

ENGINEERING SERVICES FOR EMERGENCY WATERSHED PROTECTION PROGRAM

BID FORM

Submit this page along with supporting documents as your complete bid proposal

Lump Sum Engineering Services for 2941 Dugway Rd.

\$: \$403,362 x 25% = \$100,840.50

Lump Sum Engineering Services for 572 Governor Peck Rd.

\$: \$ 73,194 x 25% = \$18,298.50

The Town of Richmond reserves the right to accept or reject any or all bids, or parts thereof, or to select the bid to be in the best interest of the Town.

Bid submitted by:

Contractor: TCE, A Bowman Business

Address: 478 Blair Park Road, Williston, VT 05495

Phone: 802-316-5076 E-mail: Jeremy.Matosky@bowman.com

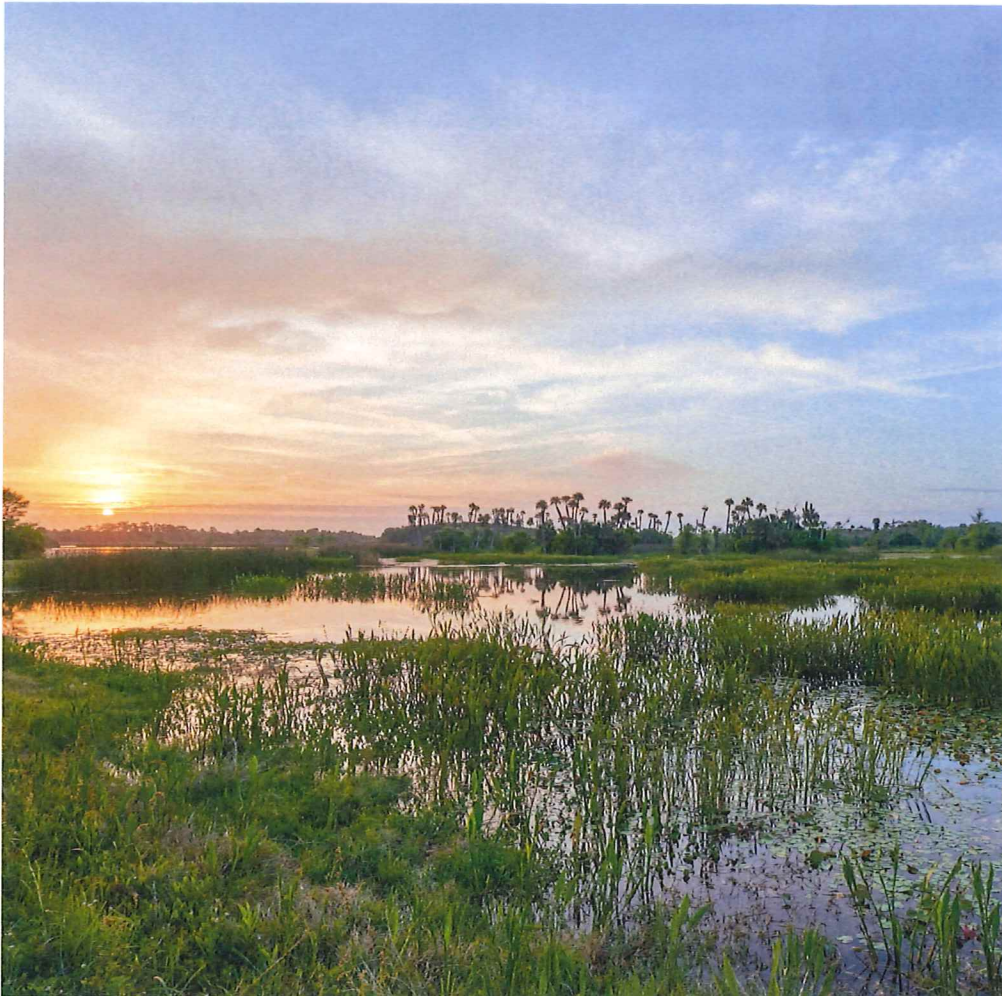
Contractor Authorized Agent Signature: _____

Printed Name and Title: Jeremy Matosky, P.E. - VT Manager | Principal

Date bid Signed: 8/7/2024

Town of Richmond

Engineering Services for Emergency Watershed Protection Program
DSR 5041-223, 2941 Dugway Road and DSR 5041-238, 572 Governor Peck Road



Qualifications for:

