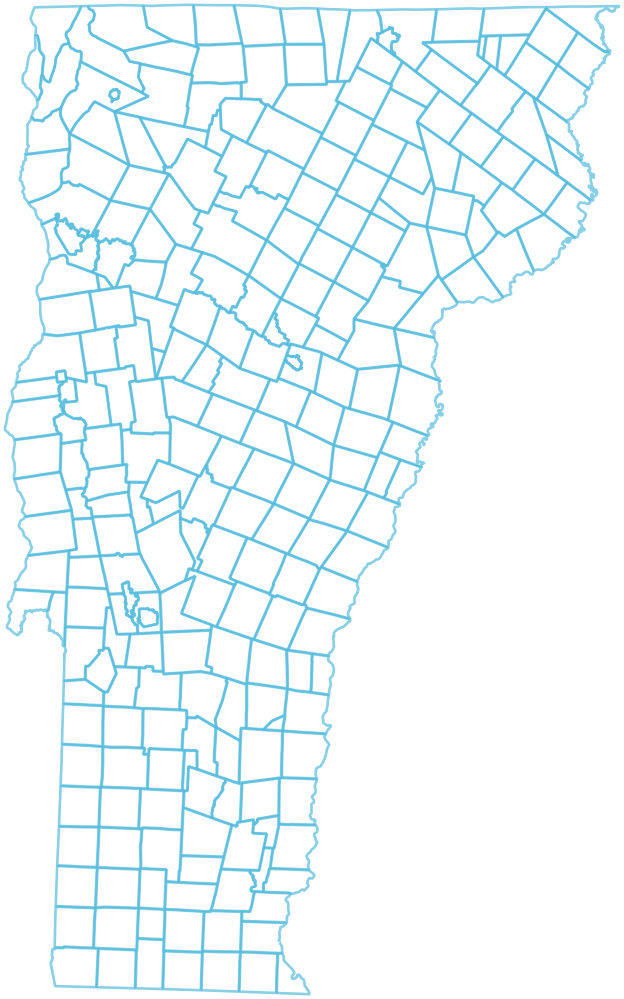
AT-THE-READY

2020 Consultant Engineering Services for Municipalities



DESIGN SERVICES

DuBois & King inc.

626234X
March 9, 2020

Nydia Lugo, Technical Development Engineer
Vermont Agency of Transportation
Barre City Place, 219 North Main Street, Suite 105
Barre, Vermont 05641

Subject: VTrans At-the-Ready Consultant Engineering Services for Municipalities – Design Services

Dear Ms. Lugo and Members of the Selection Committee,

DuBois & King (D&K) is pleased to submit ten (10) paper copies and one (1) electronic copy of our Technical Proposal in response to your February 6, 2020, Request for Qualifications for At-the-Ready Consultant Engineering Services for Municipalities (ATR). Please consider the following as you review our proposal:

For more than 100 projects, D&K has provided scoping, design, municipal project management, and/or construction phase services for Municipal Assistance Bureau projects since the program's inception in the 1990s. D&K regularly leads projects receiving grants from the State of Vermont, FHWA, FEMA, FAA, and EPA throughout Vermont and New England.

Over 90 Vermont-based D&K staff are available to serve this contract. D&K has a clear understanding of the requirements of federally-funded, municipally-managed transportation projects and the needs of municipal governments ranging in size from Vermont's smallest town to its largest city. Our staff members maintain positive working relationships with Vermont's regional planning commissions and the regulatory community. We are committed to providing qualified, well-equipped, experienced, and responsible professionals who perform high-quality work on a consistent basis.

D&K has dedicated planning, design, management, and construction professionals who have provided services on hundreds of projects throughout Vermont over our 58-year history. Our project management and design experience includes roadway/highway reconstruction, paving and pavement management, bridges, intersections, culverts, dams, water/wastewater, sidewalks/pathways, historic facilities, utility reconstruction and replacement, stormwater, riverbank and slope stabilization, building construction, and site improvements.

D&K's team includes multidisciplined in-house personnel supported by familiar specialty firms that address the needs of municipal projects. We appreciate your consideration of our qualifications and look forward to continuing to support Vermont municipalities on state- and federally-funded transportation and infrastructure improvement projects. We would be pleased to answer any questions you may have. Please do not hesitate to give me a call at 802-728-7238 or contact me via email at krobie@dubois-king.com.

Sincerely,
DuBois & King, Inc.

Ken Robie, PE
Contract Manager

General Firm Information

Introduction to the Consultant Firm

Established in 1962, DuBois & King (D&K) is a Vermont-based consulting engineering firm with 130 professional engineers, planners, designers, surveyors, technicians, environmental and permitting specialists, and support personnel, 91 of whom are in Vermont. The firm has provided engineering or construction phase services on over 100 Municipal Assistance Bureau (MAB) projects. Following are firm's municipal engineering services:

Planning and Design

- Roadway Evaluation, Reconstruction, Rehabilitation
- Scoping, Planning
- Slope Stabilization
- Signalized Intersections
- Roundabouts
- Unsignalized Intersections
- Right of Way Acquisition
- Landscape Design
- Road Diets
- Complete Streets
- Sidewalks - Concrete, Asphalt, Pavers
- Bike Lanes - Protected, Enhanced
- Multiuse Pathways
- Parking Lots
- Railroad Engineering
- Public Engagement
- Street Lighting
- Salt Sheds

Utilities and Environmental

- Water/Sewer/Stormwater – Piping, Pumping, Process, Treatment, Permitting
- Hazardous Materials Investigation, Assessment, Mitigation

Transportation Structures

- Highway Bridges
- Culverts – CMP and Concrete
- Rail Bridges
- Pedestrian Bridges
- Covered Bridges
- Steel Truss Bridges
- Retaining Walls

Permitting, Natural Resources and Wetlands

- National Environmental Policy Act (NEPA) Documentation — CEs, EAs, EISs
- Vermont Agency of Natural Resources Permitting
- US Army Corps of Engineers Permitting
- Wetland Science
- Wetland Mitigation Site Design

Water Resources/Hydraulic Design

- Hydrogeology
- Roadway and River Embankment Protection
- Hydraulic and Hydrologic Analysis
- Flood Resiliency, Floodplain Analysis
- Stormwater – Low Impact Development
- Stormwater – Traditional Closed Drainage
- River Channel Restoration, Water Quality
- Dam Engineering

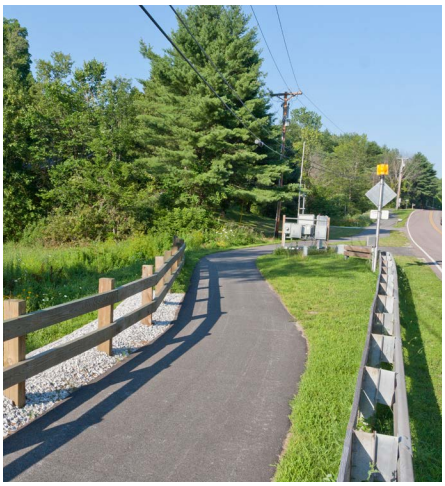
Survey and Mapping

- Topographic Survey, Basemapping
- Horizontal and Vertical Control
- ROW Boundary Survey
- Plats
- Deed Research
- GIS Services

Contact Information:

DuBois & King, Inc., 6 Green Tree Drive, South Burlington, VT 05403, 802.878.7661
Ken Robie, PE, 802.728.7238, krobie@dubois-king.com

The following pages detail the firm's areas of service that pertain to the Request for Qualifications (RFQ).



Transportation Engineering

Design | Evaluation | New Roadways | Reconstruction | Rehabilitation | Complete Streets | Stormwater | Traffic | Transportation Alternatives Program | Transit | Abutter Coordination | Signing | Striping | Parking | Streetscape | Lighting | Right-of-Way | Permitting | Cost Estimates | Construction Documents | Bid Phase Services

D&K offers transportation engineering, survey, and permitting to guide MAB projects from scoping through construction. Fully staffed to support transportation projects, our in-house team consists of qualified professionals from survey through design and construction administration/inspection services. D&K offers a comprehensive understanding of state and federal transportation programs and compliance with the Manual on Uniform Traffic Control Devices (MUTCD), the AASHTO Green Book, and NEPA, ACOE, and VT ANR regulations and processes.

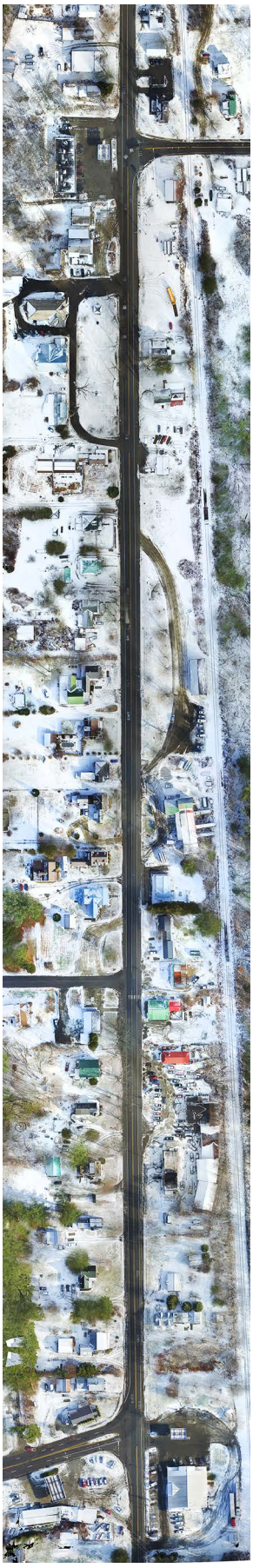
Associated in-house services include survey; assistance in right-of-way acquisition; public engagement programming; wetlands science; environmental, railway, and geotechnical engineering; and bid phase services.

Utilities and Environmental

Wastewater and Stormwater Collection | Water Distribution Mains, Process, Treatment and Pumping | Wastewater Collection Mains and Pumping | Permitting and Funding Assistance | Hazardous Materials

Water supply and wastewater treatment are the engineering sciences on which DuBois & King was founded. On an ongoing basis since 1962, D&K professionals have planned and designed water distribution and wastewater collection systems. D&K engineers provide proactive coordination with regulatory agencies and utilities to obtain permits and approvals.

DuBois & King staff provide services for investigations, assessments, compliance, and monitoring of sites containing hazardous materials and solid waste. D&K environmental professionals have an in-depth knowledge of federal and state regulations to effectively manage and guide clients through regulatory processes.



Transportation Planning

Corridor Plans | Development of Street Design Guidelines | Complete Streets | Public Engagement | Municipal/Regional Multimodal Transportation Plans | Thoroughfare Planning for Form-Based Code Adoption | Scoping and Alternatives Analysis | Multimodal/Traffic Impact Assessments | Analysis/Design of Intersections | (Roundabouts, Signalized and Unsignalized) | Traffic and Travel Demand Forecasting | Scenario Planning | Build-Out Analysis | Electric Vehicle Infrastructure

DuBois & King's Transportation Planning staff includes planners and engineers experienced in working with communities, agencies, and the public on a variety of transportation planning projects. Transportation investments are an opportunity for communities to set the stage to achieve their goals and visions for growth and development.

Our approach to transportation planning considers public and community concerns and the important influences between land use and transportation design. Our staff is well-versed in the latest innovations of multimodal land use/transportation planning, including mode share analysis for developments, evaluation of road diets, and development of Complete Streets designs.

We work throughout the Northeast and are familiar with emerging planning priorities and the need for cost-effective strategic transportation investments. Our planning work is strengthened by our comprehensive understanding of local transportation facilities programs and applicable federal and state permitting requirements.

Transportation Structures

Bridge Type Studies | Inspections | Load Ratings | Rehabilitations | Replacements | Steel | Concrete | Timber Covered Bridges | Culverts | Geotechnical Engineering | Retaining Walls | Right-of-Way | Parking Structures | Permitting | Highway Approach Design | Cost Estimates | Construction Documents | Bid and Construction Phase Services

DuBois & King offers a full range of bridge-related services. For MAB projects, D&K's bridge engineers prepare condition assessments, calculate load ratings, and make recommendations for rehabilitation and replacement and perform bridge inspections in accordance with the guidelines outlined in the Federal Highway Administration's National Bridge Inspection Program and Bridge Inspectors Training Manual. D&K staff use the latest AASHTO, state design codes and specifications, and principles of Accelerated Bridge Construction.

D&K engineers design single-span and multi-span bridges. Designs include concrete, steel, and timber bridges; spread footings bearing on soil and directly on ledge; pile foundations; and mechanically stabilized earth (MSE) abutments and retaining walls. The firm's expertise includes the assessment and repair of historic structures, including timber covered, steel truss, and suspension bridges.

Permitting and NEPA

Federal, State, Local Permitting | Environmental Documentation | Wetland Delineation | Categorical Exclusion | Environmental Assessment | Environmental Impact Statement | Visual Resource Assessments | Habitat Identification/Mapping | Biomonitoring | Natural Resource Inventories

DuBois & King's Environmental Documentation & Permitting staff guide projects through local, state, and federal regulatory documentation, clearances, and permitting. With expertise in documentation, alternative analysis, and resource identification, delineation, and mitigation, D&K staff have provided NEPA, environmental, and permitting services for a full range of assignments, including both large and complex and small and routine transportation projects. D&K staff have completed NEPA documents guided by federal agencies including the DOD, FHWA, DOE, FAA, and EPA.

When supporting a planning and engineering effort or conducting a natural resources investigation independent of a development project, staff engineers, environmental planners, permit specialists, GIS specialists, wetlands scientists, field naturalists, surveyors, and landscape architects are highly experienced in providing services for compliance with regulatory agencies. D&K staff work to identify and resolve potential conflicts early in the planning phase before they impede progress.

Wetlands

Wetland Delineations | Wetland Mitigation Site Design | Wetland Restoration Plans | Vegetation/Planting Plans | Erosion Control/Stabilization Plans | Compensatory Mitigation | Invasive Species Control | Preparation of State-Approved Construction Sequence and Methods Monitoring of Progress Reports | Mapping | Expert Testimony

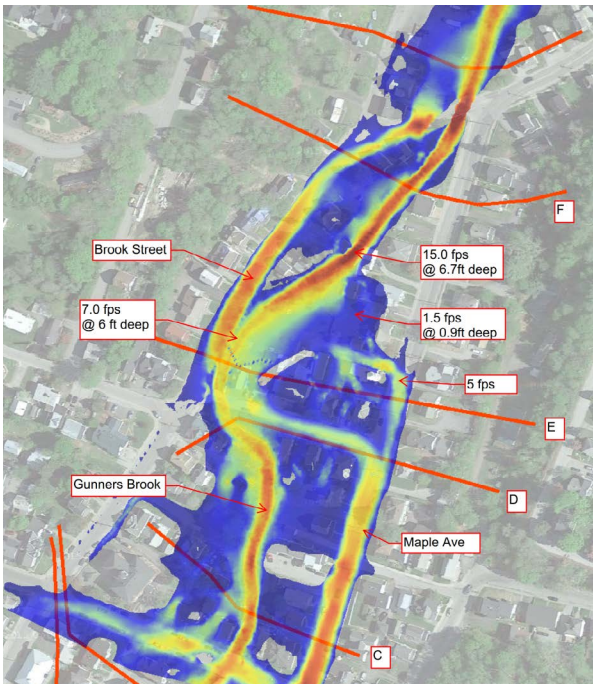
DuBois & King helps municipalities address wetland issues. The firm's staff investigate the site, meet with the owner, stakeholders, and/or regulators, and provide a plan to address the issues and monitor the outcomes. D&K's certified wetland scientists provide the technical expertise to assist owners with restoration plans, revegetation plans, invasive species control plans, erosion control, streambank stabilization, monitoring plans, and guidance on compliance with state wetlands regulations. D&K wetland scientists provide wetland delineation on all types and sizes of transportation projects and design wetland mitigation sites to compensate for resource impacts.

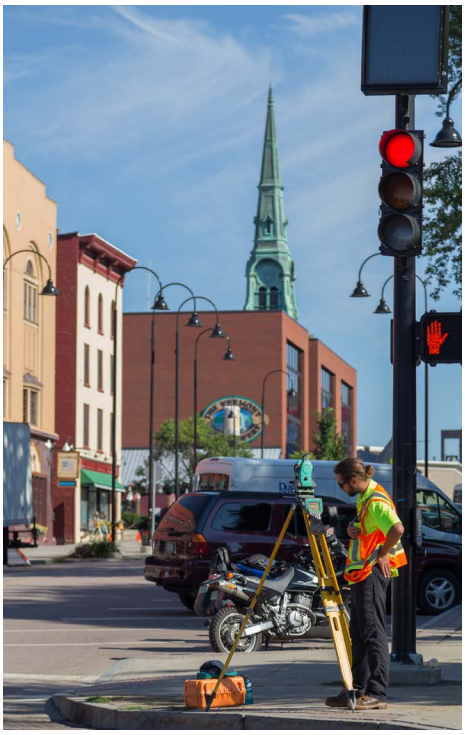
Water Resources

Stormwater Management | River Restoration | Hydraulic Studies | Hydrologic Modeling | Hydrogeology | Watershed Management | | Aquatic Organism Passage| Embankment Stabilization | Natural Channel Design | Dam Engineering | Dam Removal | Ice Jam Analysis | Ice Diversion | Flood Control & Mitigation | Drainage

D&K has over 50 years of water resources engineering experience. Typical assignments include stormwater management, river restoration, streambank stabilization, flood damage surveys, subsurface investigations, evaluation of alternative solutions, economic evaluations, environmental analysis, and public engagement. Studies include dam break analyses, flood routing, floodplain/floodway delineation, scour analysis, scour countermeasure analysis, ice jam analyses, flood frequency/low flow evaluations, reservoir routing, environmental impact assessments.

The firm's engineers are thoroughly familiar with the hydrologic, hydraulic, and physical characteristics of the northeastern United States. In-house staff use HEC-RAS 5.0 and HEC-HMS and related software, as well as other hydrologic and hydraulic software packages to provide 1- and 2-D modeling. Individuals described in this proposal have a solid understanding of state and federal regulations and procedures for transportation projects and expertise in wetlands, stormwater, dredge-and-fill, dam safety, and discharge and withdrawal permits.





Survey and Mapping

Horizontal, Vertical Control | Topographic Survey | Boundary Survey | Deed Research | Construction Stakeout | Base Mapping | Plats | Monitoring | Geodetic Leveling | High Accuracy Construction Services | GPS | GIS

D&K uses the latest technology to achieve high level accuracy and efficiency, which is fully compatible with our in-house and MicroStation/AutoCAD systems. D&K's field personnel are equipped with robotic total station and RTK GPS systems. This equipment supports providing one-man survey crews on projects for increased productivity and budget control.

Survey assignments include construction stakeout, hydrographic survey for flood insurance studies, right-of-way survey, and boundary survey in densely populated areas and in remote locations such as mountainous terrain in national and state forests. D&K's use of geodetic leveling instruments has set published national benchmarks and provides high accuracy for construction layout services.

D&K's Survey Department comprises Survey Party Chiefs and technicians who work under the direct supervision of a Licensed Land Surveyor. Survey staff offer expertise in land surveying and mapping projects and topographic, property, and construction survey. They establish horizontal and vertical control, as well as construction baselines and stakeout. Property survey services include deed research and preparation of property plats for filing with local officials.

