

January 6, 2017 | Qualifications

**Vermont Agency of Transportation**

# At-the-Ready Consultant Engineering

Construction Inspection Services



January 6, 2017

Ms. Nydia Lugo  
Technical Development Engineer  
Vermont Agency of Transportation  
One National Life Drive  
Montpelier, VT 05633-5001



**Re: Vermont Agency of Transportation –  
At-the-Ready Consultant Engineering Services for Municipalities  
Construction Inspection Services**

Dear Nydia and members of the Selection Committee:

VHB is pleased to present our proposal in response to the Agency’s Request for Qualifications for At-the-Ready **Construction Inspection Services**. Our proven dedication to VTrans and its municipal transportation partners spans nearly 30 years. We understand the challenges facing Vermont and its communities and are firmly committed to helping achieve the vision of a safer, more efficient, and more connected transportation network. We believe in making meaningful contributions to our communities and our state by providing a balanced relationship between economic growth and environmental stewardship. We are committed to quality and at 1,300-strong, we provide both the local connection and depth of resources to meet the full needs of the VTrans Municipal Assistance Bureau (MAB) program.

For this contract, we are excited to be teaming with **EIV Technical Services, LLC**. EIV provides additional experienced and knowledgeable resident engineers and construction inspectors. They are known throughout Vermont as insightful and seasoned construction professionals that represent their client’s best interests and ensure quality construction on every project.

We are delighted to have the opportunity to present our proposal and we look forward to working together with Vermont municipalities and VTrans on projects that make our communities even better places to live.

Sincerely,

A handwritten signature in black ink that reads 'Evan P. Detrick'.

Evan Detrick, PE  
**Program Manager**  
Director of Transportation Engineering  
[edetrick@vhb.com](mailto:edetrick@vhb.com)

A handwritten signature in blue ink that reads 'David Saladino'.

David Saladino, PE, AICP  
**Principal-in-Charge**  
Managing Director  
[dsaladino@vhb.com](mailto:dsaladino@vhb.com)

**Our team is  
dedicated to  
our clients  
and the  
projects that  
improve  
mobility,  
enhance  
communities,  
and make  
Vermont a  
better place  
to live.**

# General Firm Information





#### VHB

40 IDX Drive  
Building 100, Suite 200  
S. Burlington, VT 05403  
802.497.6100  
edetrick@vhb.com

#### EIV Technical Services, LLC.

55 Leroy Rd, Suite 15  
Williston, VT 05495  
802.497.3653  
ndagesse@eivtech.com

## Overview

The Vermont Agency of Transportation (VTrans) Municipal Assistance Bureau (MAB) was initially established in the 1990's as the Local Transportation Facilities (LTF) section of the Program Development division. Since its inception, the mission of this unit has been to provide assistance to municipalities and other organizations (project sponsors) to implement transportation improvement projects in their communities. These projects span a wide range of topics which may include sidewalks and pathways, intersection improvements, bridge replacements, rehabilitation of covered bridges, Safe Routes to School projects, Scenic Byway corridor plans, transportation scoping studies, stormwater improvements, crosswalk enhancements, and the rehabilitation of historic structures.

Projects through the MAB are funded using a variety of sources, often including federal monies such as Transportation Alternatives Program grants, along with local matching funds, and occasionally state funds. With the use of federal and state funds, the projects are administered through VTrans and must be developed following the VTrans project development process outlined in the MAB's Local Projects Guidebook for Locally Managed Projects. Under this process, the municipality manages and develops the project, and VTrans administers the funding and verifies the established process is being followed. Although VTrans helps the municipality with many aspects of the project development, it is ultimately the municipality's responsibility to advance the project. To do so, municipalities rely on the help of consultants. Consultants can assist the municipalities in three different ways:

- Manage the project on behalf of the municipality by serving as the Municipal Project Manager (MPM);
- Serve as the designer responsible for developing plans and specifications or preparing scoping reports;
- Provide construction administration and inspection services.

To retain the services of a consultant, municipalities have traditionally solicited proposals or statements of qualifications to identify and determine which consultants are best qualified for the project. This process has been burdensome on some municipalities, especially those with small staffs that are not familiar with the solicitation process. To streamline and simplify the process, the VTrans MAB has issued this request for qualifications to identify a list of consultants that can provide services to municipalities on an “At the Ready” basis.

VHB is pleased to be teaming with **EIV Technical Services** (EIV) and subconsultant **S.W. Cole** (SWC) to respond to VTrans’ RFQ to provide Construction Inspection services to municipalities and other project sponsors across the state. Our Team has a long history of delivering multi-faceted transportation services throughout Vermont. Through our extensive experience on numerous VTrans retainer contracts and individual MAB projects, we are ideally suited to provide construction services under this retainer. Our Vermont team is small enough to provide caring and responsive services, and with the support of many experts across our companies, we have the resources to tackle the most challenging of assignments. We look forward to working with VTrans and municipalities for the betterment of Vermont’s transportation infrastructure.

**VHB has a long history of delivering multi-faceted transportation services to municipalities throughout Vermont. Through our extensive experience on numerous VTrans retainer contracts and individual MAB projects, we are ideally suited to provide a broad array of management, design, scoping, and construction phase services under this retainer. Our Vermont team is small enough to provide caring and responsive services, and with the support of many professionals along the East Coast, we have the resources to tackle the most challenging or unique assignments. We look forward to working with VTrans and municipalities across the state for the betterment of Vermont’s transportation infrastructure.**

## General Firm Information



### VHB

Since 1979, VHB has partnered with private- and public-sector clients to provide high-quality transportation engineering services through an integrated team approach. VHB has continued to grow and hone a diverse workforce that delivers personalized service and brings value, responsiveness, and excellence to municipalities. We pride ourselves on our ability to guide our clients from initiation to completion of multi-disciplined, challenging, and important transportation projects of all sizes.

### EIV Technical Services



EIV is locally based in Williston, VT and has a solid history of providing construction management services to the engineering and construction industry. They have successfully provided construction management and environmental services for private, local and state projects since 1964. Most recently, they have been awarded a prime contract agreement with VTrans for Construction Management and Inspection services for four renewal periods (each period being 3-4 years). Their professionals have provided construction management and inspection services on sidewalk, building, bike path, paving, roadway and bridge projects. Additionally, their dedication to quality construction management services has earned them a key position on six VTrans Design-Build projects (in Windsor, Milton, Brattleboro, Ryegate, Richmond, and South Burlington / Georgia), and the first VTrans construction management

general contractor (CMGC) project in Hartford. EIV has become a 'go-to' firm for challenging projects and new methods of project delivery given our expertise, flexibility to client needs, and their dedication to quality.

### The VHB-EIV Difference

Collaboration is a focal point of our approach to projects; VHB and EIV professionals work together across practice areas and geographies to provide holistic project solutions. We emphasize truly listening to and understanding our client's needs while working collaboratively and in partnership. We also incorporate input from stakeholders into our proposed solutions early in each project's development. This approach has helped us develop our strong track record of delivering comprehensive, forward-thinking, and well-supported projects in a timely and cost-effective manner. Evidence of this success can be found in the industry recognition VHB and EIV projects receive – and the number of repeat clients we are happy to serve.

Because the VHB-EIV Team combines an understanding of VTrans procedures with in-depth knowledge of local communities, we are well-suited to assist municipalities with At-the-Ready services for their transportation improvement needs. VHB offers a broad range of services through our in-house staff, and we are fully capable to provide Construction Phase services, and have teamed with S.W.Cole (SWC) on this retainer to enhance our construction inspection and administration capabilities.

### S.W. Cole

S.W. Cole's construction materials testing division has been providing knowledgeable, friendly service since our founding in 1979. Their more than 50 technicians are respectful, dependable, experienced and knowledgeable. Many hold advanced certifications from top industry associations such as the Northeast Transportation Technician Certification Program (NETTCP), the American Concrete Institute (ACI), the International Code Council (ICC) and the National Institute for Certifications in Engineering Technologies (NICET). S.W. Coles eight offices located in strategic cities and towns across northern New England allow them to service projects efficiently, and the flexibility to schedule field testing services in an emergency or last-minute situation – saving clients time and money.

### Local Presence and Knowledge, Regional Expertise and Resources

The VHB-EIV Team's services under this retainer will be provided out of our Vermont offices. With our combined resources, we offer the full range of services anticipated under this contract. We live, work, and play here and we consistently hire Vermonters. We understand what makes our state special. We've built our businesses by serving as an extension of VTrans staff. We take great pride in helping VTrans and municipalities improve the already great quality of life in Vermont. Our Vermont staff will be supported by the resources and relationships of professional designers, engineers, scientists, planners, and seasoned construction managers and inspectors. Our local presence, knowledge of MAB practices and expectations, and depth of resources allows us to provide personal service, value, and responsiveness every time. As a WBE EIV brings diversity to our team and is an excellent addition to provide construction phase services.

### Team Accessibility and Responsiveness

When providing services on behalf of clients our goal is to be as accessible as possible. Our team members pride themselves in being accessible for a client's needs day and night.

Our local presence allows us to take a hands-on approach with attendance at regular work sessions during development of the design documents. In addition to our local office and resources across New England, we maintain a diverse network of subconsultant teaming partners, such as S.W. Cole for materials testing and geotechnical investigations. These subconsultants will be called upon as needed depending on individual project requirements opportunities for teaming with DBE and WBE firms based upon the best fit for services required.

### Previous Experience

VHB's and EIV's offices were built around our relationships with local municipalities and VTrans. We have proudly been working side by side with them for more than two decades. During this time we've seen VTrans' processes and goals evolve, and we feel privileged to be a part of that development. We are excited to continue our partnerships throughout the state and look forward to completing innovative, high quality transportation infrastructure projects in the future.