Engineering Services

Submitted by:

TCE, a Bowman company (Bowman)

tcevt.com | bowman.com

Bowman

August 8, 2024

Mr. Josh Ameson, Town Manager
Town of Richmond
203 Bridge Street, P.O. Box 285
Richmond, Vermont 05477

Sent via email to jameson@richmondvt.gov

**RE: Engineering Services for Emergency Watershed Protection Program
DSR 5041-223, 2941 Dugway Road and DSR 5041-238, 572 Governor Peck Road**

Dear Mr. Ameson:

In response to the **Town of Richmond, VT ("Town") Request for Proposals (RFP)** to plan, design, permit, and oversee implementation of two emergency stream bank restoration projects, **TCE, a Bowman company (TCE or Bowman)** is pleased to present this proposal for consulting services. The team we have assembled has the experience and qualifications to conduct the services outlined in the RFP and can provide the Town with expert design guidance as well as permit navigation and acquisition. With more frequent flooding events occurring all the time across the State we are more focused than ever before on solving the challenges our fellow Vermonters face every day.

Locally, for the past 50 years, TCE's vision has always been to live, work and play in a healthy environment. Our Vermont office wellness program and volunteer events include items such as: kayaking/canoeing down the Lamoille River, and planting trees along Allen Brook for the Winooski River Conservation District, or volunteering on Green Up Days. We have consistently won the Best of Business award given by Vermont Business Magazine and the Best Places to Work in Vermont award. In short, respecting Vermont's unique environments and ensuring responsible designs are supported in our daily work and benefiting our local community is our passion.

As of February 5, 2024, TCE has officially joined Bowman. Bowman is a national professional services firm offering multi-disciplinary engineering, planning, surveying, geomatics, construction management, environmental consulting, landscape architecture, and right-of-way acquisition. This change provides a strong foundation for us to merge our comprehensive skillsets while offering the same level of commitment to our clients and employees. Bowman has extensive experience and resources that our local experts can leverage to provide even more benefits to our clients and communities. With our individual and collective local and national experience, we are well-qualified to fulfill the tasks outlined in the RFP. **Work for this contract will be led by our Williston, VT office with support staff from our Fairfax, VA office. We have an additional 90 offices nationwide that are available for work on this contract.**

We are proud to present our team members, having decades of combined experience in civil engineering, planning, surveying and geodetic services, design, permitting, landscape design, structural design, traffic and transportation engineering, stormwater management, geotechnical, and construction observation services.

As the Vermont Manager, I will work to keep the channels of communication open and positive and strive to exceed your expectations. Should you have any questions about the services we provide, or our experience, please do not hesitate to contact me directly by email at Jeremy.Matosk@bowman.com or phone at **802-316-5076**. Thank you for your time and consideration.

Sincerely,



Jeremy Matosky, PE
Vermont Manager, Principal
478 Blair Park Rd.
Williston, VT 05495
802.879.6331

478 Blair Park Rd., Williston, VT 05495
802.879.6331

tcevt.com | bowman.com

Who We Are

Bowman is a trusted, multi-faceted professional services firm offering a broad range of engineering, infrastructure, environmental management, energy and real estate solutions to both public and private clients across the country. From large commercial developments, to master planned communities, to local transportation projects, Bowman delivers outstanding project results, builds long-lasting relationships and leverages the growth of our organization to serve the constantly changing needs of our clients.



29

Years in Business

\$376

Current Gross Revenue Pace (Millions)

2,300

Number of Employees (Approx.)

97

Offices Nationwide

Why We're Different

Success doesn't just happen. It's the result of thoughtful planning and focused action. At Bowman, we work with intention to deliver on-demand technical genius and industry leading talent that, when combined, produces innovative and solution-driven results.

Our clients benefit from a balance of deep national resources often associated with large firms, and the flexibility and quick response associated with smaller boutique firms, to effectively navigate through intricate approval processes.

Markets

- Building Infrastructure
 - Commercial & Industrial
 - Education
 - Government
 - Healthcare & Senior Living
 - Mission Critical
 - Mixed-Use/Multi-Family
 - Parks & Recreation
 - Residential
 - Retail
- Power & Utilities
- Renewable Energy
- Transportation
- Water Resources
- Mining & Exploration
- Ports & Harbors

Services

- Civil & Site Engineering
- Transportation Engineering
- Mechanical Engineering
- Electrical Engineering
- Plumbing/Fire Protection
- Land Procurement/Right-of-Way
- Commissioning/Energy Efficiency
- Energy Services
- Survey/Geospatial
- Water/Wastewater
- Construction Management
- Environmental Consulting
- Landscape Architecture/Planning
- Structural Engineering
- Reality Capture
- Financial/Economic Consulting

Team Members

With more than 90 offices nationwide, we continue to add staff, services, and locations to continue to provide the best development and infrastructure services to our clients.