Subconsultant Partners

Hartgen Archeological Associates, Inc.

For the majority of ongoing and completed municipally-managed, federally-funded transportation projects on D&K's resume, D&K has partnered with Hartgen, including the Pearl Street Bridge in Johnson, which was designed to use historically-accurate Texas Classic Rail.

Cultural Resources Documentation. Hartgen is an award-winning provider of cultural resource management solutions serving the private and public sectors since 1973. Hartgen has completed over 5,000 projects throughout the Northeast for a diverse range of clients, including not-for-profit preservation groups and municipalities. Hartgen, which is among the largest cultural resource management firms in the Northeast, is headquartered in Rensselaer, New York, and maintains an office in Putney, Vermont.

Hartgen comprises a staff of 20 well-qualified, experienced professionals and includes 36 CFR 61-qualified archaeologists, architectural historians, laboratory staff, documentary researchers, GIS specialists, and support personnel, many of whom have worked together as a team for a decade or more. The firm's staff are well-versed in cultural resource regulations, including Section 106 of the National Historic Preservation Act (NHPA), Section 14.09 of the New York State Historic Preservation Act, and the State Environmental Quality Review Act (SEQRA). Hartgen's team includes staff members trained in HAZWOPER (29 CFR 1910.120), the Native American Graves Protection and Repatriation Act (NAGPRA) training, and remote sensing methods.

Hartgen's experiences cover all phases of cultural resource management, including Phase IA, IB, II and III archaeological investigations; National Register eligibility assessments, architectural history; HABS/HAER documentation; historical deed and document research; tribal consultation; design and presentation of public information signs, pamphlets, and exhibits; and public outreach.

Sanborn, Head & Associates, Inc.

D&K and Sanborn, Head & Associates have worked closely together on numerous successful roadway slope protection projects, including the Rochester Bethel Mountain Road project, which went from design notice-to-proceed to construction completion in under six months.

Geotechnical Engineering. Sanborn Head is a multidisciplined firm of consulting engineers and scientists that provides geotechnical, environmental, solid waste and energy services to clients across the United States and internationally. The firm was founded in 1993 and employs approximately 115 professionals and support personnel. Sanborn Head has four office locations in New England and one in Colorado. This contract will be staffed and expensed from the firm's Burlington, Vermont, office. Sanborn Head has provided geotechnical engineering services for a variety of Vermont projects, including slope stability, large developments in Burlington and Montpelier, smaller-scale developments throughout the state, solar developments, and transportation-related projects such as working on the rehabilitation of the Burlington Bike Path.

Organizational Chart

Following are key staff available for municipal projects. Years of experience are listed in parentheses following each staff member's name.

Municipality/MPM

Design Services Project Managers

Ken Robie, PE (32)
- Roadway and Traffic/Intersections
- Multimodal
- Slopes

David Conger, PE (29)
- Roadway and Traffic
- Multimodal
- Culverts
- Stormwater and Site

Rich Tetreault, PE (36)
- Roadway and Traffic
- Multimodal
- Bridges and Culverts
- Stormwater and Site

Chris Lathrop, PE (26)
- Roadway and Traffic/Intersections
- Multimodal
- Slopes
- Rail

Brian Breslend, PE (14)
- Roadway and Traffic/Intersections
- Multimodal
- Slopes
- Rail

Jenny Austin, PE (20)
- Roadway and Traffic/Intersections
- Multimodal

Bob Durfee, PE, SECB (41)
- Historic Structures
- Bridges and Culverts
- Retaining Walls

Chris Sargent, AICP, CFM (20)
- Planning and Scoping
- Community Revitalization
- Permitting

Dayton Crites, AICP (12)
- Planning and Scoping
- Trail Design and Wayfinding

Matt Mears, PE (17)
- Stormwater and Site

Christopher Rivet, PE (11)
- Stormwater and Site

Key Technical Staff

Chuck Goodling, PE (33)
- Civil, Water/Sewer

Jon Ashley, PE (29)
- HazMat, Slopes, Water/Sewer

Emily Lewis, PLA, LEED AP (14)
- Landscape Architecture
- Stormwater
- Permitting

Dan Mallach, PLA, CPRP (17)
- Landscape Architecture
- Planning
- Arborist

Megan Ooms, PE (13)
- Bridges and Culverts

Becky Gaudreau, PE (14)
- Bridges and Culverts

Randy Otis, LS (20)
- Survey and Mapping
- Deed Research

Ross Tsantoulis, PE (14)
- Water Resources

Andy Hoak, PE, PG, (28)
- Hydrogeology, Slopes, HazMat

Aimee Rutledge, PWS, CPESC, CPSWQ, (22)
- Wetland Science and Permitting

Brenda Bhatti, (20)
- Bat Study, Wildlife Biology

Mark Neuroth, EIT (14)
- Geotechnical, Civil Engineering

Shawn Kelley, PhD, PE (27)
- Geotechnical Engineering

Sanborn, Head and Associates

Corey Mack, PE (25)
- Traffic Engineering

Wall Consulting Group

Tom Jamison, PhD, RPA (40)
Elise Manning-Sterling (38)
- Cultural Resources

Hartgen Archeological Associates

John Crock, PhD
- *Cultural Resources*

UVM Consulting Archaeology Program

Availability Chart

The table below provides is an overview of staff availability based on typical levels of effort for MAS and other federally-funded, municipally-managed projects. The availability indicated will be adjusted to suit the needs of individual projects.

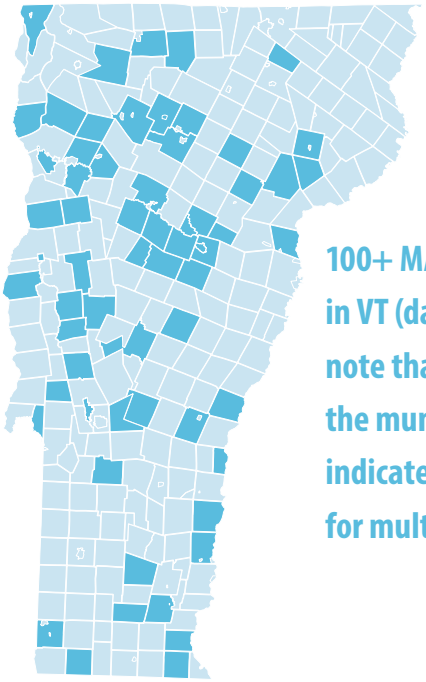
Staff Member Name	Position	Expertise	Availability %
Ken Robie, PE	Project Manager	Roadway, Multimodal/Traffic Engineering, Intersections	50
David Conger, PE	Project Manager	Roadway, Multimodal, Site, Stormwater, Traffic	25
Rich Tetreault	Project Manager	Roadway, Multimodal, Site, Stormwater, Traffic, Bridges	25
Chris Lathrop, PE	Project Manager	Roadway, Multimodal/Traffic Engineering, Intersections	25
Brian Breslend, PE	Project Manager	Roadway, Multimodal/Traffic Engineering, Intersections	50
Jenny Austin, PE	Project Manager	Traffic and Roadway Engineering	50
Bob Durfee, PE, SECB	Project Manager	Structural Engineering for Historic and Conventional Bridges and Retaining Walls	25
Chris Sargent, AICP, CFM	Project Manager	Land Use Planning Permitting Public Engagement	25
Dayton Crites, AICP	Project Manager	Trails, Public Engagement, Urban Planning	25
Matt Mears, PE	Project Manager	Salt Sheds, Sites, Stormwater, Parking, Permitting	25
Christopher Rivet, PE	Project Manager	Salt Sheds, Sites, Stormwater, Parking, Permitting	25
Charles Goodling, PE	Environmental Engineer	Utilities, Roadway, Water Resources	25
Jon Ashley, PE	Environmental Engineer	Slopes, Hazardous Materials, Stormwater, Utilities	25
Megan Ooms, PE	Sr. Bridge Engineer	Bridges, Culverts, and Retaining Walls	25
Becky Gaudreau, PE	Sr. Bridge Engineer	Bridges, Culverts, and Retaining Walls	25
Emily Lewis, PLA	Landscape Architect	Site and Linear Transportation, Urban Planning	25
Dan Mallach, PLA, CPRP	Planner/Landscape Arch.	Urban and Recreation Planning, Arborist	25
Randy Otis, LS	Land Surveyor	Linear and Site Transportation Boundary and Topo Survey, ROW Services	25
Ross Tsantoulis, PE	Hydraulic Engineer	Hydraulics for Bridges, Dams, Sites, and Roadways	25
Andy Hoak, PE, PG	Hydrogeologist	Slopes, Hazardous Materials, Stormwater, Water Resources, On-Site Water/Sewer	25
Aimee Rutledge, PWS, CPESC, CPSWQ	Permitting/ Wetland Scientist	NEPA- and ANR-related Documentation for all Project Types	25
Brenda Bhatti	Bat Specialist/ Wildlife Biologist	Bat and other natural resource documentation, NEPA- and ANR-related documentation for all Project Types	25
Mark Neuroth, EIT	Geotech/Civil Des. Eng.	Geology and Civil and Soil Engineering	25
Shawn Kelley, PE, PhD	Geotechnical Engineer	Bridges, Slopes, Retaining Walls, Buildings	20
Tom Jamison, PhD, RPA	Archaeologist	Cultural Resources	10
Elise Manning-Sterling	Archaeologist	Cultural Resources	10
John Crock, PhD	Archaeologist	Cultural Resources	10

Design Services

Qualifications and Experience

DuBois & King (D&K) has been working with municipalities and designing projects through the Municipal Assistance Bureau (MAB) since the program's inception. D&K's multidisciplined team include skilled, committed individuals experienced in MAB project administration and design requirements. D&K staff have established working relationships with nearly the entire VTrans MAB group as well as numerous other VTrans project managers and engineering staff. Through these project interactions over the years, D&K staff have developed a thorough understanding of the MAB process. Several of D&K's MAB design project managers also serve as municipal project managers on behalf of municipalities and keep current with any MAB process changes. Understanding how to navigate the MAB process is critical to a successful project. A summary of D&K's understanding of the process follows.

MAB experience:



100+ MAB projects in VT (dark shading, note that many of the municipalities indicated selected D&K for multiple projects)

- **50+ federally-funded municipal projects in New Hampshire and Maine.**
- **Municipal projects constitute the largest share of D&K's work.**

Process Understanding

Project Definition. The project definition phase is a critical step to a successful project. During this phase, the design consultant seeks local input to get a thorough understanding of the needs and objective of the project. As part of this step, the consultant will lead and attend a Local Concerns Meeting. After gathering local input, the consultant will develop a Purpose and Need statement which creates the backbone of the project and clearly states the objectives the project team must work to solve. Once the objective is defined, the team develops alternatives using the appropriate design standards, guidelines and specifications. During this phase, all potentially affected resources are identified and documented. The design team then presents alternatives, including potentially affected resources, at a community meeting. Based on public input, the municipality will choose a preferred alternative which will serve as the basis of design for conceptual level plans. The final step of the project definition phase is NEPA documentation and approval based on the conceptual plans. The design consultant's critical steps during the project definition phase include:

- Lead a project kickoff meeting
- Lead/Attend a Local Concerns Meeting
- Draft a Purpose and Need statement
- Investigate and evaluate alternatives
- Coordinate with resource agencies
- Lead/Attend a public Alternative Presentation Meeting
- Work with the community to select a preferred alternative
- Develop conceptual plans
- Prepare environmental documentation

Project Design. The project design phase commences once the conceptual plans and the federal environmental document (most commonly a Categorical Exclusion, programmatic or otherwise) has been completed and VTrans has authorized the project to move to the next phase. The design consultant develops Preliminary Plans, further refining the project footprint, and evaluates and documents impacts to utilities, either modifying the design or developing utility relocation options, coordinating with utility owners, as necessary. If required, the consultant will coordinate utility agreements.

The design consultant will identify and document right-of-way impacts and may assist the municipality with obtaining any necessary properties or permanent or temporary easements following the VTrans right-of-way process. All environmental permits and right-of-way easements will be obtained before proceeding to Final

Plan development. During Final Plan development, the design consultant will coordinate with VTrans to obtain any utility or railroad agreements (when applicable), develop project special provisions, determine material sampling and testing requirements, and provide further detail on project plans. The consultant will then submit Final Plans and construction estimates to the municipality and VTrans for review. The contract plan submission will incorporate any final plan comments and include a revised construction estimate and contract bid documents for final review and approval by the municipality and VTrans. Once approved, VTrans will give written authorization to advertise the project for bid. The design consultant's critical steps during the project design phase include:

- Develop Preliminary Plans
- Coordinate utility relocations
- Develop right-of-way plans
- Perform property owner visits
- Assist municipality with property acquisitions
- Obtain utility and railroad agreements
- Develop Final Plans
- Check that environmental document (CE) is current
- Check all applicable permits
- Certify design
- Prepare and submit Contract Plans, specifications and estimate

D&K staff member experience:

Selectboard chairs and members

Development review board members

Fire chiefs

Small business owners

Municipal engineers

Regional planning commission employees

VTrans employees

Construction. Once authorization to advertise a project has been received from VTrans the project, an invitation to bid is developed and posted. During the bidding period, the design team may be expected to answer contractor questions clarifying the design plans via an addendum. At the end of the bidding period, a public bid opening is held where the contractor bids will be read out loud and an apparent low bidder is announced. The consultant will analyze the bids to determine if all bids are accurate and responsive and there are no disadvantages to the Town/State with corresponding advantages to the contractor. The low bidder is then determined and the design consultant will provide to the municipality and VTrans a recommendation letter to award the project. After the project is awarded to the contractor, the design team may be asked to attend the preconstruction meeting. The design team will be available to answer construction-related questions that may arise during construction. Critical steps during the Construction Phase include:

- Invitation to bid
- Answering contractor questions via addenda
- Bid opening and analysis
- Recommendation to award letter
- Award contract
- Preconstruction conference

Selected on-call experience:

MAB At-the-Ready

Town/City Engineer ~ 10 municipalities

CCRPC on-call services

CVRPC on-call services

TRORC on-call services

VTrans

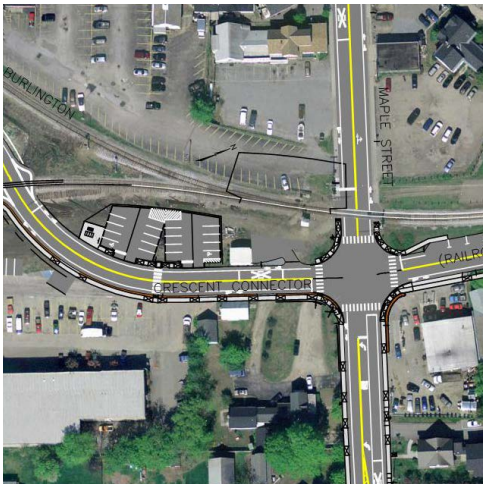
- Roadway & Safety
- Structures
- Policy & Planning
- Highway Resurfacing
- Rail
- ROW & Boundary Survey
- Gen'l. Environmental
- Aviation
- Biological Services
- Program Development
- Covered Bridges
- Operations Stormwater
- Civil Engineering Consultant
- Environmental Consulting & Resource Services

FEMA-related Master Services Agreement

- Mendon: ~ 10 projects
- Royalton: ~ 15 projects

Example Projects

Following are summaries of relevant projects completed by DuBois & King.



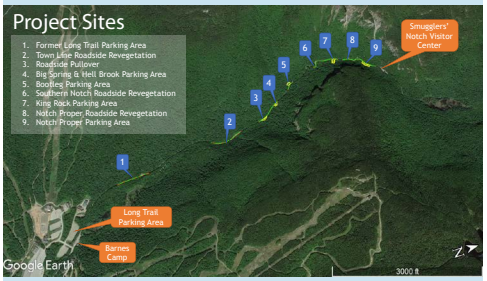
Crescent Connector Road
Village of Essex Junction

MAB Process
1,800-ft roadway on new alignment

D&K is leading design, survey, permitting, and ROW for a $6.5M FHWA-funded project to relieve pressure from the Five Corners Intersection. **Key staff:** Chris Lathrop, Brian Breslend, Matt Mears, Michael Hildenbrand, Stephanie Solla, Emily Lewis, Charlotte Brodie, Randy Otis, Gerald Stockman

- **Necessity & Comp. Hearings**
- **Complete Streets**
- **Stormwater**
- **Landscape Arch.**
- **NEPA EA**
- **Intersections & Rail**

Contact: Robin Pierce, Community Dev. Dir.; 802.878.6950; robin@essexjunction.org



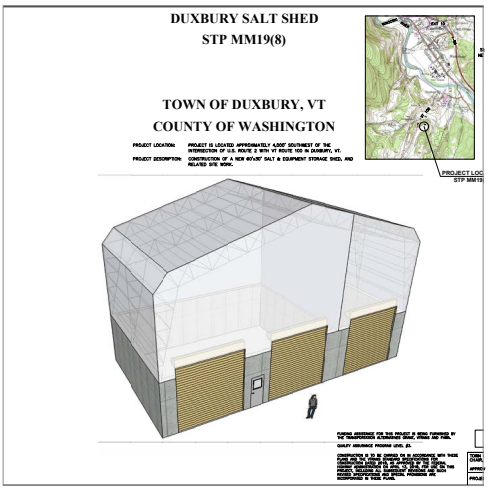
Parking and Wayfinding, Smugglers Notch Corridor
Lamoille Cty. Planning Comm.