Providing consulting services to municipalities, and to state and federal agencies, is a core purpose of our company and a key focus of our Vermont staff. Our overall approach to the management of this contract is informed by our successful experience on a wide range of similar on-call assignments.

### VHB-EIV Listing of Current Vermont On-Call Retainers and Contracts

#### VHB

##### VTrans

- Roadway, Traffic, & Safety On-Call Retainer
- Structures On-Call Retainer
- Railroad Engineering On-Call Retainer
- Park & Ride On-Call Retainer
- General Environmental On-Call Retainer
- Biological On-Call Retainer
- Planning & Policy On-Call Retainer

#### EIV

VTrans Construction Management & Inspection On-Call Retainer

### Organizational chart

The Organizational Chart on the following page shows the core team and key support staff that will work on this retainer contract. VHB and EIV will jointly provide Construction Inspection services. For the Construction Inspection services, VHB will have responsibility for each project and will either provide inspection and construction management services with our in-house staff, or rely on the staff of EIV to provide these services. The staffing for the VHB team will be flexible, and we will always provide the right people for each individual project.

## At-The-Ready Project Team

### VTrans Municipal Assistance Bureau



**Program Manager**  
Evan Detrick, PE



**Principal-in-Charge**  
Dave Saladino, PE, AICP



### CONSTRUCTION INSPECTION

*Project Manager (VHB)*  
Rachel Marvin, PE

*Project Manager (EIV)*  
Nate Dagesse, EI

*Resident Engineer (EIV)*  
Jason Waysville, PE

*Resident Engineer (EIV)*  
Sabin Clark, PE

*Resident Engineer (EIV)*  
Russ Colvin, EI

*Construction & Environmental Inspector (VHB)*  
Michael Ingram, CPESC

*Construction & Environmental Inspector (EIV)*  
Emmalee Cherington, EI, CPESC

*Construction Inspector (EIV)*  
Cameron Michaud

*Materials Testing Manager (SWC)*  
Alan Brown

*Materials Testing Technician (SWC)*  
Alex Coache

### KEY SUPPORT STAFF

*Permitting*  
Brad Ketterling

*Historical/Cultural Resources*  
Kaitlin O'Shea

*Stormwater Management/ Permitting*  
Marla Keene, PE

*Hydrologic & Hydraulic Studies*  
Ryan Lizewski, PE

*Lighting Design*  
Kathryn Lee, PE

*Bridges & Structures*  
Scott Burbank, PE

*Rail Engineering*  
Mark Louro, PE



### Availability chart

NAME	ROLE	AVAILABILITY FOR THIS CONTRACT
<b>Key Personnel</b>		
Evan Detrick, PE	Program Manager	15%
Dave Saladino, PE, AICP	Principal-in-Charge	5%
Rachel Marvin, PE	Project Manager	15%
Nathan Dagesse, EI	Project Manager	30%
Jason Waysville, PE	Resident Engineer	40%
Russ Colvin, EI	Resident Engineer	35%
Sabin Clark, PE	Resident Engineer	40%
Michael Ingram, CPESC	Construction Inspector	30%
Emmalee Cherington, EI, CPESC	Construction Inspector	40%
Cameron Michaud	Construction Inspector	40%
Alan Brown	Materials Testing	20%
Alex Coache	Materials Testing	20%
<b>Support Staff</b>		
Brad Ketterling	Permitting	10%
Kaitlin O'Shea	Historic/Cultural Resources	10%
Marla Keene, PE	Stormwater	10%
Ryan Lizewski, PE	Hydrologic/Hydraulics	10%
Kathryn Lee, PE	Lighting Design	10%
Scott Burbank	Bridges & Structures	10%
Mark Louro, PE	Rail Engineering	10%

# Construction Inspection Services





## Construction Inspection

### Understanding

Construction is the most visible part of any project. It's when the sponsor and general public get to see the improvements being made, and there is a sense of accomplishment as the project is brought to fruition. While most contractors do a fine job during construction, towns need verification that their contractor is building their project as intended. It is the role of the Resident Engineer and Construction Inspector to verify that the contractor is adhering to the plans and specifications, and constructing the project properly.

The VHB-EIV Team knows that for any project to be a success, it must progress smoothly and be compliant with design plans, specifications, procedures, and environmental permits/regulations from the start. Therefore, our team will undertake the following for all construction projects:

- Review and have a working knowledge of the plans, specifications, estimates, and special provisions before the start of construction
- Perform frequent or continuous inspection of the work
- Conduct regularly-scheduled construction progress meetings
- Verify the construction is being completed in conformance with the contract plans and specifications
- Prepare Daily Reports, calculate daily quantities, and complete a daily photo log showing progress
- Provide timely, clear and concise feedback to the contractor
- Provide materials inspection testing in accordance with the appropriate Inspection Level of the VTrans' Quality Assurance Program (QAP) and Materials Sampling Manual (MSM).

- Calculate and verify the final quantities
- Maintain communication with the MPM and coordinate with the Design Engineer, VTrans MAB Project Supervisor, the contractor and their subs whenever needed
- Provide written, weekly updates to the municipality, MPM, VTrans MAB Project Supervisor, the design engineer and the contractor. These updates can be shared with municipal stakeholders and property owners to keep people informed.

## Our Approach

The VTrans Construction Manual emphasizes that “usually more can be accomplished by positive persuasion than by the use of the full authority given to the Resident Engineer.” The VHB Team staff has established a solid track record of positive working relationships statewide with many municipalities, contractors, the public, utility companies and state and federal regulators alike.

The VHB-EIV Team’s approach to achieve success is to assign qualified people with appropriate experience on every project. Between VHB and EIV, we have a deep pool of engineers, construction managers and inspectors, and we will assign those persons with the most relevant experience for each assignment. We will work with the VTrans Project Supervisor and municipality to identify the best team members for each project, and have them meet with VTrans and the municipality prior to the pre-construction meeting to discuss their experience and roles before construction begins.

Once our team is on board, we will manage construction in a pro-active way. We will keep the municipality and VTrans informed with routine updates and bring issues forward for discussion and resolution before they become problems. Our resident engineer will be involved with and knowledgeable of the construction status through frequent communication with our Construction Inspector. Our Inspectors will raise issues and concerns with the contractor immediately upon identification, and will coordinate with the public in a respectful and cordial way. Our goal is to be an advocate for the municipality to have construction proceed as smoothly and trouble-free as possible.

## Role of the Resident Engineer

The Resident Engineer is the point of contact between all parties during construction and is ultimately responsible to verify that construction is completed in accordance with the contract documents. They supervise the Construction Inspector and provide engineering guidance, conduct routine site visits, and are available for field calls, as necessary. The Resident Engineer provides office support, reviews test reports and pay requisitions, as well as coordinates between the design engineer, VTrans MAB Project Supervisor, MPM and the contractor. The Resident Engineer is in contact with the Inspector on a daily basis and assists the Inspector with the daily clerical requirements, allowing the Inspector to focus on the construction activities. The Resident Engineer arranges for and leads the pre-construction meeting and the regular construction status meetings, convenes special meetings if necessary, and arranges for and leads the final inspection. Once the contractor has completed a minimum of 90% of the work, VHB will issue a Certificate of Substantial Completion to the contractor and schedule a final inspection. After the final inspection is complete, VHB will issue a punch-list to the contractor for the completion of the project. When the contractor has completed the items on the punch list, VHB will issue a certification to the Town and the VTrans MAB Project Supervisor stating that the project was constructed as designed and in accordance with the appropriate and necessary construction revisions, in conformance with all the project specifications, and that construction fully complied with all necessary contract provisions.

## Role of the Construction Inspector

The Construction Inspector will be the person with their “boots on the ground”. They are the first line of defense for the municipality to ensure the construction contractor is following the plans, and providing materials that meet the specifications. The Inspector must be firm with the contractor, and immediately establish that they have the ultimate say in whether or not the work meets expectations. The Inspector must be thoroughly familiar with the VTrans specifications and standards, what materials are to be used, how to assess their quality, and how they should be paid for. Our Construction Inspector will meet with the contractor each day prior to the commencement of work to go over the anticipated work, and at the conclusion of each day to verify the contractor’s plans for the following day.

The current practice on MAB projects is to have the municipality retain the services of a qualified firm to conduct material testing and sampling. This includes items such as performing concrete cylinder breaks to test the strength of Portland cement concrete; verifying the gradation of subbase materials to make sure they have the proper blend of sands and gravels; and verifying the mix design of asphalt pavements to make sure they have enough, but not too much, bituminous material. This work is arranged by and coordinated through the Inspector. As part of the construction phase services contract, the consultant will include a testing firm on their team, and the Inspector will make arrangements with the testing firm to be on-site whenever testing should be conducted, make sure the proper tests are being conducted, and then reviewing the test results. The Inspector will also conduct tests as materials are being placed, including verifying that the proper thickness is used for items such as concrete sidewalks and roadway pavements; and materials are being placed at the proper temperatures (asphalt must be within a certain temperature range and concrete can’t be placed if it is too cold). The Inspector’s responsibilities also include reviewing certifications provided the contractor and their suppliers that items such as pavement markings are comprised of the correct type of paint; signs have been fabricated with the correct type of reflective surface; and steel and iron products have been manufactured in the United States if “Buy America” provisions apply to the contract.

