Closeout.

The replacement bridge is a 28-foot span precast, prestressed concrete butted deck beam superstructure founded on steel H-piles with a concrete cap and butterfly wingwalls. Prior to construction commencing, the Town became aware of the proposed truck detour for NH Rte. 9 onto NH Rte. 202 and through the Town of Antrim. A detour route that coincided with the in-town detour route for the project causing concern for the ability of school bound traffic onto the detour. TTG coordinated outreach to the School Dept., Town Agencies, Contractor and NHDOT to formulate a workable solution for school traffic turning movements on off Main Street with the added truck traffic and revised detour program.

During construction, the existing water main was found to be in direct conflict with the proposed H-piles. TTG coordinated with the Antrim Water & Sewer Dept., Contractor, Town, and NHDOT for redesign and relocation of the utility by local forces as municipal force account work for the project, and within an acceptable time delay for the Contractor.



**Willow Street over Beaver Brook
NHDOT #26762 | Pelham, NH**

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, Budget Management, Project Meetings, QA/QC, Project Closeout.

The replacement bridge is a 104-foot span steel beam superstructure with integral abutments consisting of cast-in-place concrete pile caps supported on steel H-piles. The project also featured the reconstruction of approximately 400 linear feet of roadway with a new sidewalk as non-participating work scope within the project requiring the monitoring and accounting of the non-participating quantities of work for construction, QA/QC and identification within the Contractor's Application for Payments.

Outreach for aerial utility relocation coordination was undertaken by TTG in conjunction with the Contractor, to reactivate forgotten previous work scope agreements with the aerial utility companies so as to maintain the Contractor's proposed schedule.

Natural Resource permitting conditions required the protection of exemplary plant species within the project work zone, necessitating coordination of construction activities within the active growing cycle of the various species.



**Salt Storage Building Engineering
NHDAS DPW #80985R | Milan, NH**

Construction Services Provided: Reviewed Shop Drawings, Project Documentation, Part-Time Onsite Observation, Project Meetings, QA/QC.

TTG provided structural building design and construction engineering services for this Salt Storage Building located at NHDOT District 1 Patrol Shed 106. When completed, the structure was capable of receiving salt deliveries that could be unloaded within the building due to the 30-foot interior clear height. In addition to designing the building, TTG was responsible to perform cantilevered retaining wall reinforcing installation observations, concrete placement observations, wood framed wall construction inspection, and oversee installation of the long span prefabricated wood roof trusses and roof diaphragm construction.

TTG also received and reviewed all test results provided for the project to confirm the requirements of the plans and specifications were being met. Direct coordination with the DPW Project Manager throughout construction provided for a successful project delivered on schedule and budget.



Winnepesaukee River Trail NHDOT #14839, Federal Project #X-000(567) Northfield, NH

Construction Services Provided: Managed Project Submittals, NHDOT Bureau of Traffic Coordination, NHDOT Bureau of Rails Coordination, Project Documentation, Part-Time Onsite Observation, Budget Management, Labor Compliance, Project Meetings, QA/QC, Project Closeout.

This unpaved multi-purpose recreational of approximately 990 linear feet was constructed immediately adjacent to an active rail line on the abandoned second rail line. The project included construction of the stone dust surfaced path, railroad separation fencing, drainage swales and culverts, and reconstruction of an active railroad crossing at Knapp Road.

During the construction process the crossing of NH Rte. 3 & 11 became a local concern resulting in TTG's outreach to NHDOT Bureau of Traffic. Resultant of on-site meetings, the resolve was TTG's recommendation for an unmarked crossing of US Rte. 3 & 11 to the sidewalk on the north side of the road and installation of WRTA signage through Tilton utilizing sidewalks and into Northfield onto shared use facilities for connection of this constructed trail segment to the previous trail segments originating in Franklin, NH.

Old Marlborough Road over Charcoal Brook NHDOT #14928, FEMA-1695-DR-NH Dublin, NH

Construction Services Provided: Managed Project Submittals, FEMA Coordination, Project Documentation, Part-Time Onsite Observation, Budget Management, Project Meetings, QA/QC, Project Closeout.

A failed 8-foot high x 12-foot span corrugated metal pipe arch was replaced with an 11-foot high by 12-foot span precast concrete box culvert with natural streambed material placed on the bottom of the culvert to restore aquatic connectivity.

The project abuts the Dublin Lake Club (DLC), a local private golf course, and the roadway was deemed a scenic roadway. As such, tree removal for the project was coordinated with the DLC and the irrigation intake for the DLC was relocated to an amenable location for continued irrigation service during construction. Coordination with the DLC included maintaining security of the construction site, DLC's participation in selection of texturing and coloration of the precast components, and construction schedule.



Old North Branch Road over North Branch River NHDOT #14944, Federal Project #X-A000(927) Antrim, NH

Construction Services Provided: Managed Project Submittals, FHWA Coordination for Roadway & Drainage Reconstruction, Project Documentation, Part-Time Onsite Observation, Budget Management, Labor Compliance, Project Meetings, QA/QC, Project Closeout.

The critically deficient 44-foot span steel girder bridge supported on dry laid stone abutments was replaced with an 80-foot span steel plate girder bridge founded on concrete abutments.

Immediately at construction start the aerial utilities notified the contractor and the stakeholders that permanent aerial utility relocation over the North Branch River would be sought requiring a NH Public Utilities Commission license. This year long process required TTG's continued coordination with utility companies and the NHDPU, and required TTG to negotiate a delay of work change order with the Contractor for approval by NHDOT & FHWA.

During the delay, an unknown closed drainage system failed within the roadway designated for reconstruction. TTG coordinated a site review meeting with the NHDOT, FHWA and the Town, and reached a resolve from FHWA for additional road reconstruction with a replaced drainage system.

Bean Hill Road Reconstruction NHDOT #13698 | Northfield, NH

Construction Services Provided: Managed Project Submittals, Project Documentation, Part-Time Onsite Observation, NHDOT District 3 Coordination for Overlap Activities, Budget Management, Project Meetings, QA/QC, Project Closeout.

This 6300 linear foot road reconstruction included in-place pavement reclamation and rehandling for installation of base gravel reinforcement and additional crushed gravels, new closed drainage systems located within roadside drainage swales, and new pavements. Superelevated roadway segments were constructed as full roadway box-out construction. An existing 72-inch CMP was sliplined to preserve and enhance the service life of this deep culvert.

During construction, NHDOT District 3 (District) became concerned with the potential from increased channelized drainage swale run-off entering their systems. An on-site meeting with TTG, NHDOT Bureau of Community Planning & Assistance, District, Town, and Contractor yielded a resolve and modification of project requirements to assist District with their maintenance operations during construction.



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