MAB Process
5 parking lots and wayfinding

D&K is leading survey, design and permitting to improve parking functionality, highway safety and stormwater management along the VT 108 corridor through the Notch. **Key staff:** Ken Robie, Dayton Crites,

- **Recreation**
- **Site/Civil**
- **Stormwater**
- **Stakeholder Engagement**
- **NEPA CE**

Contact: Seth Jensen, LCPC Principal Planner; 802.851.6337; seth@lcpcvt.org



Salt Shed
Town of Duxbury

MAB Process
60-ft by 30-ft insulated salt shed

D&K is leading design and permitting for construction of a municipal salt shed near a waterway. **Key staff:** David Conger, Matt Mears

- **Site/Civil**
- **Stormwater**
- **Facilities**
- **NEPA CE**

Contact: Jonathan DeLaBruere, Selectboard Assistant; 802.323.2772; duxbury.sb.assistant@gmail.com

Siboinebi Multiuse Path
City of Montpelier

MAB Process
2-mile pathway on new alignment

D&K led design, extensive ROW and public coordination, survey, and permitting for this $6M project. **Key staff:** Brian Breslend, Jon Ashley, David Conger, Jenny Austin, Tom Jamison (Hartgen)

- **Rail Relocation**
- **Stormwater**
- **Public Engagement**
- **Landscape Arch.**
- **NEPA CE**

Contact: William Fraser, City Manager; 802.223.9502; wfraser@montpelier-vt.org

Covered Bridge Rehabilitation
Town of Warren

MAB Process
Timber and concrete repair

D&K is leading design for a project that replaces the west abutment and wing walls and completes selective restoration of the superstructure. **Key staff:** Bob Durfee, Jim Hall, Martha Evans-Mongeon,

- **Timber Bridge**
- **Historic Structure**
- **NEPA CE**

Contact: Cindi Jones, Town Administrator; 802.496.2709 ext. 5; forevermont@hotmail.com

Culvert Replacement
Town of Granville

FEMA, VTrans Proj. Dev. Process
18-ft box culvert

D&K led hydraulics and hydrology, precast reinforced concrete, roadway, and site design, permitting, survey, and ROW plan production to enlarge the Post Office Hill Road Culvert. **Key Staff:** Martha Evans-Mongeon, Jon Ashley, Charlotte Brodie, Randy Otis

- **Water Resources**
- **Structural Design**
- **Wetlands Permit**
- **ROW**

Contact: Bruce Hyde, Selectboard Chairman; 802.279.1811; granvilletown@gmavt.net

Enterprise Alley
City of Barre

MAB Process
80-slip parking lot and multiuse path

D&K led civil, electrical, transportation, and stormwater design, survey, permitting, and construction phase services for a brownfield redevelopment in the heart of Barre City. **Key Staff:** Michael Hildenbrand

- **Site/Civil**
- **Bike/Ped**
- **Lighting**
- **Parking**
- **Rail**
- **Stormwater**
- **Transit Dropoff**

Contact: Steve Mackenzie, PE, City Manager; 802.476.0221; manager@barrecity.org

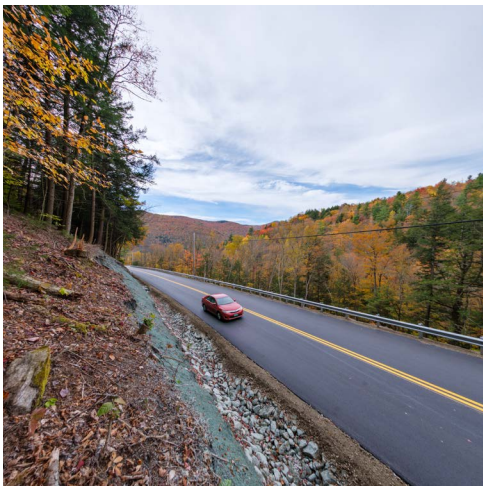
St. Paul Street
City of Burlington

MAB Process
Streetscape redesign, road reconst.

D&K led civil, utility, transportation, and stormwater design, survey, permitting, hazmat mitigation, and construction phase services as part of the Great Streets BTV implementation. **Key Staff:** David Conger, Matt Mears, Chris Lathrop, Jon Ashley, Randy Otis, Gerald Stockman

- **Complete Streets**
- **LID Stormwater**
- **Parking**
- **Water/Sewer**

Contact: Kirsten Merriman-Shapiro; 802.865.7284; kmerriman@burlingtonvt.gov



Bethel Mt. Road and Slope
Town of Rochester

FHWA ER Funds
2,800 ft of road reconst., 6 slope sites

D&K led civil, roadway, and stormwater design; survey; permitting; and construction phase services. An April 15, 2019, storm event rendered the road unusable and roadside slopes severely damaged; construction was completed on October 11, 2019. **Key Staff:** Jon Ashley, Brian Breslend, Chris Lathrop, Shawn Kelley (Sanborn Head), Randy Otis

- **Emergency Project**
- **Stormwater**
- **Permitting**
- **NEPA CE**

Contact: Joan Allen, SB Assistant; 802.767.3631; rochesterassistant@comcast.net

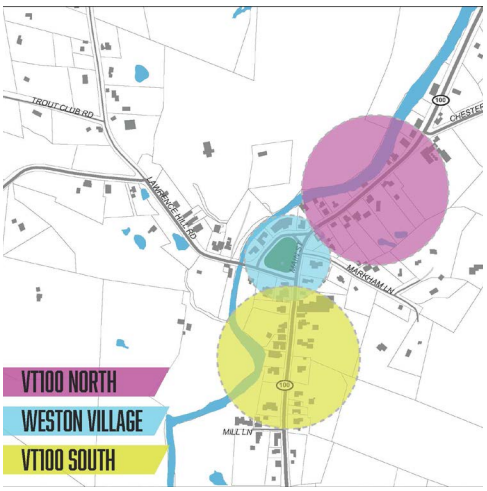
Connect Hyde Park

Better Connections Grant Funding
Downtown Streetscape Planning

D&K led transportation, land use, and economic planning and public engagement for a project to connect Main Street with the Lamoille Valley Rail Trail and other recreation assets and revitalize the downtown area. **Key Staff:** Chris Sargent, Dayton Crites

- **Scoping**
- **Complete Streets**
- **Economic Dev.**
- **Recreation**
- **Bike/Ped**
- **Public Engagement**

Contact: Susan Bartlett, Selectboard chair; 802.777.0367; senatorbartlett@comcast.net



Bicycle and Pedestrian Study
Windham Regional Commission

MAB Process
Downtown Streetscape Planning

D&K led planning for a project focusing on easily implementable measures to encourage walking and biking within Weston's VT 100 village corridor. **Key Staff:** Jenny Austin, Chris Sargent, Dayton Crites, Tom Jamison (Hartgen)

- **Scoping**
- **Complete Streets**
- **Walkability**
- **Stormwater**
- **Public Engagement**

Contact: Marion Major; 802.257.4547, ext. 109; mmajor@windhamregional.org

Knight Lane Sidewalk
Town of Williston

MAB Process
242-ft-long, 5-ft-wide sidewalk

D&K led stormwater, civil design, ROW, utility coordination, permitting, survey, and cultural resource services for a new sidewalk to improve connectivity within the town. **Key Staff:** David Conger, Charlotte Brodie, Randy Otis, Tom Jamison (Hartgen)

- **Complete Streets**
- **Walkability**
- **Stormwater**
- **Public Engagement**
- **NEPA CE**

Contact: Lisa Schaeffler, Assistant Public Works Director; 802.878.1239; lschaeffler@willistontown.com

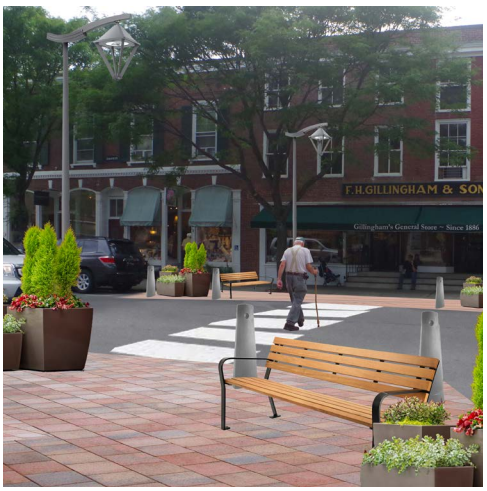
Gravel Wetland
Village of Essex Junction

MAB Process

D&K led design, survey, and permitting for construction of a water quality enhancement project. **Key Staff:** Michael Hildenbrand, Charlotte Brodie, Randy Otis

- **Stormwater**
- **Wetlands Permitting**
- **NEPA CE**

Contact: Chelsea Mandigo, Stormwater Coordinator/WW Operator; 802.878.6943 ext. 105; chelsea@essexjunction.org



Village Revitalization Plan
Town of Woodstock

MAB Process
Downtown corridor planning

D&K led transportation and land use planning for a project to develop a community vision and implementable measures to encourage walking and biking throughout downtown Woodstock. **Key Staff:** Chris Sargent

- **Scoping**
- **Complete Streets**
- **Economic Dev.**
- **Recreation**
- **Bike/Ped**
- **Public Engagement**

Contact: Joe DiNatale, Vice Chair, Econ. Dev. Commission; 802.356.5881

Overflow Culvert
Town of Brandon

FEMA HMGP Funding
278-ft-long, 6-ft-high, precast culvert

D&K led civil, hydraulic, and structural design, survey, and permitting of a new culvert that relieves pressure from an adjacent large, stone arch bridge and properties from flooding up to the 500-year storm. **Key Staff:** David Conger, Tim Dall, Charlotte Brodie, Randy Otis

- **Flood Resiliency**
- **Baffle Blocks**
- **Complex Routing**

Contact: David Atherton, Town Manager; 802.247.3635 ext. 210; datherton@townofbrandon.com

Key Personnel

Project Managers

Ken Robie, PE

- 32 years of experience
- Roadway, Traffic, Intersections, Multimodal, Slopes

Ken has significant management and transportation engineering expertise with the Vermont Agency of Transportation (VTrans). His background includes project management and design for all types of highway projects. He has experience supervising project teams, setting budgets and schedules, reviewing cost proposals and consultant scopes of work, and coordinating all aspects of project development involving VTrans, FHWA, other state and federal agencies, and the public.

David Conger, PE

- 29 years of experience
- Roadway, Traffic, Multimodal, Culverts, Stormwater, Sites

David is a Civil Engineer who has managed numerous intersection and corridor scoping studies, as well as major transportation studies related to environmental impact statement evaluations. His technical expertise includes stormwater utility, design, MS4 permits, an understanding of TMDLs, and other engineering functions specific to the design of green stormwater infrastructure, drainage, and water quality systems.

Rich Tetreault, PE

- 36 years of experience
- Roadway, Traffic, Multimodal, Bridges and Culverts, Stormwater, Sites

Rich has 36 years of experience as a Project Manager and Civil Structural Engineer overseeing transportation projects throughout New England. Rich was an employee with the Vermont Agency of Transportation (VTrans) for 31 years, ultimately serving as the Deputy Secretary of the Agency. His hands-on municipal experience includes a four-year stint serving as Vermont's State Public Assistance Officer following Tropical Storm Irene. He is currently involved in numerous municipal bridge and sidewalk projects.

Chris Lathrop, PE

- 26 years of experience
- Roadway, Traffic, Multimodal, Slopes, Rail, Intersections

Chris's experience includes the reconstruction of town highways, pathways, sidewalks, and state highways, resurfacing and safety improvements for interstate highways, and intersection improvements. He has been involved in all phases of project development from project conception through construction including design, public participation, contract documents, utility coordination, traffic management plans, bidding, and construction administration and inspection.

Jenny Austin, PE

- 20 years of experience
- Roadway, Traffic, Intersection, Multimodal

Jenny has experience providing design and analysis for signalized and unsignalized intersection projects, bicycle and pedestrian scoping studies, roadways, and multiuse pathway projects. She has experience leading scoping studies, managing design projects, and serving as MPM.

Brian Breslend, PE

- 14 years of experience
- Roadway, Traffic, Multimodal, Slopes, Rail, Intersections

Brian is a civil engineer with experience including the preparation of alternatives analyses; preliminary and final designs; cost estimation; plan development; field survey; and utility coordination for a variety of federally funded pathway, sidewalk, and roadway projects.

Bob Durfee, PE, SECB

- 41 years of experience
- Historic Structures, Bridges, Culverts, Retaining Walls

Bob is a structural and civil engineer who has managed or designed numerous highway, railway, roadway, and bridge projects for state and municipal agencies, including over 100 bridges. He is a noted author of bridge and structural publications and presenter.

Chris Sargent, AICP, CFM

- 20 years of experience
- Planning and Scoping, Community Revitalization, Permitting

Chris has experience in community planning with expertise in municipal planning and government, zoning regulation, permit analysis, facilitation and public process. He has extensive experience working with communities to engage the public, having worked with over 25 communities to develop their own municipal vision for the future. Chris has led numerous, award-winning planning projects using a wide range of methods to engage the public and respond to stakeholder requirements, concerns and ideas.

Dayton Crites, AICP

- 12 years of experience
- Planning, Scoping, Trail Design, Wayfinding

Dayton has assisted rural governmental organizations with mapping, land use and trails planning, park design, data management, and administrative needs. He has experience developing renderings, deploying hands-on charrette-style workshops, designing project websites, and using other engagement techniques. Prior to joining D&K, Dayton managed all elements of trails and active transportation planning, design, and public engagement as a municipal employee.

Matt Mears, PE

- 17 years of experience
- Stormwater and Site

Matt's expertise includes managing municipal salt shed projects, designing green stormwater infrastructure with significant site constraints and permitting requirements, and leading design of roadway and multimodal projects. Hands-on experience includes the Brickyard Road stormwater project for Essex Junction and Great Streets on St. Paul Street in Burlington. Both of these projects presented unusual site design and stormwater requirements. In Essex, the project called for conversion of an undeveloped area to a subsurface stormwater treatment facility. In Burlington, the project required street trees in silva cells, and other green stormwater BMPs.

Christopher Rivet, PE

- 11 years of experience
- Stormwater and Site

Chris has experience leading and providing design and permitting for VTrans MAS projects, including serving project manager for multiple salt shed projects and serving as the lead project engineer for stormwater BMP projects.

Key Technical Staff

Chuck Goodling, PE (33 years) | Civil, Water/Sewer. Chuck is a senior civil and environmental engineer. He brings hands-on knowledge of MAS and FEMA design projects and has led the majority of the firm's recent MAS construction phase assignments. He has overseen the design of tens of thousands of feet of municipal roadway and utility reconstruction projects.

Jon Ashley, PE (29 years) | HazMat, Slopes, Water/Sewer. Jon, who directs the Public Works Division, has experience managing MAS, FHWA ER, and FEMA roadway and utility infrastructure projects. Jon's experience includes leading many of the firm's recent slope projects, serving as MPM on MAS projects, and developing corrective actions for sites containing hazardous materials.

Megan Ooms, PE (13 years) | Sr. Bridge Engineer. Senior Bridge Engineer with 13 years of experience providing new design, rehabilitation, and replacement of complex and historic bridges. Her responsibilities include managing bridge design and rehabilitation projects throughout all phases of design and construction. She has experience managing projects that have high public interest, complex utility, and structural design components as well as subconsultants and interagency coordination.

Becky Gaudreau, PE (14 years) | Sr. Bridge Engineer. Becky has experience in load rating steel truss bridges, traditional girder bridges, and rail bridges. She also has experience with accelerated bridge construction projects, construction phase services, and quality control reviews. In the past two years,

Emily Lewis, PLA, LEED AP (14 years) | Landscape Architecture, Permitting, Stormwater. Emily has provided landscape architecture, wetland delineation, landscape and urban planning, and management of streetscape and site projects along the east coast. Her skills

also include graphic design, green stormwater concept development, public outreach, and photography.

Dan Mallach, PLA, CPRP, ISA Certified Arborist (17 years) | Landscape Architecture, Planning, Arboriculture. Dan has worked throughout the US and is currently providing planning and landscape architecture for five Vermont communities.

Randy Otis, LS (20 years) | Survey and Mapping. Randy manages D&K's Survey Department. He has led topographic, boundary, ROW, and construction survey for significant site and roadway and infrastructure projects for local, state, and federal clients.

Ross Tsantoulis, PE (14 years) | Water Resources. Ross is experienced in the hydraulic sizing and design of bridges, culverts, dams, stormwater systems, and other water conveyance structures. He has supported numerous federally funded municipal roadway, site, and airport projects.

Andy Hoak, PE, PG, CPESC (28 years) | Hydrogeology, Slopes, HazMat. Andy has supported a wide range of hands-on experience, including geotechnical assessments for roadways, bridges, and culverts, water source development, septic, hazmat projects, and slope projects.

Aimee Rutledge, PWS, CPESC, CPSWQ (22 years) | Permitting/Wetland Science. Aimee's concentration of work includes NEPA documentation, wetlands, water resources, stormwater, wildlife studies, and permitting. Aimee has strong relationships with many federal, state, and local regulatory agencies in the Northeast. She has worked with a wide range of clients on project types, including FAA/airports, bridge, roadway, dams, landfill sampling, SWPPP, industrial stormwater, wetlands restoration, corrective action plans, and Act 250.

Brenda Bhatti, (20 years) | Bat Specialist. Brenda has worked on hundreds of environmental, wetlands, wildlife and permitting projects as part of transportation and private construction and environmental compliance projects. Her experience includes using a range of techniques to measure and monitor bats and their habitat resources including radio telemetry, anabat surveys, mist netting, and use of tuttle traps.

Mark Neuroth, EI (14 years) | Geotechnical Engineer. Mark has 14 years of geotechnical and structural engineering experience supporting heavy civil projects throughout the United States. He has extensive field experience collecting geotechnical and structural testing data as well as management and design experience using AutoCAD, ArcGIS, and numerous numerical modeling software programs. His knowledge also includes providing evaluation and design for a range of slope evaluation and protection projects and for large-scale mineral extraction operations and infrastructure.

Shawn Kelley, PE, PhD (27 years) | Geotechnical Engineering, *Sanborn, Head & Associates.* As a specialist in geotechnical engineering design, geotechnical instrumentation, and geotechnical soil testing, Shawn has authored numerous publications, reports and presentations. He has provided geotechnical engineering on many of D&K's recent slope projects.

Corey Mack, PE, (17 years) | Traffic Signal Engineer *Wall Consulting Group.* Corey leads WCG's New England Transportation Design Services market, with a focus on advanced traffic signal design, signal capacity improvement, traffic operations, and transportation planning and analysis. In his experience planning, permitting, and constructing transportation infrastructure, Corey has partnered with D&K on a range of projects.

Tom Jamison, PhD, RPA (42 years) | Cultural Resources, *Hartgen Archeological Associates.* Tom has been with Hartgen since 1990, and he serves as a project manager in Putney. His expertise includes historic and precontact archaeological research and documentation, surveys, mapping, excavation, and research.

Elise Manning-Sterling (40years) | Cultural Resources, *Hartgen Archeological Associates.* Elise has been with Hartgen for 24 of her 40-year archaeological career, and she works in the Putney office. Since graduation from the State University of New York at Binghamton, she has worked as a professional archaeologist conducting research and excavations on archaeological sites throughout the United States.

John Crock PhD, (20 years) | Cultural Resources, *UVM CAP.* John specializes in the archaeology of northeastern North America and the archaeology of the Caribbean, with an emphasis on indigenous societies and the interaction between humans and the environment. UVM is working with D&K on projects in Fairfax and Lowell and has served as a valuable team member on numerous others.

Resumes

Ken Robie, PE
Project Manager/
Transportation Engineer

Years of Experience: 31
Years with D&K: <1

Education: B.S., Civil Engineering, University of Vermont, 1989

Registrations: Professional Engineer: VT 6524

Scrabble Hill Road Stabilization, Duxbury STP MM19(9), Duxbury, VT. Project Manager leading engineering services for a multiphase project to identify options to address erosion and stabilize roadway embankments. Overseeing survey, geotechnical investigations, hydrologic and hydraulic analysis, right-of-way and deed information, utility location, alternatives analysis (with cost estimates and recommendations), traffic impact assessment, permitting, preparation of bid documents and engineering assistance during construction. Responsibilities include leading engineering services, and coordination with subconsultants, Town of Duxbury, and VTrans. This project follows the VTrans MAB process.

Smugglers' Notch Scenic Highway Parking Area and Stormwater Improvements, Stowe and Jeffersonville, VT. Project Manager leading the project to design improvements to parking and stormwater management along this sensitive route between Jeffersonville and Stowe on Vermont Route 108, also known as the Smugglers' Notch Scenic Highway. The project includes the design of both on-street and off-street parking areas and the stabilization of roadside ditches and revegetation of woodland and stream buffers throughout this steep and narrow mountain pass. This project follows the VTrans MAB process.