Another important role of the Inspector is to interface with affected property owners. Virtually all construction projects have some impacts to adjacent properties, and the Inspector is often the person that owners reach out to in order to ask questions or make complaints. The Inspector must do whatever they can to answer questions and reasonably address property owner concerns. The Inspector must listen carefully and treat the owners with respect even when an owner is being particularly difficult. The Inspector must answer questions and resolve issues whenever possible, yet know when resolution is beyond their authority and recognize when it is necessary to elevate the discussion to the Resident Engineer or town officials. Keeping the public happy throughout construction is one of the best measures of a project’s success. The VHB team understands this, and works proactively to keep owners informed by explaining the upcoming work, its schedule, and how it will affect the owner’s property and access before the work occurs.

## Pre-Construction Meeting and Regular Construction Progress Meetings

Most projects benefit from regular progress meetings, which are normally held biweekly or monthly depending on schedule and progression of work.

Prior to getting started with the project, VHB will set-up a Pre-Construction Conference with the Town, MPM, VTrans LTF Project Supervisor and the contractor and their subconsultants. At the Pre-Construction Conference, the roles and expectations along with the contact information for the attendees as well as the contractor's construction schedule will be discussed. In addition to these items, the following items will also be addressed:

- Verify that the contractor has contacted Dig-Safe
- Scheduling the bimonthly construction status meetings, if required
- Determine the procedure and "chain-of command" for reporting any unusual occurrences and any accidents within the project limits
- Set-up the procedure for submitting and issuing any modifications and/or changes to the plans by the contractor
- Review the specific items requiring shop drawings and/or certificates and discuss how the shop drawing process will be administered
- Discuss preparation of the contractor's bi-weekly progress payment estimate
- Discuss the contractors requirements for traffic control for each phase of the project

The Resident Engineer will schedule and facilitate regular progress meetings, and the Construction Inspector will attend to provide a detailed update on the project status, review progress, describe the results of material testing, discuss any concerns regarding the contractor's work and how those concerns are being resolved, and identify any action items. These meetings are a good opportunity for the municipality and VTrans Project Supervisor to hear first-hand how the construction is progressing, ask questions, and verify that the Resident Engineer and Inspector are managing the project appropriately.

Frequently discussed topics normally include: traffic control, dust mitigation, site soil tracking, construction signing, permitting criteria, public outreach, erosion and sediment control, material sources and waste, materials testing and results, borrow and staging areas, coordination with state agencies, utility coordination, Requests for Information, updated schedule, pay requisitions, and other topics as required.

### Quality Assurance/Quality Control

An important aspect of Construction Inspection is the assurance that quality materials are being used, and that quality workmanship is being performed. Throughout construction our inspectors will review the contractors work to ensure that it meets or exceeds the project requirements. This will include reviewing material certifications for items such as drainage grates, paint, seed and fertilizer, sand, aggregates, and sign posts. Our inspectors will review the certifications provided by the contractor to verify the materials meet VTrans specifications and do indeed match the materials being installed.

Our inspectors will also arrange for material testing in accordance with the project requirements. We will rely on the services of S.W. Cole to perform material testing under this retainer. S.W. Cole has extensive testing capabilities including: concrete and asphalt testing, aggregate gradations, soils testing, masonry and block testing, compaction testing, and rock testing. S.W. Cole annually performs nearly 40,000 field and laboratory test procedures, including approximately 3,300 laboratory soil sieve analyses and 1,400 laboratory soil moisture density tests, and they cast and test 28,000 concrete compressive strength specimens. Two of their laboratories have been accredited by the AASHTO Materials Reference Laboratory (AMRL), and they continuously upgrade and calibrate their equipment to ensure tests are accurately performed to the latest requirements.

## Project Experience



### Cross Street, College Street & Main Street Reconstruction

#### Middlebury, VT

VHB was responsible for construction inspection and Resident Engineering in support of the \$16M Cross Street Design-Build project in downtown Middlebury. The project included three new downtown streets, a new roundabout, full depth reconstruction of a portion of Main Street, a signalized intersection, landscaping and lighting improvements, new parking lots, and numerous new sidewalks. A major project challenge was maintaining downtown traffic and access to business and residences during construction.

- Contact: Bill Finger, Former Town Manager | [finger@gmavt.net](mailto:finger@gmavt.net) | (802) 453-4296



### River Road Paving Project Construction Inspection Services

#### Lincoln, VT

VHB performed construction inspection services for the repaving of River Road. Work performed under this contract included resurfacing roadway by cold planning and filling/overlay up to two inches along with associated pavement marking, shoulder work and drainage adjustments. VHB worked closely with the contractor, MPM and VTrans to ensure that all work was performed in accordance with applicable state and federal guidelines.

- Contact: Martha Rainville | [rainvb@wcvt.com](mailto:rainvb@wcvt.com) | 802-828-3594



### Kelley Stand Road Reconstruction

#### Sunderland, VT

For this project VHB provided project scoping, design services, and full construction oversight for reconstruction of approximately four miles of Kelley Stand Road (Forest Highway 6) and reconstruction along sections of Roaring Branch stream channel located in Sunderland, Vermont. Project scope included reconstruction of 32 damaged sites along to the road, including two bridges, multiple roadway sections, and channel reconstruction.

- Contact: Mark Hyde | [mhyde@sunderlandvt.org](mailto:mhyde@sunderlandvt.org) | (802) 375-6106



### Burlington Bike Path Phase 1a

#### Burlington, VT

VHB performed resident engineering services Resident Engineering Services will generally consist of coordinating and facilitating a preconstruction conference, review of contractor submittals, material testing and certification, review of material testing results, coordination with the City and Contractor, full-time on-site construction observation, and final inspection. VHB consulted with and kept the City fully informed on project progress throughout the duration of this contract.

- Contact: Jon Adams-Kollitz | [jadamskollitz@burlingtonvt.gov](mailto:jadamskollitz@burlingtonvt.gov) | 802-540-0363



### **Green Mountain Transit Downtown Transit Center**

#### **Burlington, VT**

VHB led a team of professionals in civil engineering, architecture, mechanical engineering, electrical engineering, structural engineering, security, and traffic engineering to deliver the project on time and under budget. The project was also designed in close coordination with Burlington Public Works, and Burlington Electric Department to make sure the facility was carefully and thoughtfully integrated with the Burlington Downtown area in accordance with state and local accessibility requirements. VHB also provided construction phase engineering support to GMT delivering a smooth ride through revenue service.

- Contact: Steve Carlson | [scarlson@ridegmt.com](mailto:scarlson@ridegmt.com) | 802-540-2548



### **Burlington Bike Path Phase 1b (EIV)**

#### **Burlington Bike Path**

EIV's role for Phase 1b of the Burlington Bike Path project included both preconstruction and construction services. During the preconstruction phase, EIV assisted the City of Burlington with plan review, bid and contract documents, contractor procurement and cost estimating. Once the project was awarded, EIV managed the construction process. This included on-site construction management and inspection oversight, coordination of weekly team meetings, tracking work progress, reviewing submittals, overseeing and verifying change orders and payments, along with final inspection and acceptance of the work. EIV helped deliver this successful project on time and under budget.

- Contact: Jon Adams-Kollitz | [jadamskollitz@burlingtonvt.gov](mailto:jadamskollitz@burlingtonvt.gov) | 802-540-0363



### **Route 116 Bridge (EIV)**

#### **Bristol, VT**

EIV provided Construction Inspection services and the role of Environmental Compliance Officer to the Vermont Agency of Transportation on this \$5.5M, 1.5 year project. This consisted of replacing two smaller bridges with one 360 foot structure that would span the New Haven River and the adjacent floodplains.

- Contact: Al Campo | [Al.Campo@vermont.gov](mailto:Al.Campo@vermont.gov) | (802) 654-0732



### **I-91 Slide Bridge Replacement (EIV)**

#### **Hartford, VT**

The Vermont Agency of Transportation has contracted with EIV Technical Services to oversee Quality Management, Construction Inspection and Materials Testing for the Hartford I-91 bridge replacement project. This project utilized the innovative construction method known as a lateral slide to replace the Interstate 91 Hartford Bridges for the first time in Vermont.

- Contact: Chris Barker | [chris.barker@vermont.gov](mailto:chris.barker@vermont.gov) | (802) 828-2593





## Windsor I-91 Design-Build (EIV)

Windsor, VT

EIV led Quality Assurance management on this \$20.6M bridge replacement project on I-91. This project consisted of replacement of the existing structures with two identical 650 foot long bridges 100 feet over a ravine in Windsor. EIV provided quality assurance management, construction inspection and materials testing services throughout the project.

- Contact: Ann Gammell | [ann.gammell@vermont.gov](mailto:ann.gammell@vermont.gov) | (802) 281-5000

## Key Personnel



### Evan Detrick, PE

Program Manager | 32 years of professional experience

Evan is a Civil Engineer with over 30 years of experience supporting federal, state, municipal, and private sector projects. Evan's responsibilities include project scoping and budgeting, personnel and work assignment scheduling, project management, public engagement, and quality control. He has completed the planning and design of over 40 MAB/LTF projects and numerous projects directly for VTTrans. His experience has included a variety of sidewalks, pathways, and trails; intersection and traffic signal upgrades; roadway resurfacing and reconstruction; property and topographic surveys; bridge rehabilitation and replacement; streetscape and lighting enhancements; stormwater improvement projects; and many projects involving public outreach. Evan was project manager for the construction of Quechee Covered Bridge, as well as the Three Rivers Path project in St. Johnsbury.