- 2,300+ Employees
- 120+ Fully Equipped Field Survey Crews
- 300+ Professional Engineers
- 60+ Professional Surveyors
- 100+ Right-of-Way and Land Professionals
- 13 Environmental Specialists
- 90+ Planners and Designers
- 20+ Registered Landscape Architects

Awards

- Zweig Group - Hot Firm's List - #6 (2024)
- Forbes - Most Successful Small Cap Companies in America - #3 (2023)
- Engineering News Record
 - #78 - Top 500 Design Firms (2024)
 - #63 - Top 500 Design Firms Pure Designers (2024)
 - #18 - Southwest - Top Design Firms (2024)
 - #21 - Mid-Atlantic - Top Design Firms (2024)
 - #36 - Southeast - Top Design Firms (2024)
 - #50 - Texas & Louisiana - Top Design Firms (2024)
 - #64 - New York - Top Design Firms (2024)
- National Business Journals
 - #11 - South Florida Business Journal Largest Engineering Firm (2024)
 - #13 - Philadelphia Business Journal Largest Engineering Firm (2024)
 - #14 - Washington Bus. Journal Largest Engineering Firm (2024)
 - #19 - Louisville Business First Largest Engineering Firm (2024)
 - #19 - Dallas Business Journal Largest Engineering Firm (2024)
 - #27 - Phoenix Business Journal Largest Engineering Firm (2024)
 - #29 - Boston Business Journal Largest Engineering Firm (2024)



MEP Giants - #88 (2023)



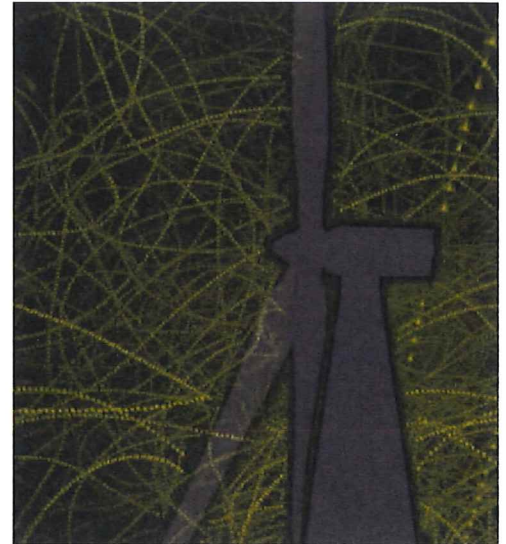
Bowman has grown not for the sake of growth, but on behalf of our customers. Our clients know their industry, their product and their end-user. It's our job to know our clients, their project drivers and how to achieve them. By leveraging the expertise of our local teams and the extensive knowledge of our national resources, Bowman stands ready to deliver innovative development strategies, design concepts and technological advancements to your next project.

National Footprint ...One Team!

Environmental Consulting

Preserving the environment is essential to the health and safety of our society and is an important service to Bowman. With a focus on minimizing environmental impacts, Bowman offers cost-effective solutions to clients in the public sector, the private development industry, and within the conservation community on how to deal with issues such as water scarcity, climate change, managing environmental liabilities, regulatory obligations, risk management, and good environmental stewardship.

Bowman offers a unique portfolio of extensive experience in natural resource inventories, wetland delineations, habitat assessments for threatened and endangered species, and surveys for conservation, development and infrastructure improvement projects. We also provide environmental services such as planning, compliance, and permitting, and we have developed, or contributed to, numerous regional habitat conservation plans (HCPs), statewide parks planning assessments, and endangered species research, planning and compliance projects.



What We Do Best

- History of successfully providing environmental services, with particular expertise in services related to natural resource identification, management, conservation, and planning.
- Finding cost effective solutions to protect the environment and navigate ever-changing local, state, and federal regulatory requirements.
- Keen understanding of market demands and trends.
- We help to deliver smarter, healthier, and environmentally sensitive communities.