Roundabouts and Roadway Reconstruction, US 5 and Sykes Mountain Ave, Town of Hartford, White River Junction, VT. Municipal Project Manager working with the Town and design engineer for final construction plans, specifications and estimate for two roundabouts at the intersection of US 5 and Sykes Mountain Avenue and the intersection of Sykes Mountain Avenue and Lehman Road. The project includes roadway approach work, utility coordination, and drainage design and follows the VTrans MAB process.

US Route 2 Road Reconstruction and Realignment, Cabot, VT. VTrans Project Manager for final design, final Act 250 permitting and construction of a 1.5-mile segment of US 2 along Marshfield Reservoir. The project included full-depth reconstruction and minor realignment of US Route 2, the addition of a climbing lane, significant shoulder widening through an environmentally sensitive area, and the design, permitting, property acquisition and construction of a large wetland mitigation site in a nearby retired gravel quarry.

Route I91 Slope Failure, Newport City, VT. VTrans Project Manager for the geotechnical investigation and conceptual design of a deep slope failure remediation. The nature and depth of the failure made conventional reconstruction and stabilization unfeasible. A siphon pump system to lower the water table in the failure area was selected, eliminating the slow creep failure and allowing reconstruction of 600' of limited access highway.

US Route 7 Road Reconstruction, Shelburne and South Burlington, VT. VTrans Project Manager during the final two years of construction of these two projects. The projects consisted of full-depth reconstruction and widening of the most heavily traveled portion of the road. The projects included multiple signalized intersections, installation of a raised median, drainage and stormwater management, utility relocation, bicycle and pedestrian facilities, and landscaping.

VT 116 Intersection Improvements, Hinesburg, VT. VTrans Project Manager for three intersection improvement projects along VT 116. Oversaw scoping, design, permitting and construction phases of intersection improvements and a new traffic signal at Charlotte Road, intersection improvements at Silver Street, and preliminary design of intersection improvements at CVU Road.

Main Street (US Route 2) in Danville Village. VTrans Project Manager during final design, Act 250, stormwater permitting, ROW acquisition and construction of this village revitalization highway project. The project involved full depth construction of a narrowed roadway (Main Street) in context with the Village surroundings and the addition of curb, sidewalk, street lighting, and street trees, a new signalized intersection, a new closed drainage system, stormwater treatment and detention facilities, replacement of existing underground utilities (water and sewer) and undergrounding of existing aerial utilities (power, phone, cable TV, data). The project eliminated a spur of town highway, creating a larger and improved village green. The project involved the Vermont Arts Council and incorporated locally crafted granite artwork on the village green and throughout the project area.

David Conger, PE
Project Manager/
Civil Engineer

Years of Experience: 28
Years with D&K: 9

Education: B.S., Civil Engineering, University of Vermont, 1992

Registrations: Professional Engineer: VT 7689

Construction Phase Services, US Route 7 Segment 6, Brandon, VT. Manager of Construction Phase Services for full-time construction administration and observation for a $20M roadway improvement project in the downtown. The project includes reconstruction of more than a mile-long section of US 7 roadway, all associated intersections and two parks. D&K provided four full-time construction inspectors to support the improvements. The project was developed through the VTrans Municipal Assistance Bureau (MAB).

VT Route 2A Sidewalk, Williston, VT. Project Manager for the LTF-funded transportation study to identify options, issues, and costs to develop a sidewalk connection for pedestrians along VT Route 2A. Sidewalk alignment incorporates modification to an existing street crossing and connection to existing sidewalks at the terminus. The study evaluated potential impacts to stormwater detention pond, Class III wetlands, and use of existing Town easement for the sidewalk alignment. Contract documents, right of way plans, and constructions support will be provided upon approval of alternative by Selectboard and VTrans Project Manager.

Knight Lane Sidewalk, Williston, VT. Project Manager for the design and construction phase services for over 242 LF of sidewalk in a highly commercial area. The new 5-ft-wide concrete sidewalk was designed to match the existing connecting sidewalk while considering the roadside drainage swale and bordering stormwater detention basin. The design accommodated steep side slopes on either side of the walkway. This project included survey, ROW, conceptual through final plans, bidding assistance, environmental resource impacts, and cultural resource review. This municipally-managed project was developed through the VTrans MAB Section.

Neshobe River Overflow Culvert, Brandon, VT. Project Manager for design of an overflow culvert to mitigate flooding of US Route 7 in the downtown under a Hazard Grant Mitigation Program (HGMP) grant. Significant storm events caused overtopping of the roadway by the Neshobe River. A preliminary feasibility study updated hydraulics and inlet control details to provide a three-sided precast structure that prevents flooding at the 100-year design event. The design integrated hydraulic requirements with a tight urban site to develop a geometry and construction details protecting adjacent structures and utilities while limiting ledge removal and property acquisition. The project fast-tracked permitting, design, and grant modifications to initiate construction in advance of impending highway work. Construction management services were continued for submittal and field condition reviews and near full-time construction inspection services. Kept client and public apprised of project status through daily logs, materials measurement, pay requisition review and biweekly contractor meetings.

Market Street Improvements, South Burlington, VT. Project Manager for utility improvements between Dorset Street and Hinesburg Road. Modification of all utilities took into account the increased requirements of the proposed redevelopment of this area with upwards of a million square feet of retail, office and residential space. Specific upgrades include increased size of electrical and communications ductbanks and sewer pump station for future capacity. For the water system, a WaterCAD model was developed for the nearby CWD system. This project was evaluated in conjunction with other future planned water systems to determine potential water system modifications necessary to support the development design flows with particular emphasis on fire flow requirements.

Great Streets BTV, Burlington, VT. Senior Project Engineer for the design implementation of reenvisioned downtown Burlington into a vibrant, walkable, and sustainable urban center. Efforts are focused twofold. The first is in assisting and vetting team design standards being established for the downtown core. The second is the development of design documents to meet these goals with the reconstruction of downtown streets and City Hall Park. Reconstruction of St. Paul Street is ongoing.

Mendon Master Service Agreement, Mendon, VT. Project Manager assisting the Town of Mendon during recovery efforts following Tropical Storm Irene. Under a Master Service Agreement, provided FEMA coordination for submission of grant applications for six damaged roadway, bridge, and culvert projects. Services included FEMA scope of work, Alternate Project Applications and Hazard Mitigation Grant Applications, and engineering design and construction phase services for each project.

Rich Tetreault, PE
Project Manager

Years of Experience: 36
Years with D&K: 1

Education: B.S., Civil Engineering, University of Vermont, 1985

Registrations: Professional Engineer: VT 5707, NH 15693, ME 15618
NHDOT LPA Certification: 2160

Deputy Secretary and Chief Engineer, Vermont Agency of Transportation. Served as the VTrans executive staff member overseeing the agency. Responsible for oversight of the highway division and managed the agency's use of the design-build contracting method on over a half-dozen large bridge projects. Served as one of two members of the VTrans Unified Command during Vermont's response to Tropical Storm Irene. Rich's leadership at the Agency led to a significant reduction in Vermont's percentage of structurally deficient bridges on interstate and state highways by using innovative programs such as the Accelerated Bridge Construction method.

Bridge Inspection Team Leader and Chief Bridge Inspector, VTrans. Managed the NBIS program and the statewide maintenance bridge program at VTrans and performed Rail Bridge Inspections for the agency. Responsible to inspect, report on, and develop emergency repairs for hundreds of local and state bridges across Vermont working hand in hand with bridge owners.

Public Assistance Officer, VTrans, Statewide. Served as Vermont's State Public Assistance Officer under a four-year Presidential emergency declaration administering the FEMA Public Assistance disaster relief program. This work provided direct service to hundreds of municipalities across Vermont to ensure that federal disaster response and recovery funds were fully realized.

Corridor Studies, Project Management, and Public Information Officer, VTrans, Essex, Bennington, Colchester. Project Manager on highway corridor studies focusing on solutions for safe and efficient mobility for all users along Susie Wilson Road in Essex as well the intersection of VT67A and Silk Road in Bennington. Also served as Project Manager on multiple projects providing Public Information Services to include the Diverging Diamond Interchange and the I89 Bridge Bundle in Colchester.

NH 12A Bridge over NH Railroad, Lebanon, NH. Principal/QA Manager for the evaluation of a consulting firm's design of a precast concrete arch carrying NH 12A over a railroad. D&K's study concluded a smaller precast concrete arch or a conventional steel stringer and concrete deck bridge, on alignment would result in significant construction cost savings to NHDOT and the City and D&K proceeded to provide design services. Responsible for oversight of firm services and quality assurance.

Lahaye Drive Pathway, Lebanon, NH. Principal/QA Manager for survey, design, and permitting of an approximate 1000-ft section of multi-use path adjacent to the heavily-used Lahaye Drive. Lahaye Drive connects Mount Support Road to NH 120 and provides access to Dartmouth-Hitchcock Medical Center. At the Mount Support intersection, TAP-Funded improvements will connect to the existing bike and pedestrian facilities with alterations to traffic signals. Responsible for oversight of firm services and quality assurance.

West Main Street Sidewalks, Hillsborough, NH. Principal/QA Manager for study, design, permitting assistance, and construction phase services for a Transportation Alternatives Program project for the construction of approximately 0.8 mi of sidewalk and appurtenant pedestrian infrastructure. The project includes the design of ADA-compliant sidewalk, locating and designing crosswalks (including ADA tip-downs), and signage. Responsible for oversight of firm services and quality assurance.

NH 130, Sidewalk and Pedestrian Bridges, Brookline, NH. Principal/QA Manager for study, design, permitting assistance, and construction phase services for a Transportation Alternatives Program project for the construction of approximately 0.5 mi of sidewalk and appurtenant pedestrian infrastructure. The project also includes installation of two 70-ft-span prefabricated truss bridges. Responsible for oversight of firm services and quality assurance.

Christopher Lathrop, PE
Project Manager/
Transportation Engineer

Years of Experience: 25
Years with D&K: 14

Education: B.S., Civil Engineering, Norwich University, 1995;
A.S., Civil Engineering, Vermont Technical College, 1992

Registrations: Professional Engineer: VT 8769; NH 10682

Sidewalk Design, Route 116, Safe Routes to School Program, VTrans, Hinesburg, VT. Project Manager for preliminary and final design of a 5-ft-wide concrete sidewalk along Route 116. The sidewalk includes a 5-ft green strip beginning at the Hinesburg Elementary School and extends 950 ft along the west side of Hinesburg Road to Charlotte Road. The project included ROW acquisition, utility relocation, crosswalks, pedestrian ramps, concrete curbing, drainage improvements, environmental permitting, erosion control, and parking/driveway improvements to properties.

Sidewalk Design, Mt. Philo Road, Shelburne, VT. Project Manager for the preliminary and final design of a 5-ft-wide concrete sidewalk running 2,500 ft along the east side of Mount Philo Road. The project included with a 5-ft green strip, crosswalks, pedestrian ramps, concrete curbing, drainage improvements, environmental permitting, erosion control narrative, and utility relocation coordination.

Road Improvements, VT Route 140, Middletown Springs, VT. Project Manager/Senior Highway Engineer for a 2,000-ft-long roadway improvement project. The road experienced side slope erosion, inadequate drainage, and significant maintenance problems. Project elements included roadway reclaim and paving, slope stabilization, profile and superelevation modifications, and drainage improvements. Developed plans, typical sections, culvert and cut-slope recommendations, and construction engineering services.

Colchester Ave Sidepath, City of Burlington, VT. Project Manager for reconstruction and widening of 2100' of sidepath. Coordinated with City of Burlington and VTrans, utility relocation coordination, ROW plans and overall technical design of the project. The project also consists of reconstructing pedestrian ramps for ADA compliance. The project follows the VTrans MAB process.

Bethel Mountain Road Slope Stabilization, Rochester, VT. Technical review and support for development of horizontal/vertical geometry, superelevation improvements. Assisted with technical coordination between disciplines and provided overall QA/QC review of plans.

Bridge No. 2 Replacement, Railroad Crossing Upgrade, Brooklyn Road, Mount Tabor, VT. Senior Civil Engineer for a bridge replacement and widening and repaving of 3,900 ft of forest highway. Project elements included replacement of bridge, cold planing, full depth reconstruction, roadway widening, railroad crossing upgrade, temporary bridge, roadway detour, waterline replacement, guardrail, and paving. Coordinated with Vermont Rail System and VTrans Rail to develop details for improvements to a railroad crossing. Crossing upgrades included design for continuously welded rail, ballasts, bituminous paving, and signage.

Rehabilitation and Resurfacing, Highway Resurfacing On-Call Contract, VTrans, Statewide, VT. Project Manager/Senior Highway Engineer for multi-year retainer contracts (2007-2010, 2010-2015 and 2015-2020). Providing preliminary and final design for pavement resurfacing and rehabilitation projects statewide. Design includes initial field reconnaissance, typical section development, pavement markings, roadway signing, guardrail and bridge rail upgrades, sidewalk ramp upgrades, traffic signal equipment upgrades, traffic control, development of banking diagrams, cross sections, and minor drainage improvements. Projects include "mill and fill" resurfacing and pavement widening and reclamation projects. Responsible for managing development of detailed project plans, specifications, and estimates, and QA/QC of all assignments.

Roadway and Safety Engineering Services Retainer Contract, VTrans, Statewide, VT. Project Manager for on-call retainer contract with VTrans to assist with developing roadway, intersection, and other safety related transportation projects throughout the state. Services included field survey, base mapping, roadway design, geotechnical design, slope stability design and plan development, permitting, and cost/quantity estimation. Design services were completed in accordance with VTrans standards including use of English units and Microstation/InRoads.

Brian Breslend, PE
Project Manager/
Transportation Engineer

Years of Experience: 13
Years with D&K: 12

Education: B.S., Civil Engineering, University of Vermont, 2007

Registrations: Professional Engineer: VT 79076; NH 15117; ME 14272

Bethel Mountain Road Slope Stabilization, Rochester, VT. Project Manager and Manager of Construction Phase Services for the evaluation, survey, permitting and final design of a 2,800-LF emergency roadway repair project. The project implemented long-term repairs to sections of an embankment that failed during a heavy spring rainfall and snowmelt event that closed the road. Improvements included upgraded drainage systems and structures, slope repair, and roadway reconstruction and minor realignment. The road is a valuable mountain connector road between VT 100 and VT 12 that required rapid reopening and stabilization of the roadway, which dictated a significantly compressed schedule. The project was managed by the Town of Rochester and received FHWA-ER funding. Led D&K's services, provided senior level engineering, and coordinated with the client, state and federal regulators.

US 2 Pedestrian Improvements, East Montpelier, VT. Project Manager for design of pedestrian enhancements as recommended in the Town's Scoping Study, also prepared by D&K. Approximately 2,000 ft long, the project includes the design of sidewalk and crosswalk improvements, relocation of a water line and hydrant, consolidation of driveway openings, property owner coordination to understand and mitigate concerns, and extensive VTrans coordination due to location along a state highway. The project was largely funded through the VTrans MAB.

Crescent Connector Road, Essex Junction, VT. Senior Transportation Engineer for $6.5 million FHWA-funded Crescent Connector roadway, an 1,800 LF bypass around the Five Corners intersection. The project included coordination of five traffic signals and five railroad crossings. Responsible for redesign review and finalizing details. The project follows the VTrans MAB process.

Maple Street Reconstruction, Weathersfield PLH MAPL(1), Weathersfield, VT. Transportation Engineer for design, permitting, and bid phase services for the Maple Street roadway reconstruction. Project includes assessing existing pavement condition and making recommendations regarding reconstruction or reclamation, investigating options to improve sight distance at the intersection of Maple Street and VT Route 106, improving the roadway alignment at a knoll/curve in the road, and drainage improvements. Signage and striping along the project corridor will be updated to meet current State and Federal requirements. Project is funded with a Public Lands Highway Discretionary Program Funds grant and followed the VTrans Local Transportation Facilities (LTF) project development process.

East Road-Depot Road Intersection Improvements, Colchester, VT. Senior Project Engineer for design plans and specifications for improvements to the intersection of East Road and Depot Road. The project included development of roadway plans; coordination with affected electric and communications utilities; design for relocation of existing water mains and erosion control and traffic control measures; development of ROW plans; and field survey, permitting, and bid phase assistance.

Roadway and Safety Engineering Services Retainer Contracts, VTrans, Statewide, VT. Project Manager/ Senior Engineer for on-call contract to assist with the development of roadway, intersection, and other safety related transportation projects throughout the State.

Rehabilitation and Resurfacing, Highway Resurfacing On-Call Contract, VTrans, Statewide, VT. Senior Project Engineer for multi-year highway resurfacing contracts (2004–2007, 2007–2010, 2010–2015, 2015–2020). Providing preliminary and final design services for pavement resurfacing and rehabilitation projects statewide.

Brandon STP 2033(27), Carver Street Crossing, Brandon, VT. Performed a safety evaluation of a track crossing to evaluate the vehicle speed limits and a skewed crossing. Determined horizontal geometry in relation to the track. Designed a new crossing layout including gates, signals, signal cabinet, and an active warning system. Prepared roadway vertical geometry improvements, drainage improvements, and intersection pavement markings.

Three Rivers Transportation Pathway, St. Johnsbury, VT. Design Engineer to develop a 1.1-mile-long, 10-ft-wide shared use pathway. Responsible for project design and right of way plan preparation. Pathway includes a crossing of an active rail line, two crossings of the Sleepers River, and refitting of a 250-ft-long tunnel. Project developed through Local Transportation Facilities Section.

Jenny Austin, PE
Project Manager/
Traffic Engineer

Years of Experience: 19
Years with D&K: 1

Education: B.S., Civil Engineering, University of Vermont, 1999

Registrations: Professional Engineer: VT 8551

Planning Study for the Intersection of States Prison Hollow Road and Monkton Ridge Road, ACRPC, Monkton, VT. Project Manager assisting with a planning study and conceptual plans for improvements to an intersection. This project follows the VTrans MAB process. Project responsibilities include attending committee meetings, reviewing and evaluating the intersection, preparation of conceptual plans, and general project management tasks. The project goal is to have a conceptual design for this intersection, including straightening the States Prison Hollow Road approach of the intersection, associated grading needed to tie into existing conditions, and the adjacent side street, and other incidentals for the project.

East Darling Hill Road Bicycle and Pedestrian Scoping Study, Town of Burke, VT. Project Engineer for a study to develop alternatives to make a town road more bicycle and pedestrian-friendly. The study developed and evaluated alternatives including variations of bike lanes and sharrow markings and two different multi-use path options. Responsibilities included review of development and evaluation of alternatives, evaluation matrix preparation, attending and presenting at local meetings, and preparation of the scoping study report.

Boulder Beach Road/VT302 Intersection Study and Design, Northeastern Vermont Development Association (NVDA), Groton, VT. Project Manager to conduct a study for NVDA to evaluate a "Y" intersection with safety issues. Involved with every aspect of this project, including analyzing tube count data, conducting a turning movement count, safety analysis, development and evaluation of alternatives, preparation of Study Report, and public presentations. Following the completion of the study, served as the Project Manager to develop plans and contract documents for intersection improvements.

I-89 Exit 12 Southbound Off-Ramp Widening, Williston, VT. Design Engineer responsible to develop plans for adding a lane to an interstate off-ramp to reduce queuing onto the interstate. Project included incorporating signage with a flashing beacon on the interstate to detect queuing.