### Rachel Marvin, PE

Project Manager | 10 years of professional experience

Rachel is a Vermont-registered Professional Engineer experienced in linear waterline and sewerline projects, construction management, civil/site projects, stormwater modeling, permitting, water and sewer ordinance reviews, and rate studies. Rachel has worked on numerous MAB projects including sidewalk improvements for the City of Burlington, Town of Milton, Village of Poultney, and Town of West Rutland. She has also worked on linear waterline replacement/extension projects that include resident engineering/construction phase services for the Town of Brighton, Town of Essex, Village of Jericho, Village of Lyndonville, Town of Milton, City of South Burlington, Town of Plainfield, Village of Poultney, Town of Springfield, Village of Swanton, Town of West Rutland, and Town of Williston.



### Michael Ingram

Construction/Environmental Inspector | 5 years of professional experience

Mike is an Environmental Scientist position in VHB's South Burlington, Vermont, office. He works as a Construction Inspector, Environmental Monitor, and Environmental Scientist, employing a diverse set of skills including field observations and reporting, GIS mapping, plan reading, and working on multiple projects simultaneously, as well as trouble shooting and solving time sensitive issues. At VHB he has worked on construction oversight and environmental compliance coordinator for VT Gas Addison Natural Gas project construction. He performed construction oversight on Milton I-89 and Windsor I-91 Design-Build projects while with another firm.

## EIV Personnel



### **Nathan Dagesse**

Project Manager | 10 years of professional experience

Nathan is an accomplished engineering and construction professional with a proven track record of planning and executing complex technical and management tasks. He has been fortunate to have experience on a variety of challenging projects, including:

- City of Burlington Phase 1a and 1b Bike Path rehabilitation project
- VTrans Hartford I-91 CMGC Project,
- VTrans Windsor I-89 Bridge Replacement Design Build Project,
- VTrans Truss Bridge Replacement project in Bethel, VT,
- VTrans Accelerated Bridge Program's Chester Double Bridge Project, and
- VTrans Milton I-89 Design Build project.

Nathan has become known for his attention to detail and working knowledge of regulatory requirements by VTrans staff. He was asked to assist other Resident Engineers and Construction Inspectors to train them on his methods for project documentation.



### **Russ Colvin**

Resident Engineer

Russ is an accomplished construction professional with over 25 years of experience in construction inspection and construction administration of various civil /site projects, and is very active in the construction community in various roles. His background includes: Resident Engineering, field inspection, review of shop drawings of submittals, construction superintendent, professional clerking, estimating, and professional construction management. Some of his most recent project work includes acting as the Resident Engineer on the Burlington Bike Path Phase 1B project and as chief construction inspector for the VTrans Windsor Design-Build project. With a previous employer, Russ was Resident Engineer for improvements to Lower Church Street and Saint Paul Street in Burlington, Vermont. Work included new street lighting, granite curbs, brick and granite pavers, landscaping and site amenities, new sub-base, and new bituminous asphalt and markings.



### **Jason Waysville, P.E.**

Resident Engineer

Jason is a civil engineering professional with over 10 years of experience. He provides quality assurance management, design and construction inspection various civil engineering projects. His civil engineering expertise includes: aviation, highway, bridge, utilities, pathway, and building design. He most recently served as the VTrans Windsor I-91 Bridge Design Build Project's Quality Assurance Manager, and is currently the Milton I-89 Bridge Design Build Project's Quality Assurance Manager. Jason also worked as the Resident Engineer for the town of Manchester, VT on the roundabout and downtown roadway improvements project.



**Sabin Clark**

Resident Engineer

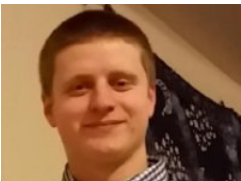
Sabin is a reliable and knowledgeable construction engineer. He is currently the chief construction inspector on the Brattleboro I-91 Design Build project. At the onset of every project, Sabin performs a thorough review of the project documents and carefully studies the proposed design plans. Throughout his career he has noted multiple plan issues in advance, and has worked with the contractor and resident engineer to determine a resolution prior to impacting the schedule.



**Emmalee Cherington**

Construction Inspector

Emmalee is technically proficient, and a diligent and thorough engineer. She has a Bachelor's Degree in Civil and Environmental Engineering at UVM, and has obtained certifications from NETTCP and ACI. Emmalee performs environmental inspection and has her wetland scientist and CPESC certifications. She recently assisted Chris Lavalette as a construction inspector on the Bridport Bridge 2 and Bridge 5 project during the 2015 construction season.



**Cameron Michaud**

Construction Inspector

Cameron is a reliable and diligent construction engineer. He has a Bachelor's Degree in Civil Engineering from UVM, and has provided construction inspection services on VTrans projects over the past year. He is currently working on the Hartford I-91 CMGC slide bridge project. Cameron provided inspection on the Stockbridge –Bethel roadway project. He is tech savvy and quickly became the team's in-house expert on new QC technology for this roadway project.

**S.W. Cole Personnel**

**Alan Brown**

Materials Testing Manager

Alan has 30 years of experience in field and laboratory inspection of construction materials, including soil, concrete, prestressed concrete, bituminous concrete, steel reinforcing, fireproofing, paint thickness gauging and non-destructive testing of metals. He is a Master of Special Inspections as prescribed by the International Code Council (ICC) and holds a number of desirable certifications and registrations from the American Concrete Institute (ACI), ICC, NorthEast Transportation Technician Certification Program (NETTCP) and other reputable organizations. Alan's responsibilities at S.W.COLE include contract and business development, project management and assisting with testing services such as soil density, concrete, masonry, and performing special inspections and associated laboratory testing.

**Alex Coache**

Materials Technician

Alex Coache joined S. W. Cole Engineering, Inc. in the summer of 2015. He is a technician with the firm in the field services and laboratory testing divisions. His responsibilities at include soil density testing, concrete testing, reinforcing steel observation and asphalt testing along with associated laboratory testing. He has worked on projects in New Hampshire and Vermont. Certifications include: ACI Certified Concrete Field Technician, Grade 1; and Certified Nuclear Densometer Operator.

# Resumes



## Evan P. Detrick, PE

Program Manager



### Education

BA, Liberal Arts, East  
Stroudsburg University,  
1984

BS, Civil Engineering,  
Pennsylvania State  
University, 1984

### Registrations/ Certifications

Professional Engineer (Civil)  
VT, 2016

Professional Engineer (Civil)  
NH, 2015

### Affiliations/ Memberships

Vermont Society of  
Engineers, 2016

Institute of Transportation  
Engineers, Vermont, 2004

Evan is a Civil Engineer with over 30 years of experience supporting federal, state, municipal, and private sector projects. Evan's responsibilities include scoping and budgeting, personnel and work assignment scheduling, project management, and quality control. He has completed the planning and design of projects, including a variety of sidewalks, pathways, and trails; highway projects such as 4-lane, limited access highways on new alignments; arterial roadways on new alignments; roadway widening and rehabilitation; bridge construction and replacement; environmental assessments in accordance with NEPA; traffic signal improvements; property and topographic surveys; floodplain certifications; and numerous Safe Routes to School and Transportation Enhancement projects.

### *33 years of professional experience*

#### **Quechee Covered Bridge #6, Bridge Replacement, Hartford, VT**

Prior to joining VHB, Evan was Project Manager for design and construction phase services for the replacement of the Quechee Covered Bridge (CB#6) over the Ottauquechee River. The bridge was significantly damaged by Tropical Storm Irene and the Town decided to implement the recommendation to replace the aging structure with an entirely new bridge. Services included development of an alternatives analysis, preliminary engineering, permitting, preparation of an H&H study, final design, bid phase services, construction administration, and full-time construction observation. The new bridge is an 87-ft-long single span bridge comprised of precast concrete beams and a cast-in-place concrete deck supported on cast-in-place concrete abutments.

#### **Three Rivers Transportation Pathway, St. Johnsbury, VT**

Prior to joining VHB, Evan was Project Manager for development of 1.1-mile-long, 10-foot-wide shared use pathway. He was responsible for project design, right-of-way, utility coordination, final design, and Contract Document preparation. Project developed through Local Transportation Facilities (LTF) Section. Evan developed alternatives to avoid wetlands and historic resources and minimal property owner impacts. The project included rail diagnostic meeting of two planned crossings, and retrofitting of a former rail bridge and former rail tunnel for pedestrian, bicycle, and snowmobile traffic. The path follows the former Lamoille Valley Rail Corridor.

#### **Chelsea Mountain Road, Road Reconstruction, Randolph, VT**

Prior to joining VHB, Evan was Project Engineer for design and construction oversight of drainage ditching, replacement of culverts, and reclaiming pavement along 3½ miles of roadway. Included installation of nearly 500 feet of new drainage culverts and cleaning of culverts plugged with debris. Responsibilities included investigation of geotechnical borings and formulation of a pavement recommendation, cost estimation, phasing of work plan, overall monitoring of construction methods, compilation of project budgets, oversight of periodic construction progress meetings, coordinating with local authorities on project schedule or field change orders, and coordination with utility companies

## Rachel E.R. Marvin, PE

Project Manager



### Education

BS, Civil Engineering,  
University of Vermont, 2005

### Registrations/ Certifications

Professional Engineer  
(Water Resources) VT, 2013

### Affiliations/ Memberships

Chi Epsilon, University of  
Vermont, 2004

Tau Beta Pi, Alpha of  
Vermont, 2004

Rachel is a Vermont-registered Professional Engineer experienced in linear waterline and sewerline projects, construction management, civil/site projects, stormwater modeling, permitting, water and sewer ordinance reviews, and rate studies. Rachel has worked on numerous MAB projects including sidewalk improvements for the City of Burlington, Town of Milton, Village of Poultney, and Town of West Rutland. She has also worked on linear waterline replacement/extension projects for the Town of Brighton, Town of Essex, Village of Jericho, Village of Lyndonville, Town of Milton, City of South Burlington, Town of Plainfield, Village of Poultney, Town of Springfield, Village of Swanton, Town of West Rutland, and Town of Williston.

*<1 year with VHB and 11 years of professional experience*

### **Skyline Drive Sidewalk & Waterline Extension, West Rutland, VT**

Prior to joining VHB, Rachel provided final design and permitting services for a 550 linear foot waterline expansion; a 300 linear foot sidewalk expansion; and miscellaneous stormwater improvements. Responsible Charge includes being responsible for the topographic field survey, the final design drawings and specifications, permitting, and providing clarifications to the Owner and State of Vermont.

### **Village Core Sewer Expansion, Milton, VT**

Prior to joining VHB, Rachel provided bid phase and construction engineering services as well as part-time resident project representation for the construction of approximately 15,000 linear feet of new gravity and forcemain sewerlines, approximately 1,700 linear feet of new waterline, and one new aboveground duplex pump station. Responsible Charge includes performing tasks during bid phase; for processing shop drawings, change orders, and pay estimates; documenting monthly project meetings; providing clarifications to the Contractor, Owner, and State of Vermont; and providing resident project representation.

### **Water Works System Improvements, Contract A1 – Well Houses, Springfield, VT**

Prior to joining VHB, Rachel provided final design services and permitting assistance as well as construction engineering services for improvements to the Town's well fields and well houses. Responsible Charge includes assisting with the final design drawings and specifications; permitting; being responsible for tasks during bid phase; for processing shop drawings, change orders, and pay estimates; running and documenting monthly project meetings; providing clarifications to the full time Resident Engineer, Contractor, Owner, and State of Vermont; and providing part-time resident project representation.

### **Route 30 Sewerline Replacement, Castleton, VT**

Prior to joining VHB, Rachel acted as the Staff Engineer/Project Manager/Resident Engineer for the Route 30 Sewerline Extension Project where she provided final design services, permitting, construction cost estimating, bid phase services, and construction phase services for roughly 1,500 linear feet of new 10" diameter gravity sewermain.

## Michael Ingram

Construction and Environmental Inspector



Mike is an Environmental Scientist in VHB's South Burlington, Vermont, office. He works as a Construction Inspector, Environmental Monitor, and Environmental Scientist, employing a diverse set of skills including field observations and reporting, GIS mapping, plan reading, and working on multiple projects simultaneously, as well as trouble shooting and solving time sensitive issues.

### Education

MS, Geology, University of Vermont, 2015

BS, Geology, University of Vermont, 2011

*1 year with VHB and 5 years of professional experience*

### Vermont Gas Systems – Addison Natural Gas Project Construction Phase

Mike is the environmental scientist/Erosion Prevention and Sediment Control ("EPSC") Specialist for this natural gas pipeline construction project that includes transmission mainline and access routes, laydown/staging areas, gate stations, mainline valve sites, Vergennes distribution mainline, and Middlebury distribution mainline. He provides Environmental permit compliance monitoring and assistance to the construction team regarding environmental permit compliance, as well as on-going coordination with the project environmental team regarding environmental permit conditions and compliance, environmental training for contractors, and general coordination with Vermont Department of Environmental Conservation ("DEC") and US Army Corps of Engineers ("USACE").

### Milton I-89 and Windsor I-91 Design Build Projects

Prior to joining VHB, Mike was a Construction Inspector on a two interstate bridge replacement projects. He reviewed and performed inspection of erosion prevention and sediment control (EPSC) measures; performed dry swale with permeable soil inspection; and inspected all construction activities for conformance to the plans and project specifications. He performed elevation and location surveys included subgrades, forms, drainage structures, bearing seats, and beam camber profiles. Mike performed material tracking, sample scheduling, and material certifications verification.

### Vermont Gas Systems – Gauthier Wetland Fill Removal

Mike provided EPSC recommendations to stabilize a site of wetland fill during the winter of 2016 and provided oversight of the installation of the EPSC measures. In the spring of 2016 he worked directly with the contractor by providing oversight of the wetland fill removal and restoration to ensure additional impacts to the wetland were minimized and that restoration efforts would result in a revitalized wetland. He also screened the removed soils with a Photo Ionization Detector ("PID") to determine if any contamination was present.

### National Grid – Harriman Station 8 Substation

Mike fulfilled the role of Environmental and EPSC Inspector on this substation expansion project located near the Deerfield River in southern Vermont. He conducted weekly site visits and provided recommendations to the client to maintain compliance with DEC and USACE permits.

# Nathan Dagesse, E.I.

Resident Engineer / Chief Inspector

6 Years with EIV  
11 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

UNIVERSITY OF VERMONT,  
BURLINGTON, VT

**B.S. CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- NETTCP Driven Pile Foundation Inspector
- NETTCP Drilled Shaft Inspector
- NETTCP Concrete Certified
- NETTCP Hot mix Asphalt Certified
- ACI Concrete Field Inspection Technician – Grade I
- Licensed Engineer Intern
- NETTCP Driven Pile Foundation Inspector
- NETTCP Drilled Shaft Inspector
- NETTCP Concrete Certified
- NETTCP Hot mix Asphalt Certified
- ACI Concrete Field Inspection Technician – Grade I
- NETTCP Driven Pile Foundation Inspector



## EXPERIENCE

**VICE PRESIDENT, DIRECTOR OF CONSTRUCTION SERVICES,  
EIV TECHNICAL SERVICES, WILLISTON, VT**

Mr. Dagesse has provided resident engineering services, detailed inspection, and on-site field testing of materials for VTrans bridge, rail and roadway projects and commercial building projects throughout New England. He has a thorough understanding of VTrans construction specifications, design and inspection requirements. He is detail-oriented and has the ability to identify issues, analyze alternatives and recommend solutions. Mr. Dagesse has become a proven inspector and project manager on some of the largest bridge and building projects in Vermont.

### PROJECT EXPERIENCE:

- **Burlington Bike Path Phase 1B** – \$1.8M bike path project.
- **Hartford CMGC Slide Bridge** – \$12M innovative bridge replacement project.
- **Windsor I-91 Design Build Bridge Replacement** – \$20M bridge replacement.
- **Milton I-89 Design Build Bridge Replacement** – \$23M bridge replacement.
- **Bethel BRF 022-1(14)** – \$8M bridge replacement project of Bridge 15.
- **Readsboro 0105(3)** – \$2.5M replacement project for Bridge #32.
- **Arlington GMRC Rail Bridge 62, White River Jct. Rail Bridge 501, Chester Rail Bridge 121 and Chester Rail Bridge 114** – \$15M rail bridge repair due to Tropical Storm Irene flooding.
- **Chester BRF 025-1(28) & Chester BRF 025-1(37)** A \$3.5M replacement project.
- **Bridgewater BRS 0149(4)** – \$3M Bridge replacement project.
- **Ludlow STP ST Culv (30)** – \$1.5M Box culvert replacement project.

## CONTACT

55 LEROY RD, SUITE 15 | WILLISTON, VERMONT 05495 | P. (802) 497-3653 | F. (802) 497-3656 | W. [eivtech.com](http://eivtech.com)



# Russ Colvin, E.I.

Resident Engineer / Chief Inspector

4 Years with EIV  
40 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

UNIVERSITY OF VERMONT,  
BURLINGTON, VT

**B.S. CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- ACI Concrete Field Testing Technician – Grade I
- NETTCP Hot Mix Asphalt Inspector
- NETTCP Soils and Aggregate Inspector
- NETTCP Nuclear Density Gauge Inspector
- NETTCP Driven Pile Inspector



## EXPERIENCE

### CIVIL ENGINEER

EIV TECHNICAL SERVICES, WILLISTON, VT

Mr. Colvin has provided resident engineering and construction inspection service on the following VTrans bridge replacement projects:

- Milton IM 089-3 (66)
- Windsor IM 091-1 (64)
- Readsboro 0105 (3)
- Brattleboro AC IM 091-1 (50)
- Hartford IM 091-2 (79)

### MUNICIPAL PROJECTS

- Burlington Bike Path Rehabilitation Project
- Belvidere ARRA Bridge Project
- Franklin ARRA Sidewalk Project
- Stowe Emergency Services Facility
- Stowe Historical Society Building
- Grand Isle Fire Station, Grand Isle, VT
- Cambridge Fire Station & Town Offices, Cambridge, VT
- Public Works Facility, Burlington, VT
- Waste Water Treatment Facilities Renovation and Upgrades, Burlington VT

### COMMERCIAL CONSTRUCTION MANAGEMENT PROJECTS

- 462 Shelburne Road Office Building
- UVM MC Ophthalmology Clinic at 462 Shelburne Road
- Vermont Commons School Addition and Renovations, 2015

## CONTACT

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# Jason Waysville, P.E.

Resident Engineer / Chief Inspector

5 Years with EIV  
11 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

NORWICH UNIVERSITY,  
NORTHFIELD, VT

**B.S. CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- State of Vermont Professional Civil Engineer
- State of New Hampshire Professional Civil Engineer
- State of Vermont Site Tech A&B certification
- Wetland Scientist
- QC Resources Nuclear Density Gauge Cert
- ACI Concrete Field Technician - Grade II
- OSHA 10-Hour Course



## EXPERIENCE

**QUALITY ASSURANCE MANAGER/CIVIL ENGINEER IV,  
EIV TECHNICAL SERVICES, WILLISTON, VT**

Mr. Waysville is a senior transportation engineer with over 10 years of experience as a project manager or lead project engineer on various types of transportation projects involving bridge, highway, pedestrian facilities, and rail. He has previous design and construction inspection experience working for the Agency of Transportation as well as the Army Corp of Engineers. Mr. Waysville works closely with his clients to develop creative and effective solutions designed to meet both the complexity of the project and the needs of the community.