Highgate Rte 78 Bicycle and Pedestrian Scoping Study, Town of Highgate, VT. Project Engineer for a scoping study to evaluate bicycle and pedestrian improvement alternatives along Route 78 in the village of Highgate. This project was funded by VTrans and followed the MAB process. The study developed and evaluated sidewalk and bike lane alternatives beginning at the intersection with VT 207 and continuing east 0.4 miles. Responsibilities included review of development and evaluation of alternatives, evaluation matrix preparation, attending and presenting at local meetings, and preparation of the Scoping Study report.

US2/North Williston Road Intersection Scoping Study, VT. Project Engineer for development of scoping study at an intersection known to be a high crash location. Alternatives developed include signalization of the intersection and a new roundabout. Project tasks include assessment of existing conditions, alternatives investigation, development of alternatives in CADD, preparation of the Scoping Report, and assistance with the selection of a preferred alternative.

Winooski Transportation Master Plan, CCRPC, Winooski, VT. Project Engineer to develop a comprehensive Transportation Plan for the City to use as a planning tool for future transportation projects. Responsible for an inventory of existing conditions, developing an online survey and evaluating results, high crash location reviews, worked with the client to develop a "wish list" of improvements, developed cost estimates, and served as the primary author of the City's Transportation Master Plan.

Hinesburg Road/Tilley Drive Area Land Use & Transportation Plan Phase II, CCRPC, South Burlington, VT. Project Engineer for a study to develop and evaluate transportation alternatives to support future growth and traffic volumes added to a roadway network due to future development. Assessed impacts to the roadway network and helped determine mitigation measures needed to maintain acceptable traffic operations at a number of intersections. Project included analyses of varying phases of project development and identifying mitigation measures for each.

Barre-Montpelier Road Diet, VTrans, Berlin, VT. Project Engineer on a pilot project to support the monitoring and performance evaluation of a road diet project. Responsible for public outreach and summarizing hundreds of survey responses, developing a Road Diet Evaluation Matrix with scoring criteria, preparation of a Road Diet Assessment Report, traffic analyses, before and after evaluations, and project management coordination with VTrans. This project was featured in FHWA's Innovator newsletter.

Bob Durfee, PE, SECB
Project Manager/
Bridge Engineer

Years of Experience: 40
Years with D&K: 14

Education: M.S., Engineering, Virginia Polytechnic Institute, 1984
B.S., Civil Engineering, Clarkson University, 1977

Registrations: Professional Engineer: VT 5342; NH 5811; MA 32202; ME 5606; CT 13564; NY 63406; PA 60807

Memberships: Structural Engineers of New Hampshire; American Society of Civil Engineers; American Concrete Institute; National Council of Structural Engineers Associations; Vermont Covered Bridge Society; New York Covered Bridge Society; Covered Bridge Society of Oregon; Covered Bridge Society of Indiana; Theodore Burr Covered Bridge Society of Pennsylvania; National Society for the Preservation of Covered Bridges

Ryegate Culvert Replacement Design Build, VTrans, Ryegate, VT. Design Quality Control Manager for a $15 million design-build project to replace undersized/flood-prone culverts beneath US Route 5 and WACR railroad. The project involved construction of two 32-ft-wide, cast-in-place, reinforced concrete arch culverts beneath the roadway/railroad. The new culverts are 141 ft and 128 ft in length and will have 100-year service life, eliminate flooding potential, and greatly improve aquatic organism passage. The design included temporary rail bridge to allow culvert excavation below, and temporary track realignment and superelevation removal to minimize lateral forces of trains on bridge throughout construction. The rail culvert is designed to accommodate Cooper E-80 live loads. Provided Quality Control management and oversight.

Warren Covered Bridge #6 Restoration, Warren, VT. Senior Bridge Engineer for an engineering study and design and to restore the Bridge #6. The bridge is a 42 ft 6 inch long, single span structure constructed in 1880. The one-lane bridge spans the Mad River in downtown Warren and utilizes Queenpost trusses spaced approximately 15-ft apart and is listed on the National Register of Historic Places. The project replaces the west abutment and wing walls while preserving the bridge's appearance. The project includes selective restoration of of the superstructure. Responsible for leading the inspection of the bridge and developing rehabilitation design. Participated in the Historic Covered Bridge Preservation Committee meeting. The project receives federal funding and follows the VTrans MAB process.

Robbins Nest Covered Bridge Repairs, Barre Town, VT. Project Manager for fast-track project involving field observations, truss analysis, and repair design for a 57-ft-long, single-span covered bridge that spans over the Jail Branch, Winooski River. The bridge, constructed in 1962 by Robert Robbins, is 12 ft 10 inches wide and utilizes Queenpost truss framing. During routine repairs, the contractor uncovered significant deterioration of a truss chord member. D&K provided professional engineering services for repair design.

Truss Bridge Rehabilitation, Wallingford, VT. Project Manager for repair and rehabilitation of the 131-ft by 20-ft Route 140 truss bridge over Otter Creek. Determined needed bridge repairs for structural items (stringers, floor beams, lower lateral bracing) and safety items (approach guardrails, sidewalks, curbing, drainage). Recommended repairs included partial depth and full depth concrete deck repairs; steel stringer, floorbeam, and truss repairs; deck joint replacement; concrete abutment repairs; drainage improvements; guardrail upgrades; utility (water) replacement and relocation; and approach pavement replacement.

Emergency Bridge Repairs to Two Bridges, Whitingham, VT. Principal-In-Charge for the design of emergency repairs to one bridge and the replacement of a second bridge to remediate the damage from Tropical Storm Irene. The emergency repairs included replacing missing stones and grouting to stabilize a bowing abutment. The replacement included designing a new 37-foot single span bridge comprised of a prefabricated timber deck on steel stringers and new cast-in-place concrete abutments. The span could not be lengthened due to site conditions, so a thin deck configuration was designed to provide as much freeboard above the river as possible.

Mill Street Truss Bridge, Woodstock, VT. Project Manager for inspection, evaluation, and design of repairs and upgrades to a single-lane historic truss bridge in Woodstock, Vermont. This pin and hanger through truss was rehabilitated to increase load capacity to H15 (15-tons) for fire truck access.

Chris Sargent, AICP, CFM

Project Manager/
Planner

Years of Experience: 18
Years with D&K: 3

Education: M.S., Resource Management & Administration, Antioch New England Graduate School, 2001; B.A. Johnson State College, 1993

Certifications: American Institute of Certified Planners; Certified Floodplain Manager

Bicycle and Pedestrian Scoping Study, West Hartford, VT. Senior Land Use Planner for study to identify options, issues, and costs associated with the construction of pedestrian and bicycle infrastructure and provides design recommendations and an implementation strategy. The project complies with Vermont's Act 34 and contemplates the following Complete Streets elements: sidewalks, crosswalks, multiuse paths, pavement markings, signing, traffic calming, pedestrian lighting, on-street parking, bicycle racks and streetscape enhancements. Completed permit and land use analysis, developed final report. This project follows the VTrans Municipal Assistance Bureau (MAB) process.

East-West Activity Connections Activity Center Master Planning, Danville, VT. Project Manager for a master plan to make Danville and West Danville accessible to a greater variety of visitors and residents. The plan includes wayfinding and redevelopment of the Danville Train Station building. The project is a community-focused effort to encourage visitors to enjoy the scenic area, recreate, and engage local businesses while promoting nearby points of interest. Responsible for public outreach, engagement, facilitation and (when necessary) mediation. Developing outreach and engagement materials, including project-specific website.

Main Street Action Plan, Hyde Park, VT. Project Manager for a plan evaluating the ease of use for alternate forms of transportation throughout the Town, local points of interest, aesthetics, streetscape improvements, landscape architecture, socioeconomic data, including land use context and property values to inform the Village's action plan. Responsible for public outreach, engagement, facilitation and (when necessary) mediation. Developing outreach and engagement materials, including project-specific website.

Woodstock Village Revitalization Project, Woodstock, VT. Senior Planner supporting D&K services through an analysis of existing conditions, development of a base map, and final report of suggested design elements to revitalize Woodstock Village throughout the seasons identifying elements that make the Town unique, and challenges to the streetscape that need to be addressed, including accessibility, wayfinding, amenities.

Route 5 Corridor Master Plan, Fairlee, VT. Project Manager and Senior Planner for a downtown economic, multimodal transportation, and stormwater revitalization plan serving 0.5 miles of a core downtown area. Led client and public stakeholder coordination, land use studies, economic development and engagement subconsultant coordination, and oversight of team deliverables and report production. The project is supported by a Vermont Better Connections grant that includes funding from VTrans, ACCD and DEC.

Right Side of the Tracks, Windsor, VT. Senior Planner for a planning and design project, funded through the Better Connections grant program to enhance the streetscapes and multimodal connectivity of Windsor's Riverfront Industrial Area. Responsible to develop plans, review floodplain information, support public engagement programming and attend meetings.

East Randolph Transportation Plan, East Randolph, VT. Project Manager for a process which identified transportation improvements in the rural village of East Randolph. With significant public process and community input, the Plan recommended new sidewalks and streetscaping to enhance the village's walkability and improve village aesthetics. Potential funding sources for the proposed infrastructure investments were included in the project.

Quintown Community Vision Project, Granville, Hancock, Pittsfield, Rochester and Stockbridge, VT. Lead Author and Project Manager for a multi-town process that identified areas for cooperation between communities in a distinct geographic region. The project involved a wide range of public participation including forums, governmental meetings and regional survey. Proposed opportunities for cooperation included a region-wide housing study, economic collaboration between communities and possible opportunities for shared municipal services.

Town Plan Update, Fairlee Planning Commission, Fairlee, VT. Project Manager/Senior Planner for Fairlee's Town Plan update. Worked with the Planning Commission and stakeholders to develop a cohesive list of assets to drive economic development and implement changes to the Fairlee Future Land Use plan.

Dayton Crites, AICP
Project Manager/
Planner

Years of Experience: 10
Years with D&K: <1

Education: M.S., Landscape Architecture and Environmental Planning, Utah State University, 2013; B.A., Psychology, UC Santa Cruz, 2004

Certifications: American Institute of Certified Planners

Bicycle and Pedestrian Scoping Study, Windham Regional Planning Commission, Weston, VT. Senior Transportation Planner for a study that evaluates options to make the VT 100 and Lawrence Hill Road corridor attractive, inviting, and safer for those traveling on foot or riding bicycles. Following the VTrans MAB process, the project includes significant public engagement, environmental and cultural resource evaluation, and development of alternatives to increase connectivity between anticipated destinations throughout the area. Responsible for developing and implementing public engagement programming and developing design alternatives including crossings and dedicated on and off-road bicycle and pedestrian facilities.

Route 5 Corridor Master Plan, Fairlee, VT. Project Manager and Senior Planner for a downtown economic, multimodal transportation, and stormwater revitalization plan serving 0.5 miles of a core downtown area. Responsible for evaluating existing conditions and developing streetscape improvement concepts. The project is supported by a Vermont Better Connections grant which includes funding from VTrans, ACCD and DEC.

Intersection and Parking/Trailhead Study, Richmond and Texas Hill Road, CCRPC, Hinesburg, VT. Senior Planner for a scoping study addressing the elimination of a slip lane and redevelopment of a municipal trailhead and parking lot located in a triangular parcel between the slip lane and 4-way intersection. The study evaluates opportunities to enhance connectivity to existing trails, a planned multiuse trail to the high school, drainage and stormwater infiltration improvements, and safety for intersection and parking area users through analysis and public stakeholder engagement. Responsible for providing existing conditions analysis and developing streetscape improvement concepts.

Bicycle and Pedestrian Scoping Study, Windham Regional Planning Commission, Weston, VT. Senior Transportation Planner for a study that evaluates options to make the VT 100 and Lawrence Hill Road corridor attractive, inviting, and safer for those traveling on foot or riding bicycles. Following the VTrans MAB process, the project includes significant public engagement, environmental and cultural resource evaluation, and development of alternatives to increase connectivity between anticipated destinations throughout the area. Responsible for developing and implementing public engagement programming and developing design alternatives including crossings and dedicated on and off-road bicycle and pedestrian facilities.

Midtown Street Design, Houston TX. As part of the landscape architecture and urban planning team, contributed to the design, layout, and graphic renderings to capture proposed street redesigns throughout the Midtown area of Houston. Responsible for the graphic renderings and contributed to the overall design of these streetscapes.

Low Impact Design Toolkit, Houston TX. Dayton worked as part of a multidisciplinary team to develop a site development toolkit for use in the Houston Galveston area that provided guidelines for site planning and design interventions to reduce runoff from development projects. The toolkit developed multiple commercial, residential, and institutional site plans to illustrate the benefits of low impact design to the environment, private developer, and broader community. Dayton was responsible for the site plan design and graphic renderings used to convey these concepts.

1500 Brazos Development, College Station, TX. Dayton worked with a team to develop multiple alternative site plans for an undeveloped 1500-acre farm located just outside of Texas A&M University. Site plans responded to environmental and regulatory constraints to provide site plans that proposed road development, residential, commercial, and institutional development envelopes, along with parks and open space preservation. Dayton was responsible for the design, layout, and graphic representation of all site plans.

Matt Mears, PE
Project Manager

Years of Experience: 17
Years with D&K: 9

Education: B.S., Civil Engineering, University of Vermont, 2004

Registrations: Professional Engineer: VT 66112

Great Streets BTV, Burlington, VT. Transportation Engineer for a project to reenvision downtown Burlington into a vibrant, walkable, and sustainable urban center. The project includes establishing new design standards for the downtown area and redesigning and reconstructing two blocks of Main Street. Responsible for cost estimating, compiling survey and utility information and design services, and construction phase services for St. Paul Street and City Hall Park.

Knight Lane Sidewalk, Williston, VT. Transportation Engineer for design and construction phase services for over 400 lf of sidewalk in a suburban area. This project included survey, right-of-way, conceptual through final plans, bidding assistance, environmental resource impacts, and cultural resource review. This municipally managed project was developed through the VTrans LTF Section.

Crescent Connector, Village of Essex Junction, VT. Project Engineer for $6.5 million Federal Highway Administration (FHWA)-funded Crescent Connector project, a bypass around the east side of the Five Corners intersection in Essex Junction. The scope of work includes design plans, cost estimates, permitting, right-of-way acquisition, utility design, public outreach, preparation of bid documents, and engineering design services during construction. The project is administered through the VTrans Local Transportation Facilities (LTF) Section. Provided drafting and design.

Northfield Savings Bank Operations Center, Berlin, VT. Project Engineer for the site design and permitting of a new 20,800 sf office building. Site improvements include site grading, drainage, landscaping, stormwater management, parking, walkways, and water/wastewater utility services.

Central Vermont Medical Center, Hospital Loop Road Reconstruction, Berlin, VT. Project Engineer for the reconstruction of the hospital's main entrance, including 700 feet of driveway, curb, and parking lot entrance aprons. The project included upgrades to the storm system and burial of conduit for future communications or electrical use.

Montpelier Downtown Hotel, Montpelier, VT. Project Engineer for site design including a parking garage.

Market Street, South Burlington, VT. Project Engineer for the utility design and coordination for the Market Street roadway improvements project. The project will develop the infrastructure needed to bring a town center to the City of South Burlington between Hinesburg Road and Dorset Street. D&K worked with private developers and the City to ensure that their combined needs will be met.

Main Street Lighting and Sidewalk Improvements, Bristol, VT. Senior Civil Engineer providing design services for the main street lighting and sidewalk improvements project. D&K is providing design, permitting, and construction services to the Town for the project. The municipal lighting portion of work requires vintage lampposts and associated electrical service to be upgraded. The sidewalk improvements include replacing 711 linear feet of brick pavers with stamped concrete and resetting the existing granite curb for the designated downtown area.

One Taylor Street Redevelopment, Montpelier, VT. Project Engineer for site planning and design including stormwater, flood zone analysis, access, permitting, and utility design. Work included cut/fill analysis to assess alternative development plans.

FRP Implementation, Sydney Drive, Essex, VT. Project Engineer for conversion of an open stormwater retention pond to a subsurface manifold piping and stone retention facility with an underlying treatment media developed by University of New Hampshire Stormwater Center faculty. The project is an implementation of the Indian Brook Flow Restoration Plan and a pilot treatment study in preparation of future Lake Champlain Phosphorus TMDL requirements. Above ground, the project is designed to serve as a passive recreation area tying into a nearby park. Responsible for design, calculations, permitting assistance, and client coordination.

US General Services Administration Site Improvements, Champlain, NY. Project Engineer for site design improvements to the border security commercial vehicle inspection facility. The project included traffic pattern evaluation, utility extensions, stormwater management, site grading, and signage.

Christopher Rivet, PE
Project Manager

Years of Experience: 11
Years with D&K: 3

Education: B.S., Civil Engineering, Norwich University, 2010

Registrations: Professional Engineer: VT 109341

Salt Shed Replacement, Wardsboro, VT. Project Manager/Lead Engineer for the design, bid, and construction phase services for a salt and sand shed. The existing small wooden lean-to salt shed structure is being replaced with a larger salt and sand shed that will prevent water intrusion into the salt mixture and contaminated runoff from discharging into the stream and associated wetlands across the road. It will also reduce the risk of groundwater contamination, eliminate the need for salt and sand to be dumped on the ground upon delivery and then moved into the structure, and reduce waste. Responsible for engineering, design and permitting for the salt shed. The project follows the VTrans MAS project development process and is being funded by a (VTrans) Municipal Mitigation Grant. It is currently in the design phase.

Smugglers Notch Trailhead and Access Improvements, Lamoille County Planning Commission, Stowe and Cambridge, VT. Project Engineer responsible to complete stormwater benefits calculations for a project that reconfigures parking and reduces impervious surfaces and improves drainage along a narrow state highway providing access to popular trailheads.

Sand Shed Replacement, Pittsfield, VT. Project Manager/Lead Engineer for the design of a new sand storage shed at the town garage site. Working with the Town and Two Rivers Ottauquechee Regional Commission for the design, bid and construction phase services. The construction of the proposed sand shed will replace the existing deteriorated shed currently used by the Town and will cover the same footprint. The new shed will provide a more safe, stable structure for the Town to work in. Responsible for engineering, design and permitting for the sand shed. The project follows the VTrans MAS project development process and is currently in the design phase.

Sand and Salt Shed Construction, Bridgewater, VT. Project Manager/Lead Engineer for the design of a VTrans MAS storage shed for sand at the town garage site. Working with the Town and Two Rivers Ottauquechee Regional Commission for the design, bid, and construction phase services. The new shed will provide economic benefits to the Town through the reduction of waste and emissions and improve the water quality of nearby resources, including the Ottauquechee River that borders the site. Responsible for engineering, design and permitting for the sand shed.

Subsurface Gravel Wetland, Village of Essex Junction, VT. Project Engineer for the design of a Subsurface Gravel Wetland Best Management Practice (BMP). The BMP was implemented as part of the Indian Brook Flow Restoration Plan and will support the Town's effort to meet the Total Maximum Daily Loads (TMDL) to Lake Champlain and Indian Brook. The BMP treated the stormwater discharge from a 17.7-acre watershed, including 6.5 acres of impervious area associated with three homeowner associations, roadways, and sidewalks. Stormwater treatment includes reducing pollutant loading due to total suspended solids and phosphorus. Responsible for conceptual and final plan production for the project according to VTrans standards and for stormwater modeling. This federally-funded project followed the VTrans MAS Guidebook.