### PROJECT EXPERIENCE:

- **Milton I-89 Design Build** - \$23M bridge replacement project.
- **Windsor I-91 Design Build** - \$20M bridge replacement project.
- **Springfield State Airport** - Wetland delineation for upcoming expansion work at the Hartness Airport.
- **Newport State Airport** - Worked on site plans to help aid with the development of the airport.
- **North Hero-Grand Isle** - Locate environmentally sensitive areas and delineate them in the field.
- **Burke Mountain Resort/Campground Permitting** - Permitting and design for a replacement wastewater system for Burke Mountain Campground, as well as design and place additional monitoring wells for the expansion to the leachfield.
- **Manchester Roundabout** - \$5M accelerated bridge replacement and extension project of an existing dry laid 1908 marble arch bridge.
- **Gilman Covered Bridge** - \$5M rehabilitation of the Gilman Covered bridge.

## CONTACT

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# Sabin Clark, P.E.

Resident Engineer / Chief Inspector

5 Years with EIV  
8 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

UNIVERSITY OF VERMONT,  
BURLINGTON, VT

**B.S. CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- Licensed Professional Engineer
- ACI Concrete Field Testing Technician – Grade I
- NETTCP Driven Pile Foundation Inspector
- NETTCP Drilled Shaft Foundation Inspector
- NETTCP Concrete Inspector
- PTI Level 1 Bonded PT Field Installation
- OSHA 10hr Construction Safety & Health
- FEMA ICS-100



## EXPERIENCE

**CIVIL ENGINEER IV,**  
EIV TECHNICAL SERVICES, WILLISTON, VT

Mr. Clark has experience in providing a variety of technical services to ensure bridge and rail projects are constructed to VTrans construction standards, engineering design plans, and contract agreements. He has been responsible for completing daily construction site layout and ensures that construction begins and ends following design plans. Additionally, he has gained experience in working with specific requirements in railroad contract projects and reviewing complex change orders.

### PROJECT EXPERIENCE:

- **Milton I-89 DB** - \$23M bridge replacement.
- **Battleboro IM 091-1(65)** - \$60M replacement of Bridges 8 N&S and 9 N&S on I-91.
- **Swanton IM 089-3 (70)** - 1.5M repair of 4 bridges on I-89 near Exit 21.
- **Barre Switchback Slide RREW (1)** - \$1.3M emergency contract for slope stabilization and reconstruction.
- **Rockingham STP GMRC (1)** - \$2M rail project that included construction of a new superstructure and abutments.
- **Putney IM 091-1(31)** - \$3M bridge rehabilitation project on USRoute 5 over I-91.
- **Hartford (Wilder) STP 1444 (35)** - \$2.5M historic bridge rehabilitation project on Bridge 38 and a precast arch on Bridge 36.
- **Rockingham STP GMRC (16)** - \$160k rail project that includes precast wall stabilization of a bridge approach and repair of the undermined pier.
- **Brookfield IM 089-1 (59)** - \$440k interstate bridge project involving the phased construction of new deck and related roadway approach items.

## CONTACT

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# Emmalee Cherington, E.I., CPESC

Construction Inspector

5 Years with EIV  
18 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

UNIVERSITY OF VERMONT,  
BURLINGTON, VT  
**B.S. CIVIL ENGINEERING**

VERMONT TECHNICAL COLLEGE,  
**A.E. ENVIRONMENTAL &  
CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- Certified Professional in Erosion Prevention and Sediment Control (CPESC)
- Wetland Scientist
- ACI Concrete Field Technician – Grade I
- Nuclear Density Gauge
- NETTCP Hot Mix Asphalt
- NETTCP Concrete Inspector
- NETTCP Driven Pile
- 24hr Hazwoper
- 10hr OSHA



## EXPERIENCE

**CIVIL ENGINEER IV,**  
EIV TECHNICAL SERVICES, WILLISTON, VT

Ms. Cherington is a transportation construction engineer who has strong communication, organizational and interpersonal skills. She is detail oriented and has the ability to identify issues and help to develop solutions in a team setting. In addition to her civil engineering skill set, she has also provided environmental compliance inspection and public relation services.

### PROJECT EXPERIENCE:

- **Burlington Bike Path Phase 1B** – \$1.8M bike path project.
- **Hancock STP 2923 (1)** – \$7.7M reclaim project.
- **Bridport STP CULV (29)** – \$1.2M culvert replacement project.
- **Bristol HES 021-1 (28)** – \$600K traffic signal construction project.
- **Bristol STP F 021-1 (15)** - \$5.5M bridge project.
- **New Haven WCRS (18)** – 48 hour accelerated rail bridge replacement project.
- **Jericho STP FTBR (3)** - Pedestrian bridge replacement project.
- **Charlotte BHO 1445 (34)** - \$960,000 bridge rehabilitation project.
- **Addison STP 032-1(18)** – Landscape planting and pedestrian dock access project.
- **Addison STP CULV (14)** – Maintaining public relations after the completion of the project.
- **Charlotte-So. Burlington NH 2907 (1)** –This \$4.2M resurface project.
- **Burlington STP 2722 (1)** – This \$1.8M resurface pavement project. meeting minutes.
- **Burlington STP 2721 (1)** – This \$1.8M resurface pavement project.

## CONTACT

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# Cameron Michaud

Construction Inspector

3 Years with EIV  
4 Years of Experience



Serving as experts in  
providing quality environmental and construction inspection services since 1964 in VT, NY and NH.

## EDUCATION

UNIVERSITY OF VERMONT,  
BURLINGTON, VT

**B.S. CIVIL ENGINEERING**

## CERTIFICATIONS & TRAINING

- NETTCP Concrete Inspector
- NETTCP Hot Mix Asphalt Inspector
- NETTCP Nuclear Density Gauge Certification
- NETTCP Driven Pile Foundation Inspector
- ACI Level 1 Concrete Certification
- 10hr OSHA

## EXPERIENCE

**CIVIL ENGINEER II,**  
EIV TECHNICAL SERVICES, WILLISTON, VT

Mr. Michaud is a construction engineer with three years of experience providing construction inspection services for VTrans projects. The last project worked on was the Hartford Slide Bridge project that was responsible for replacing two highway bridges on I-91 where it passes over route 5 in Hartford VT. This was a fast paced project yet Mr. Michaud was able to keep pace with the high work demand required by the ambitious project schedule, one which required two bridges to be built in under a year. On this project Cameron provided construction inspection, concrete testing, daily work documentation, survey checks and documentation, quantity calculations and electronic books checking.

### PROJECT EXPERIENCE:

- **Hartford I-91 CMGC bridge slide project** – Two Bridge replacement project on I-91.
- **Stockbridge-Bethel STP 2910 (1)** – A 9.7 mile roadway reclaim project.

**PROJECT ENGINEER,**  
DC DESIGN BUILD, WILLISTON, VT

Mr. Michaud is a project engineer working directly under Russ Colvin for projects including a three story, 31,280 square foot, commercial building located at 462 Shelburne Rd in South Burlington.



## CONTACT

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**Alan I. Brown**

Construction Services Manager  
AOT Technician IV/V

**Education:**

A.A.S., Architectural and Building  
Engineering Technology, Vermont  
Technical College

**Certifications:**

ACI Field Technician Level 1

Precast / Prestressed Concrete Institute  
(PCI) Quality Technician, Grade III  
(Permanent)

ICC Reinforced Concrete Special  
Inspector, Soils Special Inspector,  
Fireproofing Special Inspector, Structural  
Steel and Bolting Special Inspector  
and Welding Special Inspector

ICC Master of Special Inspections

NETTCP Concrete Technician, HMA Plant  
Technician, HMA Paving Inspector and  
Soils and Aggregate Inspector

Certified Nuclear Densometer Operator

Ground Penetrating Radar Inspector

Hellier Magnetic Particle and Ultrasonic  
Inspector

American Welding Society (AWS)

Certified Welding Inspector

ASNT Level III, UT, PT and MT

DipStick Floor Flatness Operator

**Safety Certifications:**

OSHA 10-Hour Construction  
Safety & Health Certified

OSHA Hazardous Materials Certified

Troxler Radiation Safety Officer

**Affiliations:**

Board of Directors, International Code  
Council, Vermont Chapter

**WHITE RIVER JCT. OFFICE**

Joining S. W. Cole Engineering, Inc. in 2013, Alan Brown has been the construction services manager in the firm's White River Junction office for two years. Prior to working for S.W.COLE, Alan held the position of Vice President of New England Operations with Advance Testing Company, Inc. for four years and was also Vice President of New England Testing Company, Inc. for eight years.

Alan has 30 years of experience in field and laboratory inspection of construction materials, including soil, concrete, prestressed concrete, bituminous concrete, steel reinforcing, fireproofing, paint thickness gauging and non-destructive testing of metals. He is a Master of Special Inspections as prescribed by the International Code Council (ICC) and holds a number of desirable certifications and registrations from the American Concrete Institute (ACI), ICC, NorthEast Transportation Technician Certification Program (NETTCP) and other reputable organizations.

Alan's responsibilities at S.W.COLE include contract and business development, project management and assisting with testing services such as soil density, concrete, masonry, and performing special inspections and associated laboratory testing.

**Project Experience:**

**Dartmouth College, Hanover, New Hampshire:** Alan has served as Project Manager on a variety of materials testing projects for Dartmouth for more than ten years. He has been responsible for coordinating and performing construction materials testing and inspection services, as well as Special Inspection services, on many campus-wide projects.

**Dartmouth Hitchcock Medical Center, Hanover, New Hampshire:** Alan served as Project Manager on this project and was responsible for installing and managing a mobile laboratory facility for a new campus with nine buildings.

**Harness Airport, Springfield, Vermont:** On this new hazard tower installation, Alan performed pull testing of grouted rock anchors for new support guy wires and setting of prestressed loads.

**Burlington Electric, Burlington, Vermont:** On this project, Alan was responsible for performing ground penetrating radar examination of 17 live underground electrical vaults to map rebar and concrete thickness. He also performed a Windsor Probe analysis to estimate concrete compressive strength.

**Kendal at Hanover, Hanover, New Hampshire:** On this three year parking garage project, Alan performed impact-echo testing on approximately 300 columns to determine the presence and extent of delamination caused by corroding reinforcing steel.



**S.W.COLE**  
ENGINEERING, INC.

Our Clients Make Better Decisions  
**From the Ground Up.**

**Alex Coache**  
Technician

**Education:**

B.S., Architectural Engineering  
Technology, Vermont Technical  
College

**Certifications:**

ACI Certified Concrete Field  
Technician, Grade 1

Certified Nuclear  
Densometer Operator

Alex Coache joined S. W. Cole Engineering, Inc. in the summer of 2015. He is a technician with the firm in the field services and laboratory testing divisions. He has a bachelor's of science in architectural engineering technology from Vermont Technical College in Randolph, Vermont.

Prior to working at S.W.COLE, Alex held several positions at Vermont Technical College while attending classes, including calculus tutor. His responsibilities at S.W.COLE include soil density testing, concrete testing, reinforcing steel observation and asphalt testing along with associated laboratory testing. He has worked on projects in New Hampshire and Vermont.

**Project Experience:**

**Combined Sewer Overflow Project #10, Lebanon, New Hampshire:** This project included the reconstruction of two miles of city streets, including new sewers, storm drains and water lines, new sidewalks and road paving. As the technician on the project, Alex performed sampling of base course and sub-base materials, compaction testing, monitoring, sampling and coring of Hot-Mix asphalt and field testing of concrete.

**VTrans STP CULV (10) Culvert Replacement, Ryegate, Vermont:** Alex was the technician on this project, which consisted of the reconstruction of a cast-in-place arch culvert under US Route 5 and the Railroad. Alex performed acceptance testing for VTrans of concrete placed for the foundations, stub walls and arches.

**Slayton Hill Reconstruction, Lebanon, New Hampshire:** Alex was the technician on this project, which consisted of the full depth reconstruction of five miles of roadway. Alex performed sampling of base course and sub-base materials, compaction testing, monitoring, sampling and coring of Hot-Mix asphalt and field testing of concrete.

**BURLINGTON AREA OFFICE**

# Engineering Support Staff Resumes





## Brad Ketterling

Permitting/NEPA



### Education

MS, Physical Geography,  
University of Western  
Ontario, 1995

BS, Geography, Concordia  
University, 1992

Brad has worked as an environmental scientist for close to two decades, specifically in the fields of wetland mitigation site feasibility and design, stream assessment, watershed planning, state and federal permitting, and NEPA compliance. Brad helps clients navigate complex regulatory requirements and achieve successful results by identifying and assessing natural and cultural resource issues and constraints and developing strategies to obtain authorizations that are in the best interest of the client and the environment. n. Brad has managed projects for a variety of private and public sector clients, including the National Park Service, the Department of Defense, the Vermont Agency of Transportation, the Vermont Telecommunications Authority, the Maryland Aviation Authority, Green Mountain Railroad Company, the City of Burlington, Vermont, and James City and Arlington Counties in Virginia.

*14 years with VHB and 21 years of professional experience*

### **Burlington Bike Path Rehabilitation Project, Burlington, VT**

Brad assisted with various permitting activities associated with the proposed rehabilitation of the Burlington Bike Path, including: coordinating the process of infiltration testing to support the use of a driveable grass pavement system in Waterfront Park; coordinating with Department of Public Works Stormwater Program Manager to discuss potential stormwater treatment approaches; permit applications for Construction and Operational Phase Permits from the DEC Stormwater Section; preparation of city permit applications (Zoning Permit and Small Project EPSC Plan); and coordination with Senior Planner at Department of Planning and Zoning

### **Federal Street Multimodal Connector, Environmental Assessment, St. Albans, VT**

Brad was Task Manager for National Environmental Policy Act (NEPA) compliance for the proposed Federal Street Multimodal Connector Project. He is the lead author of the Environmental Assessment (EA) and is responsible for outreach to and direct coordination with state and federal regulatory agencies. BHe presented the findings of the EA at a public hearing and finalized the EA to obtain a Finding of No Significant Impact (FONSI) in April 2013.

### **Main Street and Merchants Row Bridges, Middlebury, VT**

Brad is Task Manager for Environmental Services, evaluating potential natural resources and other constraints on the design for the proposed replacement of two bridges over the Vermont Railway in Downtown Middlebury as part of an Environmental & Historic Structures Evaluation and National Environmental Policy Act (NEPA) documentation.

### **Waterfront Park Improvements – Act 250 Permitting, Burlington, VT**

Brad prepared and submitted to the District 4 Commission an application to amend the existing Land Use Permit for Waterfront Park to reflect a suite of proposed physical improvements. Principal improvements include a rehabilitated and realigned Bike Path (being designed by VHB), electrical and potable water service, and lighting.

## Kathryn Lee, PE

Lighting Design



**Kathy is a Senior Project Manager with VHB's Transportation Systems Group. She specializes in the design and preparation of signalization, signing, sign panel layout and pavement marking plans. Her FDOT certification in Traffic Control Plan Design supports a strong background in work zone traffic safety. Traffic studies and analysis round out her focus on traffic operations and the transportation field. Kathy's qualifications and experience have been utilized on a multitude of public- and private-sector projects.**

### Education

BS, Civil Engineering,  
University of Central Florida,  
1998

BS, Geography,  
Pennsylvania State  
University, 1984

### Registrations/ Certifications

Professional Engineer FL,  
2005

### Affiliations/ Memberships

American Society of Civil  
Engineers

*17 years with VHB and 29 years of professional experience*

### Skillset: Lighting Design

Kathy has served as Project Manager and as Project Engineer for numerous lighting design projects on both local and interstate roadways. Lighting projects have encompassed Lighting Justification Reports, the layout and design of new lighting systems, interfacing new lighting systems with existing lighting systems, photometric analysis to optimize light pole spacing and arrangement, luminaire mounting height, wattage and distribution type, and also voltage drop calculations to verify that conductors and load centers are sized appropriately. Some representative projects include Walton Road from US 1 to Lennard Road, City of Port St. Lucie, St. Lucie County, I-95 Widening from north of SR 50 to north of SR 46, Brevard County (FDOT District Five), I-4/Osceola Parkway Braided Ramp project, Osceola/Orange County (FDOT District Five), US 27/SR 50 Interchange Design Build Project, Lake County (FDOT District Five).

### Skillset: Intelligent Transportation Systems (ITS) Design

Kathy has worked extensively with local and state municipalities in order to improve the safety of the motoring public while increasing the efficiency and capacity of roadway corridors. ITS provides mechanisms to aid in the effort that make use of advanced communication and other technologies to make surface transportation safer and more efficient. VHB has been involved in numerous ITS projects and is experienced in creating and implementing these types of plans. Representative ITS projects include weigh-in-motion stations, dynamic message signs, fiber optic interconnect plans, closed circuit television systems, AVI systems, emergency vehicle management systems utilizing Opticom and highway advisory radio plan design. Representative projects include City of Orlando, Crystal Lake Drive Improvements, Greater Orlando Aviation Authority (GOAA) BP-355 Loop Road Dynamic Message Signs Design Build, Orange County, UCF Arena ITS Project, FDOT District Five, US 17-92 at SR 436 Interchange, FDOT District Five, I-95 from North of SR 50 to North SR 46.

### Skillset: Traffic Signal Systems

Kathy has completed numerous traffic signal system design, optimization and retiming projects. These projects involve development of design plans and technical specifications for traffic signal systems, data collection, development of time-of-day and day-of-week system timing plans, and implementation and fine-tuning. Some of the representative projects include SR 5 / SR 60 Signal Systems, Indian River County; Olive Road Traffic Signal System, Escambia County; and Pensacola Street Traffic Signal System, City of Tallahassee.

## Kaitlin O'Shea

Historic/Cultural Resources



### Education

MS, Historic Preservation,  
University of Vermont, 2011

BA, Historic Preservation,  
University of Mary  
Washington, 2006

### Affiliations/Memberships

UVM Historic Preservation  
Alumni Association, Vice  
President

National Trust for Historic  
Preservation

Kaitlin is a Preservation Planner with a strong background in and understanding of preservation principles and practices. Kaitlin provides expertise in regulatory process and compliance, particularly Section 106 review and Section 4(f) evaluations, as well as historic documentation, historic resource identification, and project management in the government framework. From national and statewide conference presentations to public meetings, she is skilled in stakeholder interaction and communication. Kaitlin meets the Secretary of the Interior's Professional Qualification Standards for an Architectural Historian and Historian (36 CFR 61).

*2 years with VHB and 9 years of professional experience*

### Federal Street Multimodal Connector Project, St. Albans, VT

Kaitlin is working on the preparation of the Act 250 application for the Federal Street project, as well as reviewing the development of 60% plans to determine potential implications for reevaluation the Section 106 and 4(f) determinations, and the EA.