Stormwater Permitting, Crescent Connector, Essex Junction, VT. Project Engineer responsible for revising the stormwater treatment system based on design revisions to the $7.5 million FHWA-funded Crescent Connector roadway, an 1,800-LF bypass around the Five Corners intersection. The project included the use of porous pavement in parking areas to promote groundwater recharge. The design included an underground sand filter that was used to treat stormwater runoff due to extremely limited space and flat grades within the project area. Responsible for the preparation and submission of the stormwater discharge permit amendment application.

Delaware & Hudson Rail Trail Erosion Prevention and Sediment Control Plan, Rupert, Pawlet, Poultney, and Castleton, VT. Lead Engineer to prepare an Erosion Prevention and Sediment Control (EPSC) Plan for the Contractor's use on-site during construction of rail-trail improvements along a 19.8-mile shared use path.

Wye, Culvert, and Embankment Rehabilitation, Leicester WCRS (23)C-1, Leicester, VT. Project Engineer to prepare an Erosion Prevention and Sediment Control (EPSC) Plan for the Contractor's use on-site during construction of 6 rail culverts and 2,600 of track and embankment rehabilitation. Responsible for the preparation of the EPSC Plan.

Chuck Goodling, PE
Civil/Utilities Engineer

Years of Experience: 33
Years with D&K: 31

Education: B.S., Civil and Environmental Engineering, Utah State University, 1984; A.A.S., Ecology & Environmental Technology, Paul Smith's College, 1981

Registrations: Professional Engineer: VT 5797

Project Manager, Construction Observation Services, VTrans, Statewide, VT. Project Manager for multiple consecutive retainer contracts with VTrans to provide consultant construction observation services. Chuck served as point of contact for District Engineers for assignments under this retainer contract. He allocated and assigned inspectors for VTrans projects and provides management review of projects and inspectors.

Construction Phase Services, US Route 7 Segment 6, Brandon, VT. Principal-in-Charge for full time construction administration and observation services on a $20M roadway/utilities improvement project in downtown. The project includes reconstruction of more than a mile-long section of US Route 7 roadway, all associated intersections and two parks. D&K is providing four full-time construction inspectors to support the improvements. The project was developed through the Municipal Assistance Bureau (MAB) of VTrans.

Construction Phase Services, Waterbury Roundabout, Waterbury, VT. Manager of Construction Phase Services for a new vehicular roundabout at the intersection of US Route 2 and VT Route 100. This $3.9M project included: modification and rehabilitation to existing bridges for roadway and pedestrian accommodation; partial and complete roadway reconstruction; imprinted island construction; stormwater management; parking reconfigurations and improvements; new sidewalks, curbing, crosswalks, and signage; undergrounding of utilities (electrical and communications); replacement and extension of water and sewer mains; and lighting, landscaping, and streetscaping. Monitored construction and traffic control and coordinated regularly with state agencies, municipality, contractor, and design engineer.

Portland Street Bridge - Maintenance & Improvements ARTB(9), St. Johnsbury, VT. Manager of Construction Phase Services for bridge maintenance and construction of improvements. Improvements consisted of replacement of the northeast and southeast expansion bearing at pier 7; replacement of all expansion bearings at piers 2, 3, 4, and 8; repair of existing concrete surfaces at piers 1 and 4; replacement of stair treads, landings, and railing systems; cleaning and painting the structural steel; and replacement of stair tower footings. Project funding was administered by the VTrans LTF section.

Construction Observation Services, Enosburg ARRA Bridge Project ARTB (5), Enosburg, VT. Manager of Construction Phase Services for maintenance and construction of improvements to a 36-ft-long steel beam/timber deck bridge, consisting of removal of the timber decking, cleaning and painting of the steel beams, installation of a new concrete deck, and new guardrail and approach improvements. Project qualified for federal funding and was funded and administered in part by VTrans under the Local Transportation Facilities (LTF) Section.

Road and Utility Reconstruction, Franklin, Fales, Summer, and School Streets, Randolph, VT. Project Manager for design of water/sewer/stormwater utility improvements and road reconstruction for 4,000 LF of roadway in a residential area in the Town of Randolph. The project was modified and extended to breakout the design, bidding and construction of sewer replacements on School and Park Streets, which were identified as high priorities to address long-term maintenance issues prior to the winter of 2015-16. Led design and coordination with the client. Attended a neighborhood meeting to present the project and receive local input.

Sidewalk Design, Woodstock, VT. Design and construction phase services for sidewalk design project funded through VTrans Local Transportation Facility (LTF) Section. The project was initiated with an assessment of alternative sidewalk alignments, materials of construction, crosswalk locations/types of surface treatments, and drainage requirements. The design provided for streetscape elements such as curbed and planted islands, lawns with trees, and lighting. Coordination with utilities was provided to accomplish relocation of several poles and right-of-way requirements were established.

Road Improvements, Central Street, Randolph, VT. Project Engineer for comprehensive road and utility reconstruction project, gateway into Randolph's downtown. Required full-depth reconstruction of 2,200 linear feet of roadway and included enhancements such as road widening to provide two-foot shoulders on both sides of the road, new concrete curbs and sidewalk, and two-foot green belt. Final construction was coordinated with VTrans street repaving project to maximize State funding opportunities.

Jon Ashley, PE
Civil/Environmental Engineer

Years of Experience: 27
Years with D&K: 4

Education: B.S. Environmental Engineering, Rensselaer Polytechnic Institute, 1992; M.S. Course, Advanced Hydrology, Kansas State University, 2001; M.S. Course, Physical and Chemical Hydrogeology, University of Massachusetts, Lowell, 1996; M.S. Courses, Wastewater Treatment and Engineering; Open Channel Hydraulics, University of New Haven, Connecticut, 1994-95

Registrations: Professional Engineer: VT 7350; NH 9709; NY 79818

Bethel Mountain Road Slope Stabilization, Rochester, VT. Project Director for evaluation, survey, permitting and final design for the emergency repair of 2,800-LF of a valuable mountain connector road between VT 100 and VT 12. The project implemented long-term repairs to sections of an embankment that failed during a heavy spring rainfall and snowmelt event that closed the road, including upgraded drainage systems and structures, slope repair, and roadway reconstruction and minor realignment. Rapid reopening and stabilization of the roadway was urgent, which dictated a significantly compressed schedule. The project was managed by the Town and received FHWA-ER funding. Responsible for providing quality assurance review, firm resource scheduling and budgeting oversight, geotechnical subconsultant coordination, and client coordination.

St. Paul Street Reconstruction, Great Streets BTV, Burlington, VT. Senior Environmental Engineer responsible for developing and implementing a pre-construction site investigation to evaluate the magnitude and extent of petroleum contamination from four known hazardous sites in the vicinity of a roadway and utilities reconstruction project between Main and Maple Streets. Developed and implemented a Construction Plan for Management of Contaminated Soils, including soil monitoring practices and temporary off-site stockpiling prior to off-site disposal. Completed a UST closure assessment for the removal of abandoned gasoline and diesel USTs that were encountered.

Shard Villa Road Slope Stabilization, Middlebury, VT. Project Manager for assessment, design, permitting, bid, and construction services for a slope stabilization and roadway surface reclamation project along Shard Villa Road. The project included 200 LF of slope stabilization along the outer bank of the Middlebury River and 2,700 LF of roadway reconstruction. An initial assessment included soil borings and the development of a slope stability model using Slope/W. The slope stabilization included the installation of a rip rap wall and slope protection with riprap. Live staking and placement of clearing and grubbing material was used to establish vegetation in the rock wall and rip rap protected slope.

Warren Mountain Road, Roxbury, VT. Project Manager for design, permitting assistance, and construction administration to repair and stabilize the partial roadway embankment failure of a gravel town highway. Serving as the point of contact, leading day-to-day design development, and managing schedules and budgets. The project includes stabilization of the roadway embankment; reconstruction and stabilization of the failed slope; stabilization of the roadway; completion and submission of VTANR and USACE permit applications; and development of contract documents.

Salisbury Village Lighting and Sidewalk Study, ACRPC, Salisbury, VT. Project Manager in responsible charge of D&K's evaluation and planning services. Served as primary contact for Town. Evaluated existing conditions of safety and accessibility for pedestrians, presenting multiple alternatives for separated and attached walkways and lighting options for the village center.

Vernon and Phillips Street Combined Stormwater Separation and Sewer Design in the Tenney Brook Watershed, RNRCD, Rutland, VT. Project Manager for design of a separate stormwater collection system for residential neighborhoods served by combined sewers in the City of Rutland. The project included HydroCAD modeling and analysis to evaluate alternatives for disconnection of neighborhood stormwater from the outdated combined sewer collection system. Analysis included modeling an existing hydrodynamic separator and diversion structure with proposed stormwater infrastructure. Developed plans, pipe profiles, and details for stormwater separation and for sanitary sewer replacement. The project will help reduce combined sewer overflows from the City sewer system and provide water quality treatment of stormwater runoff.

Culvert Replacement, Post Office Hill Road, Granville, VT. Project Manager for design and permitting of an 18-ft. precast concrete box culvert to replace a damaged 9-ft corrugated metal pipe culvert. The project is receiving funding from a FEMA HMGP grant.

Emily Lewis, PLA, LEED AP
Landscape Architect/Environmental Planner

Years of Experience: 12
Years with D&K: <1

Education: M.S., Environmental Sciences and Policy, Johns Hopkins University, 2016; Bachelor of Landscape Architecture, Penn State, 2007

Registrations: Professional Landscape Architect: MD 3695

Certifications: LEED AP-US Green Building Council; Erosion and Sediment Control Qualified Professional-Maryland Department of Environment; First Aid, CPR and AED-American Red Cross

Route 5 Corridor Master Plan, Fairlee, VT. Landscape Architect for a downtown economic, multimodal transportation, and stormwater revitalization plan serving 0.5 miles of a core downtown area. Responsible for developing stormwater and streetscape design concepts. The project is supported by a Vermont Better Connections grant which includes funding from VTrans, ACCD and DEC.

Crescent Connector, Village of Essex Junction, VT. Landscape Architect for $6.5 million Federal Highway Administration (FHWA) funded Crescent Connector Road project, a 1,800-ft-long bypass around the east side of the Five Corners intersection for traffic that is traveling between Maple Street, Main Street, and Park Street. Scope of work includes design plans and cost estimates, permitting, right-of-way acquisition and utility relocation assistance, public outreach, preparation of bid documents, and engineering design services during construction. The project is administered through the VTrans Municipal Assistance Bureau (MAB). Developed landscape plan.

Mechanical Engineering Services, Statewide Term Agreement, New Hampshire Department of Public Works Design and Construction. Landscape Architect serving D&K's contract for mechanical, electrical, and associated structural engineering issues for HVAC for State facilities. Projects include:

- **Glencliff Home Dementia Wing Addition, NH Department of Administrative Services, Glencliff, NH.** Landscape Architect responsible for developing a landscape plan for addition to an existing care facility.

Smugglers' Notch Scenic Highway Parking Area and Stormwater Improvements, Stowe STP 0235(14) and NBRC 18GVT11. Landscape Architect to support design of parking and and stormwater improvements at a state park along the congested VT Route 108. Reviewing planting mixes and analyzing appropriate roadside groundcover options where grass is not an option.

InterCounty Connector (MD 200) C, D & E, Prince George's & Montgomery Counties, MD. Landscape Architect for 8.5 mi of new roadway, 1.9 mi of improvements, 4 interchanges, 16 SWM ponds, and 13 bioretention facilities. Services included preliminary design through final construction. The design included over 300,000 plants and over 40 acres of reforestation.

MD 32 Landscape Concepts and Specifications, Clarksville, MD. Landscape Architect responsible landscape specs and concept designs for 6.4 miles of roadway improvements. Included design specifications for reforestation, stream restoration planting, and stormwater.

US 113 Dualization, Phase 3, Worcester County, MD. Project Manager for the landscape design, reforestation, tree inventory, noxious weed control plan, and construction admin. for 5 miles of highway improvements. Landscape design included microbioretention, bioswale and wet swale SWM facilities. Researched resilience of plantings in wet swales.

Discovery Park, Gaithersburg, MD. Project Manager for the design of a new 3-acre passive recreation park. The project removes invasive species and reintroduces native plantings in reforestation, meadow and perennial gardens to promote local biodiversity and improve downstream water quality.

Dan Mallach, Daniel B. Mallach, PLA, AICP, CPRP, ISA Certified Arborist

Planner/Landscape Architect

Years of Experience: 17
Years with D&K: <1

Education: Master in Landscape Architecture, University of New Mexico, 2009
B.A., Music; Minor in Plant Ecology, Middlebury College, 1995

Certifications: Professional Landscape Architect: VT, PA; American Institute of Certified Planners; Certified Park and Recreation Professional; ISA Certified Arborist PD-2782A, TRAQ

Center Street Scoping Study, Rutland, VT. Planner and Landscape Architect responsible for design development, evaluation of existing conditions and preparation of presentation graphics. The project aims to encourage residents and visitors to linger longer in an attractive and inviting mixed-use, pedestrian-friendly downtown context. Concepts include plantings, hardscape amenities, public art and improvements for pedestrian safety and ADA access.

Greensboro Bend Revitalization Plan, Greensboro, VT. Planner and Landscape Architect responsible for design of streetscape improvements to encourage human-powered transportation and enjoyment of local businesses and recreational resources, particularly by users of the centrally-located Lamoille Valley Rail Trail (LVRT). A village area that is rich in history and natural beauty, "The Bend" features greenspace in a mixed use, rural context, with the LVRT making a sweeping 180 degree curve as it crosses the community's Main Street.

Heart of Glover Village Plan, Glover, VT. Planner and Landscape Architect responsible for design for improvements along the Village streetscape and at the Village Green. The project proposes amenities including a pavilion, community gardens, a variety of seating, and accessible connections along Glover Road (Route 16) and to the Barton River. Glover's tight-knit community and renown as the home of the Bread & Puppet Theatre make this an engaging opportunity to think big, build better and plan for people.

Middlesex Streetscape & River Trail Scoping Study, Middlesex, VT. Planner and Landscape Architect working to improve the safety and comfort of walking and biking in Middlesex Village. This effort, funded by the VTrans Bike Ped Program and the Municipal Assistance Bureau, envisions connecting businesses, the adjacent Winooski River, and other recreational resources. Stakeholder coordination includes the Town and its Planning Commission, VTrans, community residents and abutting property owners.

Revamp The 'Ville, Lyndonville, VT. Planner and Landscape Architect responsible for identifying potential zoning enhancements to promote economic activity, mapping analysis (comparing Lyndonville's infrastructure assets with similar Vermont communities), and developing strategies to make Lyndonville more active, attractive and thriving. As a compact state-designated village center, with a densely settled pattern of residences surrounding a town green and commercial center, Lyndonville represents an attractive place to strengthen connections and vitality via collaboration and a shared vision.

Route 52 Kennett Pike Greenway Landscape Plans, Kennett Township, PA. Landscape Architect and Planner for landscape restoration along 1.5 miles of the Brandywine Valley National Scenic Byway in Kennett Township, Pennsylvania near Longwood Gardens. Responsible for evaluation of existing conditions and developing detailed plans for hazard tree and invasive plant removal, improving motorist and bicyclist visibility, revealing historic stone walls and "String of Pearls" Sycamore trees planted by the DuPont family and preparing detailed frontage planting plans for 44 individual properties. Also prepared perspective illustrations, community outreach materials and brochure, and Requests for Proposals documents.

Edgmont Community Park Planning and Design, Edgmont Township, PA. Planner and Landscape Architect for the first community park in Edgmont Township. Responsible for master planning, playground design and equipment specification, lighting specification, detailed planting and seating plans, coordination with neighboring property owners and other stakeholders, construction and permitting specifications and oversight of plant, play equipment and furniture installation. The project was supported with funding from the Pennsylvania Department of Conservation and Natural Resources.

Megan Ooms, PE
Senior Bridge Engineer

Years of Experience: 13
Years with D&K: 1

Education: B.S., Civil Engineering University of Delaware, Newark, DE, 2008; M.S., Structural Engineering, Rutgers University, New Brunswick, NJ, 2016

Registrations: Professional Engineer: VT 133532, DE 18110, NY 101653; NHDOT LPA Certification

Structures Engineering Services IDC, VTrans, Statewide, VT. Project Manager for planning, inspection, design, permitting, and bid phase services for state-managed bridge replacement and rehabilitation projects throughout Vermont. Projects included bridges carrying US, state, and Class 1 town highways. The projects received a combination of state and federal funding and followed the VTrans Project Development Process. Assignments include:

- **Waterbury BF 0284(3)), VT.** Project Manager for the superstructure replacement and substructure rehabilitation project. The existing simple span superstructure is being replaced with a curved girder continuous superstructure with substructure repairs and modifications. Responsible for providing coordination with VTrans and internal project management of deliverables, scope and budget.

Grout Road Bridge Replacement, Montpelier, VT. Project Manager for the replacement of the existing steel girders and timber deck. Load ratings were developed for existing conditions so that the bridge was adequately posted until the rehabilitation could take place. The project included providing rehabilitation and repair alternatives and working with the City to determine the appropriate solution that also met the residents needs. This included assisting the City with the application of the VTrans Municipal Town Highway Structures Program Grant, as well as coordinating with a local contractor to determine feasible and cost effective solutions as well as working with VTrans to arrange for use of a temporary bridge during construction.

Brook Road Bridge Replacement, Plainfield, VT. Project Manager for the replacement of the existing Brook Road Bridge with a bridge that provided increased hydraulic capacity, meeting bank full width, and providing a superstructure resistant to debris catching and damage. This project included coordinating with FEMA regarding the FEMA funding the Town utilized.

Burlington Rail Projects, Burlington, VT. Project Manager for seven separate rail crossing and rail improvement projects within the City. These projects include three major roadway crossing reconstructions, one of which had three sets of tracks crossing the road; a new platform utilizing a historic platform canopy; installation of two new power switches; installation of active highway warning systems at each crossing; railyard reconfiguration; and adjacent roadway reconfiguration. This project was located at the waterfront and near downtown Burlington, requiring a significant level of coordination with the City's various departments; the FRA, who was providing funding for a section of the work; and AMTRAK who had specific requirements for the platform and railyard. These projects had a high-level of public interest due to location, impact to waterfront access, and nearby bikepath.

Middlebury Rail and Tunnel, Middlebury, VT. Deputy Project Manager for landscape design and roadway reconstruction. The project included a precast concrete tunnel, precast concrete U-walls and concrete retaining walls, as well as several utility crossings under the existing railroad. Responsible for coordinating all disciplines, a subconsultant, and task manager for plan development. Responsible for overall project deliverable quality control and coordinating the development of public outreach documents, including those required for ROW, coordination with public and private utilities and public meetings.

Readsboro Bridge Replacement, Readsboro, VT. Deputy Project Manager for the replacement of a fracture-critical bridge with a 287-foot-long single-span structure. Challenges included detailed constructability analysis due to site constraints and equipment required. Responsible for preliminary design, overall project quality control, and plan development, including coordination with all disciplines, ROW process, and permitting.

Becky Gaudreau, PE
Senior Bridge Engineer

Years of Experience: 15
Years with D&K: <1

Education: M.S. Civil Engineering, University of New Hampshire, Durham, NH, 2007; B.S. Civil Engineering, University of New Hampshire, Durham, NH, 2005

Registrations: Professional Engineer: VT 10072, NH 13317, ME 13417

Honors: Young Engineer of the Year, New Hampshire 2017

Replacement of Bridge 10, VTrans, New Haven, VT. Senior Bridge Engineer for a two-span continuous curved girder bridge with integral abutments and an integral pier cap on a single drilled shaft. Rebekah's work included full 3D modeling of the curved, integral system, and seismic analysis given that the structure was in seismic zone 2. Rebekah also completed work on the primary steel system and deck designs. Construction was completed in 2016. Rebekah presented a paper on this structure at the 2017 International Bridge Conference and 2017 Accelerated Bridge Conference. *This project was the recipient of the 2018 ACEC-VT Engineering Excellence Award for Transportation Projects.*

Load Ratings for 6 Bridges, MaineDOT, Various Locations. Senior Bridge Engineer Responsible for leading load ratings for 6 concrete T-beam bridges throughout Maine. Refined analysis techniques were utilized for the distribution of live load to ascertain the best possible rating.

Load Ratings for 20 Truss Bridges, MaineDOT, Various Locations. Senior Bridge Engineer responsible for the Load and Resistance Factor Ratings of gusset plates and floor systems for more than a dozen of these bridges consistent with the requirements of the Manual for Bridge Evaluation.

MA 128 Bridge Replacement, MassDOT, Amesbury, MA. Responsible for quality review of design plans on a NEXT beam integral abutment bridge with Expanded Polystyrene approach fills. She was also responsible for the design of the integral substructure components.

Bridge Replacements, I-93 over Beaver Brook, NHDOT. Senior Bridge Engineer responsible for completing the substructure design and quality control checks of plan sets for these integral abutment 75'-span NEXT F beam bridges.

Lyman Street Bridge, MassDOT, Holyoke, MA. Independent Quality Control Reviewer of all superstructure design calculations on this 2 -pan composite steel girder bridge replacement. Additionally, Rebekah completed calculations for the design of the CFST Drilled Shaft components utilizing the capacity of the permanent casing throughout the height of the shaft with a reinforced connection to the pier and abutment caps.

US 4 Bridge Replacement, NHDOT, Durham, NH. Design Quality Control Manager for this ABC design-build project. Responsibilities included ensuring compliance with quality control procedures and completing quality control audits as needed, as well as high-level quality reviews of submission documents.

I-95 Hampden Design Bridge Bundle, MEDOT, Hampden, ME. Design Quality Control Manager for this design-build bridge replacement project along I-95. This project includes the replacement of eight interstate structures, the construction of four temporary bridges, and a substructure rehabilitation of a bridge overpass. Her responsibilities include ensuring compliance with quality control procedures and completing quality control audits as needed, as well as high-level quality reviews of all submission documents.

General Pierce Bridge over the Connecticut River, MassDOT, Greenfield, MA. Structural Team Leader for an analysis of the existing Greenfield-Montague Bridge for existing conditions and proposed upgrades. This bridge is a 767'-long, 4-span structure with two central spans consisting of riveted steel through trusses. The condition evaluation included both the superstructure and substructure components and a material testing program. Rebekah's role included analysis of the substructure, load rating and analysis of the truss, load rating of gusset plates, delegation and management of tasks, and authoring the Preliminary Structures Report.

Randy Otis, LS
Licensed Land Surveyor

Years of Experience: 17
Years with D&K: 13

Education: B.S., Business Administration, Southern New Hampshire University, 2019; A.S., Survey and Applied Science, Paul Smith's College of Arts and Sciences, 2002

Registrations: Land Surveyor: VT 60852

Certifications: OSHA 40-Hour HAZWOPER Certification

Bethel Mountain Road Slope Stabilization, Rochester, VT. Survey Manager for a 2,800-LF emergency roadway repair project. The project implements long-term repairs to sections of the embankment that failed during a heavy spring rainfall and snowmelt event that closed the road, including upgraded drainage systems and structures, slope repair, and roadway reconstruction and minor realignment. Serving as a valuable mountain connector road between VT 100 and VT 12, rapid reopening and stabilization of the roadway was a critical need, which dictated a significantly compressed schedule. The project is managed by the Town of Rochester and receives FHWA-ER funding. Responsible for rapid response topographical survey upon selection as well as ongoing surveying to track slope stabilization quantities.

Great Streets BTV, Burlington, VT. Survey Party Chief for existing conditions of roadway, pedestrian facilities, and utilities supporting the redesign of City Hall Park and two blocks of Main Street/US 2 in downtown Burlington. Completed a detailed survey of the sidewalks, roadways, paint markings, building party walls, utilities, tree type and size. Record documents were compared with existing utilities to establish locations that could not be built on, as well as establish both private/public boundaries.

Flood Study of the Mad River Area, Central Vermont Regional Planning Commission, Fayston, Waitsfield, Warren, Moretown, and Waterbury, VT. Chief of Survey to develop cross sections serving a flood study of the Mad River, Thatcher Brook and Graves Brook. Survey cross sections supported the development of high-quality hydraulic models of the streams using HEC-RAS software and prepare inundation maps for flows ranging from the 2- to 500-year flood flows—used to identify the vulnerable infrastructure. Deliverables included a summary report of mitigation actions on the three most vulnerable sites per town, including inundation maps. The project was funded through a Community Development Block Grant for disaster recovery and builds on the work of a previous study led by D&K. Managed field and desktop survey services. Helped evaluate and plan for shooting of cross sections with complex access conditions.

One Taylor Street Retaining Wall, Montpelier, VT. Survey Party Chief to oversee the survey of river cross sections to support repairs to a retaining wall supporting the development of a new transit center, parking lot, and bike path. The stone retaining wall runs along the Winooski River.

Warren STP EH12(4) - Covered Bridge #6 Restoration, Warren, VT. Survey Party Chief for an engineering study and final design for repairs to the Warren Covered Bridge #6. The project replaced the abutment and wing walls and opening up the channel for better hydraulics, while preserving the bridge's appearance. Oversaw survey of cross sections of river for hydraulic study, and to locate low chord of the bridge.

Waitsfield Village Covered Bridge Emergency Repairs Engineering Design Services, Waitsfield, VT. Survey Party Chief to assess and evaluate damages to the historic 1833 covered bridge that resulted from Tropical Storm Irene. D&K inspected the bridge for damages immediately following the storm, evaluated damaged components, and made recommendations for emergency repairs. Oversaw survey of cross sections of river and to locate low chord of the bridge.

Crescent Connector Road Survey Services, Village of Essex Junction, VT. Survey Party Crew Chief for $6.5 million Federal Highway Administration-funded Crescent Connector Road project, a bypass around a five-way intersection. Project consisted of deed research on 15 parcels and 3 State Highways. Field survey required location of existing conditions of 3 highways, 1 active railway, and all private lands abutting the 1,800 ft proposed route. Record documents were compared with existing monuments to establish both private and public boundaries. Plans were drafted identifying all existing and proposed boundaries. Project is administered through the VTrans Local Transportation Facilities Section (LTF).

Maple and Union Street Sidewalk, Brandon, VT. Topographic survey for new sidewalk along Maple and Union Streets in the Town of Brandon. The project is a municipally managed project developed through the VTrans LTF Section.

Ross Tsantoulis, PE
Hydraulic Engineer

Years of Experience: 12
Years with D&K: 2

Education: B.S., Civil Engineering, Worcester Polytechnic Institute, 2007

Registrations: Professional Engineer: NH 14122; ME 15511

Certifications: FAA Part 107 sUAS Remote Pilot

Roadway Drainage Improvements, Allen Street, Rangeley, ME. Project Engineer for a drainage improvement projects for the town. The project included drainage improvements along a 2,700 ft roadway corridor. Design included a hydrologic analysis/watershed delineation, as well as a hydraulic analysis for existing and proposed storm drain networks.

Gazo Avenue Outfall Repair, Burlington, VT. Project Engineer for the study, final design, and construction administration of a stormwater outfall failure. An existing 30-inch CMP pipe caused significant erosion creating a ravine approximately 20 feet deep. The design included geotechnical analysis of the existing soils, repair of the existing 30 inch CMP, extending the existing 30-inch outfall 400 feet, filling and grading the site to minimize erosion.

River Road Slope Stabilization, Caribou, ME. Project Engineer for a rapid response design to address failure on a locally, City owned roadway. Time is of the essence for this project as the roadway is closed to traffic and four property owners have been permanently displaced. The City is currently negotiating purchase and sale agreements for all affected property owners as timing for design and implementation are not in line with the short construction season in Northern Maine. D&K has been tasked with providing a planning study to develop alternatives for embankment and roadway mitigation. Specific responsibilities included development of conceptual designs with associated cost opinions with an ultimate preferred alternative presented.

Roadway and Utility Improvements, Lebanon, NH. Served as Project Engineer for Contracts 10 and 11 sewer separation projects for the city. The projects included utility improvements, combined sewer separation, multimodal planning, roadway and sidewalk construction, storm drain outfall improvements and slope stabilization. Design included a hydrologic analysis and watershed delineation, as well as a hydraulic analysis for existing and proposed storm drain networks.

Old Poor Farm Road Culvert Replacement, Ware, MA. Project Engineer and technical advisor for evaluation, design and permitting for the replacement of an existing 3-sided concrete box culvert on Flat Brook. Performed field reconnaissance including stream survey at the crossing to compile data for hydrologic and hydraulic analysis.

Wallace Shore Road Culvert Replacement, Harpswell, ME. Project Engineer and technical advisor for evaluation and design for the replacement of an existing culvert within a salt marsh. The existing culvert is a tidal restriction affecting the natural hydrology in the salt marsh. Supported hydrologic and hydraulic analyses, incorporating sea-level rise predictions, to determine the appropriate size for a replacement culvert.

Lubberland Creek Culvert Replacement and Stream Restoration, Newmarket, NH. Project Engineer for evaluation and permitting for the replacement of deteriorated CMP arch culvert for the town and the Nature Conservancy. The crossing assessment included tidal monitoring, as well as hydrologic and hydraulic modeling incorporating future sea-level rise projections. The design included stream simulation techniques for restoration of the natural stream channel and enhancement of aquatic organism passage.

Wallis Road Culvert Replacement, Rye, NH. Project Engineer for evaluation, design and permitting for the replacement of an old stone box culvert for the town. Also, responsible for construction administration and inspection for the duration of the construction phase of the project.

NHDOT, Route 108 Reconstruction, Durham and Newmarket, NH. Civil Engineer for the design of roadway improvements for a two-lane roadway with bicycle accommodation. Prepared preliminary design plans for roadway improvements and safety improvements along a 5.4-km corridor.

United States Agency for International Development (USAID), Emergency Sanquin River Diversion Channel Bridge Replacement, Sinoe County, Liberia. Transportation Engineer on an emergency task order for replacement of a 58-m temporary bridge that had collapsed. Performed due diligence, GIS mapping, and data collection, as well as design of roadway alignment at bridge approach.

Andy Hoak, PE, PG, CPESC
Civil/Environmental Engineer

Years of Experience: 27
Years with D&K: 5

Education: M.S., Hydrogeology, Clemson University, 1994; B.A., Geology, Environmental Studies, Alfred University, 1993

Registrations: Professional Engineer: VT 8929; NY 101102; Professional Geologist: NH 388, NY 001131

Certifications: Certified Professional in Erosion and Sediment Control, Certified Wastewater Site Technician Type B: VT 487; Class IV Public Water System Operator: VT #2644; Grade 2 Domestic Wastewater Operator: VT #1421; OSHA 40-Hour HAZWOPER Certificate; OSHA 8-Hour Supervisor Certificate

Geotechnical Analysis, One Taylor Street, Montpelier, VT. Completed the seismic analysis and assisted with the bedrock characterization to prepare the geotechnical report to support the redevelopment of property located at One Taylor Street. The site is being redeveloped from a graveled surface parking lot to a 4-story Multimodal Transit Center with upper floor residential apartments, bus parking and turning areas, new sidewalks and pedestrian features, a bike path, a new parking lot, a repaired retaining wall along a portion of the Winooski River, new green space, and other improvements.

Highway Sub-base Permeability Study, Vermont Agency of Transportation, Berlin, VT. In an effort to minimize washout and frost heave action on newly installed highways, the Vermont Agency of Transportation contracted to evaluate the hydraulic conductivity of highway base and sub-base materials. As Project Manager, designed a large-scale lysimeter to accommodate a representative soil profile of highway sub-base materials, including appropriately sized and compacted layers. Prepared representative soil samples and performed sieve analysis on approved sub-base materials to determine compliance with existing specification. Experimented with alternative materials, including shredded tires and varying soil grain distributions. Provided recommendations on material design and application. Researched and incorporated large and small-scale permeability testing techniques to develop correlation factors.

Hydrogeologic Investigation, Workman Development, Fairfax, VT. Served as Senior Project Manager to evaluate the potential impact to nearby water supplies from a proposed 19-lot subdivision. After review of information contained in drillers well logs for water supplies in the vicinity of the site, topographic maps of the area, and the proposed development plan, ECS concluded that the risk posed to existing water supplies in the area was very low. The evaluation included a calculation of the water budget within the sub-watershed of the development and accounted for current water usage. Since the proposed development is located near the village of Fairfax, and as such, most of the residences are serviced by a municipal water supply and do not have private drilled wells, ample groundwater reserves were available.

Soils Evaluation, Harrison Sand Pit, Georgia, VT. Project Manager to conduct an investigation to evaluate soil type and depth to groundwater. Previous investigations conducted in 1995 indicated that fine brown sand was present at the site to a depth of 35 feet and was underlain by fine silty sand to a depth of 45 feet, and an elevation of 340 feet. This investigation evaluated subsurface conditions down to an elevation of 300 feet.

Statewide Environmental Consulting and Resource Services, VTrans. Recently selected as Independent Technical Reviewer/Hydrogeologist for a statewide contract to provide evaluation and mitigation design for hazardous materials at VTrans-owned or VTrans-controlled sites.

No. 9 Road, Fayston, VT. Project Manager and Hydrogeologist to complete an Engineering Assessment Report to evaluate existing conditions of the roadway embankment of a town road and assess stability of the slope along a section of failing roadway due to slope instability and movement. A large crack in the pavement extended longitudinally along the road for 110 feet and sat over an embankment retained by a stacked stone wall. The Class 3 Town Highway connects several roads to Route 17. Completed a series of soil borings to identify on-site soil conditions and establish the depth to groundwater. Collected field data supported completion of a seepage and stability analysis using the GeoStudio software. Recommended to extend steel sheet pile below the existing slope failure surface.

Aimee Rutledge, PWS, CPESC, CPSWQ

Permitting/Wetland Scientist

Years of Experience: 22
Years with D&K: 1

Education: B.S., Environmental Management, University of Rhode Island, 1999

Registrations: Society of Wetland Scientists, Professional Wetland Scientist: 2238; Certified Professional in Erosion and Sediment Control: 4647; Certified Professional in Stormwater Quality: 0732

Environmental Assessment, Northeast Kingdom International Airport, VTrans, Newport, VT. Senior Environmental Analyst responsible for wetland field identification for compensatory wetland mitigation required for wetland impacts as a result of airport projects. This high-profile project involved preparation of the design plans, permits, and an Environmental Assessment for a proposed runway extension, as well as a new terminal, maintenance hangars, fire and rescue building, corporate hangars, manufacturing facility, and warehouses. Permits and approvals were obtained within a challenging time frame to meet funding deadlines.

Alburgh Village Water System, Alburgh, VT. Senior Environmental Technical Lead responsible for natural resource inventory for the relocation of the town's existing water storage tank. The project area was reviewed for threatened, endangered, and rare species, wildlife habitat, wetlands, cultural and other natural resources which could potentially be impacted by the project. The information gathered was used to complete a VTDEC Environmental Report.

Runway 9-27 Extension EA, Ogdensburg International Airport, Ogdensburg, NY. Senior Environmental Analyst responsible for development of the EA document. Prepared an EA for a proposed 600-LF runway extension, apron expansion, and terminal expansion. Key issues included mitigation for the approximately 6.5 acres of wetland impacts and threatened and endangered species coordination related to obstruction removal.

VTrans Natural Resources Services Term Agreements, Statewide, VT. Senior Environmental Analyst and Project Manager responsible for managing several task assignments; performing wetland delineation; stream assessment; identifying rare, threatened, and endangered species; and state and federal permitting. Under numerous term contracts, provided a wide range of environmental services to VTrans, including wetland delineations, wildlife connectivity analyses, stream channel characterization, state and US Army Corps of Engineers (USACE) wetland permitting, bat surveys, and rare mussel surveys and relocation.

Monkton Road Stabilization, Charlotte, VT. Senior Environmental Technical Lead responsible for permitting for a slope stabilization project along Monkton Road. The project involved an expedited review of project plans and development of permit plans for a VT Wetlands General Permit application.

Mad River Green Shopping Center Permitting, Waitsfield, VT. Environmental Analyst responsible for a wastewater permit modification and Act 250 amendment. Projects at separate spaces in the Mad River Green Shopping Center involved a change in uses of existing spaces and outdoor patio expansion. The shopping center comprises a variety of businesses with a shared wastewater treatment system and an Act 250 Permit. The projects involved permitting services for a change in use, repurposing of a former bank building, salon use conversion to a butchery, restaurant outdoor patio expansion, and a new brewery. All projects involved an Act 250 compliance evaluation and, in most cases, an Act 250 Amendment, and wastewater permit modification. The projects included close coordination with VT Agency of Natural Resources, VT Natural Resources Board and the local Environmental Commission.

VT 104A Bridge Over Arrowhead Mountain Lake, VTrans, Georgia, VT. Senior Environmental Analyst responsible for performing natural resource identification and permitting for the Highbridge Road bridge replacement project. Responsibilities included wetland and waterway delineation, identification of rare, threatened, and endangered species, and state and federal permitting review.

Main Street Bridge Scoping Study, CCRPC, Winooski, VT. Senior Environmental Technical Lead supporting the emergency repair of an historic bridge rail, including a scoping study to evaluate options for repairing, reconstructing, or replacing the entire structure. The 85-year-old, three-span, 350'-long structure straddles the border between the cities of Winooski and Burlington, VT, and is a primary route for traffic in and out of these communities. Supported plans and details for the emergency repairs and also developed plans and details for more permanent repairs to the remainder of the concrete bridge rails on both sides of the structure.

Brenda Bhatti
Bat Specialist/Wildlife Biologist

Years of Experience: 20
Years with D&K: 1

Education: M.S., Environmental Studies, Antioch New England Graduate School 2001; B.S., Zoology/Wildlife Biology, Ohio University 1991

Franklin County Regional Council of Governments, Wildlife Survey, Greenfield, MA. Wildlife Biologist/Ecologist conducted habitat assessment targeted toward wood turtles (Clemmys insculpta) and (Geum fragraoides) in order to comply with MA state regulations (rare and endangered species) for a proposed bikeway project.