### Mountain View Drive Sidewalk Project, Colchester, VT

As one of her first projects at VHB, Kaitlin evaluated the project corridor for historic resources and researched previous Act 250 applications for earlier determinations to resource impacts. Kaitlin is writing and compiling the Resource Identification Report on behalf of VHB for the Town of Colchester.

*Kaitlin's professional experience before joining VHB includes the following*

### Section 106 Reviews & Section 4(f) Evaluations, VTrans, Montpelier, VT

As the Historic Preservation Specialist for the Vermont Agency of Transportation (VTrans), Kaitlin reviewed all types of transportation projects: sidewalks, streetscapes, roadways, culverts, covered bridge and truss bridge rehabilitations, bridge replacements, park and rides, and more. She has completed over 650 Section 106 reviews and over 30 Section 4(f) evaluations.

### Lake Champlain Bridge Replacement Project, Addison, VT

Kaitlin began with VTrans during the 2010 Lake Champlain Bridge Replacement Project as the Historic Preservation Monitor. Tasked with ensuring the state agencies and contractors complied with the Programmatic Agreement protecting historic resources, she gained invaluable "on the ground" experience at a large-scale, fast-paced construction project.

### Historic Railroad Buildings Conditions Assessments & Survey, Vermont

While working at VTrans, Kaitlin conducted a survey of the state owned and transportation enhancement (TE) funded historic railroad buildings, documenting the architectural condition of the structures and evaluating the success of the TE grants. This 200 page report included historical context and building histories, architectural descriptions, photographic documentation, condition assessments, and recommendations for future work.

## Mark R. Louro, PE

Rail Engineering



### Education

BS, Civil Engineering,  
Southeastern Massachusetts  
University (now University of  
Massachusetts Dartmouth),  
1987

### Registrations/ Certifications

Professional Engineer (Civil)  
MA, 1992

Professional Engineer CT,  
1997

Professional Engineer NJ,  
2014

### Affiliations/ Memberships

American Society of Civil  
Engineers

Mark is a Senior Project Manager in VHB's Transit & Rail Division with extensive experience in Transportation Engineering and Construction. Notable projects include Downtown Burlington Transit Station, the Ruggles Station Platform Project, the Green Line light rail extension project, South Coast Rail commuter rail project, Portland North track and drainage improvements, freight railroad track extension and line improvements at Boston's Marine Industrial Park, WMATA Greenbelt route extension, and the Central Artery/Third Harbor Tunnel project. Before joining VHB, Mark was a civil engineer with the Massachusetts Highway Department.

*18 years with VHB and 29 years of professional experience*

### Main Street and Merchants Row Bridges, Middlebury, VT

For the Town of Middlebury, VHB is responsible for the development of design documents and construction or the replacement two 93-year-old bridges spanning the Vermont Railway mainline track in Middlebury's downtown area. Mark is performing a study to develop alternatives for the relocation of the ACTR (Addison County Transit Resources) transfer point located on Merchants Row. The alternatives analysis will evaluate up to 10 temporary and permanent locations for the transfer point. The analysis will consider constructability, cost, property impacts, and impacts to bus operations to evaluate the alternatives.

### MassDOT, South Coast Rail Commuter Service Extension, Southeastern Massachusetts

For the Massachusetts Department of Transportation (MassDOT), Mark was Task manager for the design development of highway grade crossing concepts for proposed commuter services to southeastern Massachusetts along a proposed 40-mile commuter rail corridor from Boston to Fall River and New Bedford.

### MBTA, Ruggles Station Platform Project, Boston, MA

Mark is managing a multidisciplinary team of engineers and architects to expand Ruggles Station to include a new 800-foot-long commuter rail platform to serve Track 2. The project includes construction of the platform with two canopied access points lighting, furniture, VMS, security, plumbing, drainage and the extension of eleven catenary structures. The project also involves coordination with Northeastern University (NEU) for their proposed science and engineering building that is located on the adjacent NEU parking lot. ts.

### CCTA, Burlington Downtown Transit, Burlington, VT

For the Chittenden County Transit Authority (CCTA), Mark is Project Manager for the development of construction documents for the construction a new \$10 million transit station. He is managed a multidisciplinary team of civil engineers, architects, structural engineers, and MEP engineers to design a bus station that accommodatea 10 bus berths along a 250-foot canopied platform with a 2,500-square-foot two-level station building. The facility will includea a driver's lounge below street level to provide rest facilities and a break room for drivers between runs.

## Ryan Lizewski, PE

Hydrologic & Hydraulic Studies



### Education

BS, Civil and Environmental  
Engineering, Worcester  
Polytechnic Institute, 2007

### Registrations/ Certifications

Professional Engineer MA,  
2012

Ryan is an environmental engineer focusing on water resource engineering, surface hydrology, and stormwater management. He has served as a project and field engineer for a diverse set of responsibilities and tasks including hydrologic & hydraulic modeling, coordinating and conducting field programs, construction oversight, data management, and data analysis. His experience includes projects focusing on low impact development, flood mitigation, innovative stormwater designs and developing best management practices for both private and public sector clients.

*4 years with VHB and 9 years of professional experience*

### **VTrans, Preliminary Bridge Hydraulic Analysis, Vermont**

For VTrans, Ryan served as Project Engineer for the development of preliminary bridge hydraulics models using HEC-RAS software to evaluate structure sizing for subject waterway crossings in accordance with the VTrans hydraulic manual and other regulatory requirements. Georeferenced hydraulic models were created for each bridge location using the MicroStation: InRoads CAD software package to generate the geometric cross section and line string information for import into HEC-RAS based on the site survey.

### **Railway Brook Stream Restoration, Newington, NH**

As Project Engineer, Ryan is providing construction support for the restoration of Railway Brook, a highly impacted urban stream in the Great Bay coastal watershed. Ryan developed a HEC-RAS hydraulic model to predict maximum shear stress and velocities through the project reach to assist channel design and bed stability analysis.

### **Ashuelot River (West Street) Dam, Hydrologic Modeling and Wetlands Analysis, Keene, NH**

Ryan is Project Engineer assisting the City of Keene with the evaluation of the potential removal of the Ashuelot River (West Street) Dam, which has fallen into disrepair. The City and community seek to more fully understand the implications on wetlands and floodplains that would result from the possible dam removal.

### **Great Dam Removal, Exeter, NH**

Ryan is Project Engineer assisting with engineering design for the removal of the Great Dam from the Exeter River. He is assisting with geomorphic analysis, hydrological and hydraulic analysis, water supply, dam and structural engineering, and impacts to natural resources. He will also assist with preparation of bid documents and selection of a contractor to complete the dam removal.

### **Beaver Brook Flood Study, Pelham, NH**

Ryan was Project Engineer for a flood study involving a 10-mile stretch of Beaver Brook, including eight bridge structures. The study involved conducting a hydrologic evaluation based on river gage records; developing a step-backwater hydraulic model using HEC-RAS; and evaluating alternatives for flood mitigation including conveyance improvements, floodplain storage, infrastructure modifications, and regulatory controls.

## Scott Burbank, PE

Bridges and Structures



Scott is VHB's Director of Structures in Vermont, with extensive experience in planning, design and construction of both highway and railroad bridges and roadway reconstruction projects. His qualifications also include services for quality control and quality assurance, construction cost estimating, accelerated bridge construction (ABC), and structural inspections of both railroad and highway bridges.

### Education

BS, Civil Engineering,  
Worcester Polytechnic  
Institute, 1993

### Registrations/ Certifications

Professional Engineer  
(Structural I) VT, 2000

*7 years with VHB and 22 years of professional experience*

### USDA, Green Mountain National Forest IDIQ, Vermont

Scott provided structural engineering support for bridges, culverts, embankments, and other structures when the United States Department of Agriculture (USDA) Forest Service retained VHB to provide surveying and civil and structural engineering services for a multi-year Indefinite Delivery/Indefinite Quantity (IDIQ) contract to support activities in the Green Mountain and Finger Lakes National Forests in Vermont and New York. VHB's services included civil and structural engineering for bridges, culverts, embankments, roads, and other structures.

### Brattleboro Town Highway Bridge #7, Brattleboro, VT

Scott was the Project Manager for the complete replacement of Town Highway Bridge No. 7 over Halladay Brook in Brattleboro VT. This project included project scoping, environmental resource documentation, regulatory permitting, hydraulics analysis, structural design and construction cost estimating throughout the development of the project.

### Cross Street Bridge, Middlebury, VT

Scott was Project Engineer assisting with the design and construction cost estimating of the various Design-Build submittal packages for project aimed to alleviate major traffic congestion, improve safety, and provide additional pedestrian and bicycle access. Tasks included design/construction coordination and scheduling, utility company coordination, material testing coordination and monitoring, coordination of property owner and town meetings.

### Guilford Town Highway Bridge #65, Guilford, VT

Scott was the Project Manager for the complete replacement of Town Highway Bridge No. 65 over Hinesburgh Brook in Guilford, VT. This project included project scoping, environmental resource documentation, regulatory permitting, hydraulics analysis, structural design and construction cost estimating for rapid bridge construction techniques. Accelerated bridge construction elements were used to minimize the roadway closure period during construction.

### VTrans ER BRF 0162(18) and Rochester, ER STP 0162(19), VT

Scott was the Project Manager for the complete replacement of two state bridges on VT 73 over Brandon Brook and the White River. Both bridges were destroyed during Tropical Storm Irene. These projects included project scoping, environmental resource documentation, regulatory permitting, hydraulics analysis, structural design and construction cost estimating for VTrans first multiple bridge replacement projects on a single corridor within one Town.



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