Proposed Commercial Project, Confidential Client, Avon, MA. Environmental Regulatory Specialist responsible for providing oversight and client management for a feasibility study that included environmental constraints analyses and natural resource investigations for large, multi-million dollar commercial project proposed adjacent to the Brockton Reservoir. Worked with engineers and an attorney to evaluate the applicability of Massachusetts laws, including 314 CMR 4.00: Massachusetts Surface Water Quality Standards, 310 CMR 22.00: Drinking Water, DEP Stormwater Management Policy, and the Avon Zoning Bylaws relating to water supply, earth removal, and stormwater runoff.

Mist Net Survey, Department of Energy/Department of Defense (US Air Force), New Boston, NH. Bat Biologist responsible for assisting with mist net survey of species present on the 2,800-acre New Boston (NH) Air Force Station (NBAFS) following US Forest Service protocol for Indiana Bat (Myotis sodalis) surveys.

Trail Development Projects, Wapack National Wildlife Refuge, Peterborough and Town of Jaffrey, NH. As Wildlife Biologist/Ecologist, provided services on multiple trail improvement and development projects: 1) conducted analysis of topographic constraints and potential wildlife compatibility for a mountainside spur trail off the Wapack Trail in the Wapack National Wildlife Refuge; 2) completed a turtle nesting habitat analysis for a rail trail that extends from the Massachusetts border through Rindge, Jaffrey, and Peterborough, and 3) participated on regular maintenance of trails at Monadnock State Park during a nine-year stint as a seasonal park ranger.

WW Cross Site, EPA Brownfields Project Site, Town of Jaffrey, NH. As Environmental Scientist and Regulatory Specialist, participating in remediation efforts by the Town at the site of a former manufacturing facility projected to cost over $1.2M. Participated in Redevelopment Committee meetings. Met with Town Planner with suggestions and potential strategies regarding creative financing. Reviewed and provided recommendations to the Town Planner for improvements to the $300K EPA Brownfields grant application. The grant was successfully awarded in May 2021. Subsequently participated in bid review and interview panel in October 2021.

Habitat Evaluation, Orvis, Sunderland/Manchester, VT. Wildlife Biologist to provide background research and drafting support. Compiled a report of potentially affected key wildlife and wetland resources (especially bear and bobcat) on a 300-acre area proposed for a shooting facility by Orvis.

NH Department of Transportation, Wetland Resource Delineation; Rare and Endangered Species Surveys; Alternatives Analysis Review (Natural Resources), Salem, NH to Manchester, NH. Environmental Planner/Wildlife Biologist to provide wetland resource delineation and regulatory compliance assistance, rare and endangered species studies, vernal pool and other critical habitat inventories, surface and groundwater resource studies, hazardous material assessments, and impact assessment to support the preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

Lebanon Municipal Airport, Lebanon, NH. Sr. Environmental Planner responsible for overseeing and developing an Environmental Assessment under the National Environmental Policy Act (NEPA) in accordance with FAA criteria. Evaluations encompass multiple runway safety improvements, including a runway extension that involves vegetative clearing. Leading the natural resource field investigation efforts, including participating in wetlands delineations, preliminary potential bat roost locations within the project area, and overseeing other species investigations in conjunction with D&K naturalists, the New Hampshire Natural Heritage Bureau and the USFWS. Conducted historical and archeological desktop reviews in collaboration with the New Hampshire Division of Historical Resources. Led NHDOT Natural Resource Agency Coordination (NRAC) meeting and presented the project. Collaborating with other consulting firms regarding engineering specifications, stormwater studies, alternatives impacts, and mitigation.

Mark Neuroth, EIT
Geotechnical/Civil Design Engineer

Years of Experience: 14
Years with D&K: <1

Education: M.S., Civil & Environmental Engineering; emphasis in Geotechnical Engineering with a graduate certificate in Underground Construction & Tunnel Eng., Colorado School of Mines, 2021

B.S., Civil Engineering, minor in Mining Engineering, University of Alaska at Fairbanks, School of Mines, 2020

B.A., Geology, Cum Laude, minors Wilderness Ed. & Environmental Studies, SUNY Potsdam, 2007

Registrations: Engineer-in-Training: CO, NH

Geotechnical Site Investigation and Design Criteria, Green Mountain National Forest, Mount Tabor Road 10, Mile 8.4 Stream Crossing, Mount Tabor, VT. Staff Engineer responsible for aligning construction materials, construction requirements, and testing requirements from state specifications to FP-14 Federal Specifications.

Geotechnical Report, Bridge #6 on the Arnold District Road, Brandon, VT. Staff Engineer responsible for interpreting rock core lithology, rock quality designation (RQD), and rock mass rating (RMR) for the purpose of calculating bearing capacity for use in foundation design per AASHTO LRFD specifications, and compiling the geotechnical report.

Slope Stability Analysis and Design, Bullfrog Gold Pit, Beatty, NV. Geotechnical Engineer and Senior Geologist responsible for slope stability and kinematic analysis using numerical modelling with LiDAR data, collecting geotechnical and geologic data from rock core, training and supervising junior staff, collecting geotechnical samples for laboratory analysis, writing data collection SOP, and writing geotechnical slope stability report.

Foundation and Slope Stability Investigation and Design, Water Treatment Plant #3, Pogo Gold Mine, AK. Project Geotechnical Geologist responsible for foundation and slope stability data collection and design of a floating 140' x 80' foundation on a ~35° slope. Responsibilities included designing drill plan, managing drilling subcontractors, structural mapping outcrops, calculating rate of permafrost decay and debris flow with colluvium, collecting and analyzing soil and core samples for subsurface conditions, calculating bearing capacity and settlement, calculating volume of rock to be removed via blasting, writing geotechnical report.

Tunnel Stability and Hydrologic Scoping Investigation and Design, Constantine Metal Resources, Haines, AK. Project Geotechnical Geologist responsible for development and implementation of geotechnical program designed to correlate surface structural mapping with subsurface geotechnical characterization. Geotechnical program was carried out concurrently with the hydrologic program. Responsibilities included completing borehole packer tests at multiple depths, monitoring groundwater flow, conducting geophysical subsurface investigations, and assisting in writing geotechnical reports.

Slope Stability Investigation and Design, Red Dog Mine, AK. Senior Geotechnical Geologist responsible for developing and managing data collection process and training for collecting geotechnical, geologic, and mineralogical data for the development of two open pits for North America's largest Zinc mine. Responsibilities included project management, design of drill plan, collecting and analyzing data, performing quality control and assurance on data, and working with geotechnical engineers to streamline data collection and integration process. Approximately 140,000 feet of oriented rock core was drilled and analyzed.

SHAWN P. KELLEY, PH.D., P.E.
Project Director

KEY AREAS OF PRACTICE
Geotechnical Engineering

In Situ Testing

Geotechnical Instrumentation

Geo-Environmental Engineering

EDUCATION
Ph.D., Civil Engineering (Geotechnical Specialization), University of Massachusetts, Amherst, 2003

M.S., Civil Engineering (Environmental Geotechnical Specialization), University of Massachusetts, Amherst, 1997

B.S., Civil Engineering, University of Massachusetts, Amherst, 1994

REGISTRATIONS
Professional Engineer - VT

PROFESSIONAL AFFILIATIONS
American Society of Civil Engineering (ASCE) – National Committee – Leadership Training Committee

American Council of Engineering Companies (ACEC)

Vermont Society of Engineers

Geo-Institute of ASCE

Shawn has over 20 years of geotechnical engineering experience on a wide range of development projects. As a specialist in geotechnical engineering design, geotechnical instrumentation, and geotechnical soil testing, he has authored numerous publications, reports and presentations. In 2016, Shawn was named Vermont's Civil Engineer of the Year by the Vermont Section of American Society of Civil Engineering (VTASCE). In 2017, Shawn was named Engineer of the Year by the State of Vermont Engineer of the Year selection committee.

RELEVANT EXPERIENCE

Middlebury Bridge & Rail Launch Shaft, Geotechnical Services, Middlebury, VT
Project Director responsible for on-site field observation of exposed bedrock surfaces of a 40-foot diameter 35-foot deep launch shaft used for rock tunneling activities to install a 42-inch storm water drainage pipes and structures.

Downtown Bridge Replacement & Rail Line Improvement Project, Middlebury, VT
Project Manager responsible for site investigation program and foundation design recommendations for removing two old bridges spanning over Vermont Railway (VTR) and replacing with a cut and cover tunnel in downtown Middlebury, VT. The project also consists of lowering over 3000 feet of railway to transport future double stack freight and provides improved surficial drainage to the railway and surrounding surface streets.

Cross Street Bridge, Middlebury, VT
Project Manager responsible for site investigation program and foundation design recommendations for a new 3 span bridge over Otter Creek, Vermont Railroad, and a public parking lot.

Kelley Stand Road, Sunderland, VT
Project Manager responsible for site evaluation program for a 5 mile long stretch of Kelley Stand Road. Project scope included design repair of two bridges, repair of multiple retaining walls, and design of two large rock cuts for roadway realignment. The roadway was damaged by Tropical Storm Irene and project cost was $3.8M.

VT Route 100 – Plymouth to Bridgewater, VT
Project Manager responsible for site evaluation program for a 10.7 mile stretch of VT Route 100. Project scope included an evaluation of the pavement section and roadway base for full reconstruction. Damaged slopes were evaluated for stability and rated.

SANBORN HEAD

corey.mack@wcg.us
Winooski, VT 05404
802-297-7759
wcg.us

COREY MACK, P.E.

Lead Traffic Signal Engineer

Corey Mack, PE, leads WCG's New England Transportation Design Services market, with a focus on advanced traffic signal design, signal capacity improvement, traffic operations, and transportation planning and analysis. In his experience planning, permitting, and constructing transportation infrastructure, he enjoys working collaboratively with stakeholders to identify their challenges, inform discussion and decisions, and develop innovative and intuitive solutions through public engagement. While proficient in computer modeling, assembling conceptual plans, and preparing construction documents, Corey finds real excitement in guiding public conversations through the transportation decision process.

Crescent Connector Signal Design, Essex Junction, Vermont (RSG & WCG). Led the design of a complex signal construction project in Essex Junction associated with the construction of a new bypass road adjacent to two railroad crossings. Signal design included detailed pre-emption plans for approaching trains, emergency vehicles, and queue detection to ensure the safe and efficient movement of people and freight through the village. Design elements included system implementation consistent with the statewide ATMS and equipment standards. Project involved complex communication with multiple railroad lines, providing advanced and simultaneous preemption requiring logic programming of Cobalt controllers. (2012-ongoing)

Milton Marketplace Signal Design, Milton, Vermont (RSG). With Trudell Consulting Engineers as the site civil lead, developed the design and installation of a new signalized intersection US Route 7 and Milton Marketplace, considered the Southern Gateway to the community. The signalized intersection was designed to serve a retail shopping center (under development on the south side of the intersection) with phased implementation to allow for flexible signal operations for the existing residential land use on the north side of the intersection as the site was developed. The signal system included hardware for future integration into the statewide ATMS and ATSPM systems. (2018-2019)

Prospect Street Signal Design, White River Junction, Vermont (RSG). Led the design of a traffic signal at a constrained location adjacent to a railroad overpass and bridge over the Connecticut River at the intersection of Prospect Street and Maple Street in White River Junction, Vermont. Corey continued to assist throughout construction, coordinating the installation of the signal in conjunction with the replacement of the adjacent Connecticut River Bridge. Signal elements included accessible pedestrian signal features, countdown timers, audible tones, and tactile pushbuttons. (2016)

Road Reallocation Projects, throughout Vermont (RSG). Developed and analyzed successful road reallocation concepts throughout the state, including reduced vehicle and enhanced bicycle lanes in Colchester and Winooski Avenues in Burlington, Williston Road in South Burlington, and locations in Norwich and Manchester, Vermont. (2012-2019)

EDUCATION

- B. Eng., McGill University, Montréal, Quebec, Canada, 2005

CERTIFICATIONS

- Professional Engineer, State of Vermont (63093)
- Professional Engineer, State of New Hampshire (16977)
- Professional Engineer, State of California (72780)

AFFILIATION

- Institute of Transportation Engineers (ITE) – Member

EXPERIENCE

- Project Engineer
  WCG
  Winooski, VT
  July 2021 – current
- Project Engineer
  RSG
  Burlington, VT
  June 2008 – July 2021
- Project Engineer
  Dokken Engineering
  San Diego, CA
  June 2005 – November 2007

VOLUNTEER

- Winooski City Council (2019)
- Winooski Public Works Commission (2014-current)
- Winooski Environmental Board (2011-2014)
- Winooski GMTA Commissioner (2009-2012)
- Vermont STEM Fair Judge (2017-2018

EDUCATION:

State University of New York at Albany
Ph.D., Anthropology, 1993; Master of Arts, Anthropology, 1986

Hamilton College
Bachelor of Arts, Anthropology, 1980

QUALIFICATIONS:

36 CFR 61 Qualified Archeologist

SPECIAL TRAINING:

Archeology Consultant Training, VT Division for Historic Preservation (VDHP), May 2015

Native American Graves Protection and Repatriation Act (NAGPRA), 1998; Federal Projects and Historic Preservation Law sponsored by the Advisory Council on Historic Preservation and the University of Nevada, Reno, 1997; Section 106 Workshop, Vermont Division of Historic Preservation (VDHP), 1996; Developing a Vermont Archaeological Predictive Model workshop, Vermont Agency of Transportation (VTrans) and VDHP 1999; evaluating significance of Historic and Archaeological Resources Workshop, Vermont College, Montpelier, VT, May, 2001; and Best Practices in Working with American Indian Tribes presented by the FHWA and sponsored by the VAOT, Montpelier, VT, 2004.

RELEVANT VTRANS EXPERIENCE

2018 Sydney Drive Storm Water Retention, Essex TAP TA 16(5), Town of Essex, Chittenden County, VT
Principal investigator for a Phase I archeological reconnaissance survey for an upgrade to a storm water retention system.
Contracted by: DuBois & King, Inc.

2018 Muddy Brook Culvert Replacement, STP MM 18(3), City of South Burlington and Town of Williston, Chittenden County, VT
Principal investigator for an archeological resource assessment for a culvert replacement project on Muddy Brook at Kimball and Marshall Avenues.
Contracted by: Hoyle Tanner & Associates

2017/2018 Route 2A Reconstruction, Williston STP 5500 (17), Town of Williston, Chittenden County, VT
Principal Investigator for a Phase I archeological reconnaissance survey for the reconstruction of 6.9 miles of Route 2A. Identified an historic site that will be avoided by construction.

Contracted by: Vermont Agency of Transportation through the Statewide Archeological Consultant term agreement

2017 Winooski River Bridge Scoping Study, Cities of Burlington and Winooski, Chittenden County, VT
Principal investigator for an archeological resource assessment for a scoping study examining the proposed replacement of the bridge over the Winooski River between Winooski and Burlington.
Contracted by: McFarland-Johnson

EDUCATION:

The College of William and Mary
Masters of Arts, Historical Archeology, 1994

State University of New York at Binghamton
Bachelor of Arts, Anthropology, 1983

HEALTH/SAFETY: 40-hour HAZWOPER Training (OSHA 29 CFR Part 1910.120), July 1, 2014

RELEVANT VTRANS EXPERIENCE:

2018 Shared-Use Path and Bridge at Exit 14 on I-89, City of South Burlington, Chittenden County, VT
Conducted an archeological resource assessment for a bike/pedestrian path at Exit 14 of I-89.
Project Sponsor: Chittenden County Regional Planning Commission

2018 Improvements to Exit 17 on Interstate 89, Town of Colchester, Chittenden County, VT
Conducted Phase I archeological reconnaissance survey for proposed improvements of Exit 17 on I-89.
Project sponsor: Chittenden County Regional Planning Commission

2018 William Morse State Airport Tree Clearing, Town of Bennington, Bennington County, VT Conducted Phase I archeological reconnaissance survey for proposed tree clearing to improve airport approaches. Completed under the Statewide Archeological Consultant term agreement
Project sponsor: Vermont Agency of Transportation

2018 Enosburg Salt and Sand Shed, TAP TA 17 (7), Town of Enosburg, Franklin County, VT
Conducted archeological resource assessment for proposed salt/sand shed at existing town garage.
Project sponsor: Vermont Agency of Transportation

2018 VT Route 15 Scoping Study, Town of Essex, Chittenden County, VT
Conducted archeological resource assessment for proposed improvements to Route 15.
Project sponsor: Vermont Agency of Transportation

2016 Newport Airport Land Acquisition, Town of Coventry, Orleans County, VT
Conducted archeological resource assessment and Phase IB testing for the proposed airport expansion of the Newport State airport.
Project sponsor: Federal Aviation Administration

2015 Barton Reload Facility, Town of Barton, Orleans County, VT
Conducted Phase IB and II archeological field investigations to support the construction of a bulk transfer facility. A small pre-contact site was identified during the investigation.
Project sponsor: Vermont Railroad System

JOHN GORDON CROCK, PH.D.
Department of Anthropology, University of Vermont
111 Delehanty Hall, Burlington, Vermont 05405. (802) 656-4310. jcrock@uvm.edu

EDUCATION:

2000 Ph.D. in Anthropology, University of Pittsburgh
1989 B.A. University of Vermont

RESEARCH INTERESTS:

Archaeology of New England and northeastern North America; Archaeology and ethnohistory of the Caribbean Region; Heritage Management; Archaeology of climate change; Trade and exchange; Maritime adaptations; Development of inequality; Human colonization of islands.

TEACHING:

2011-present Associate Professor University of Vermont Department of Anthropology
Courses include *Introduction to Prehistoric Archaeology*; *Indians of the Northeast: Vermont; Caribbean Archaeology; Field Work in Archaeology*; *Heritage Management*; *Archaeological Laboratory Methods*.
2005-2011 Assistant Professor, University of Vermont Department of Anthropology.

CULTURAL RESOURCE MANAGEMENT:

2000-present Director, Consulting Archaeology Program, Department of Anthropology, University of Vermont. Principal Investigator and Chief Administrator.

SELECTED REFEREED PUBLICATIONS:

In press Natural and Anthropogenic Landscape Change and the Submergence and Emergence of Archaic Age Settlement on the Eastern Edge of the Anegada Passage. John G. Crock. Chapter 3 in *New Approaches to the Archaic Age in the Lesser Antilles*, edited by C. Hofman and A. Antczak. University of Alabama Press.

In press Paleoindian Sites, Site Patterning, and Travel Corridors along the Southern Arm of the Champlain Sea. Francis Robinson, IV, John G. Crock and Wetherbee Dorshow. Chapter 17 in: *In the Eastern Fluted Point Tradition, Volume 2*, edited by Joseph Gingerich. University of Utah Press.

2017 "Marineness," the Underwater Seascape and Variability in Maritime Adaptations in the Late Ceramic Age Northern Lesser Antilles. John G. Crock, Nanny Carder and Wetherbee Dorshow. *Environmental Archaeology* DOI=10.1080/14614103.2017.1345468.

2012 Maritime Mountaineers: Paleoindian Settlement Patterns on the West Coast of New England. John G. Crock and Francis W. Robinson, IV. In *Late Pleistocene Archaeology and Ecology in the Far Northeast,* edited by Claude Chapdelaine. Texas A&M University Press.

2012 A Pre-Columbian Fisheries Baseline from the Caribbean. Nanny Carder and John G. Crock. *Journal of Archaeological Science*. 39(10):3115-3124.