Our Experts

Bowman is passionate about finding the best solutions for our clients, and strives to provide innovative answers to their environmental needs. **Our licensed professional staff includes:**

- Professional Wetland Delineators
- Qualified Environmental Professionals
- Certified Wildlife Biologists
- Certified Arborists
- LEED® Accredited Professionals

Environmental Consulting Capabilities

Natural Resource Surveys and Assessments


- Wetland and Waters of the U.S. Delineations
- Natural Resources Inventories
- Wildlife and Vegetation Surveys
- Threatened and Endangered Species Surveys
- Habitat Assessments
- Habitat Conservation Plans
- Forest Stand Delineations
- Water Quality Assessment
- Soils, Geological, and Geomorphological Assessment
- Chesapeake Bay Preservation Area Studies

Environmental Planning and Management

- Natural Resources Management Plans
- Endangered Species Conservation and Management
- Land and Wildlife Management Plans
- Forest Conservation Plans
- Wetland Creation and Enhancement Design
- Stream Restoration and Enhancement Design
- Native Vegetation Restoration
- Conservation Easement Baseline Reports and Inspections
- Urban Redevelopment

Environmental Compliance

- Section 404 / 401 Permitting and Compliance
- Wetland and Stream Mitigation Monitoring
- NEPA Documentation
- Section 7 Endangered Species Act Consultation
- Cumulative Effects Assessment
- NPDES Permitting
- Stormwater Pollution Prevention Plans
- Phase I Environmental Site Assessments
- Phase II Environmental Site Assessments
- Hazardous Waste Management



Bowman's project experience reflects a broad range of services. Our various departments work in concert to provide the unique ability to meet virtually all of your project needs in-house. We focus on careful planning and detailed follow-through at every phase of your project.

Flood Resiliency & Climate Change Adaptation

The real effects of climate change have arrived. Urban and rural communities alike are experiencing increased frequency and intensity of storms, and the prior century's infrastructure design approach for stormwater and coastal flooding is outdated and fails to take advantage of the protection afforded by natural systems.

Bowman takes a balanced approach to design and deliver resilient flood control solutions that anticipate future conditions and fit within available project budgets. Our expertise includes the traditional engineering disciplines associated with flood control design, but with a heightened focus on sustainability, regulatory compliance, and incorporation of natural solutions (e.g. living shorelines, wetlands, etc.).

Bowman is experienced in emergency response, coordinating with agencies and funding sources to provide immediate flooding relief that complies with federal reimbursement standards. We coordinate with state and federal sources to meet administrative requirements for reimbursement, and our grants & funding team is engaged to deliver substantial grant awards that meet benefit-to-cost funding criteria for long-term resiliency improvements.



Services

- Emergency Response
- Hydraulic Analysis & Watershed Hydrology Modeling
- Stormwater Management & Pollution Prevention Design
- Climate Change Evaluation & Policy Developmet
- Shoreline & Bank Stabilization
- Dam Breach Analysis
- Living Shorelines
- Wetland Creation & Enhancment
- Grants & Funding Procurement / Management
- Local, State and Federal Permitting
- Regulatory Compliance Monitoring
- Ecological Surveys, Studies and Mitigation Design
- FEMA Map Revisions & Appeals
- Feasibility Studies & Long Term Planning
- Economic and Benefit-to-Cost Evaluations
- Coastal Modeling & Sea Level Rise Projections
- Structural Design
- Construction Management
- Floodproofing of Existing & Proposed Buildings & Campuses
- Flood Resilient Building Code Consultation
- Expert Witness Services

Lake Champlain Seawall & Erosion Control Projects

Colchester, VT & No. Hero, VT



Owner

Boudah, Mongeon, Desautels

Services Provided

Topographic Survey
Base mapping
State & Local Shoreland
Protection Permitting
Public Presentations
Site Design & Grading
Site Plan Package
Erosion Control Design
Landscape Design
Color Renderings
Structural and Wall Manufacturer
Coordination
Construction Observation
Project Management.

Description

TCE a Bowman Company assisted landowners dealing with severe bank erosion along Lake Champlain, developing site designs that met strict Shoreland Protection design guidelines, protected valuable shoreland properties and prevented further bank erosion. TCE a Bowman Company provided custom services to meet the needs of each client based on current conditions at each site. In each case, engineers, landscape architects, and erosion and stormwater specialists worked together to create environmentally conscious, aesthetically pleasing designs. The designs implemented provided each landowner with the security of shoreline stabilization and long-term erosion control solutions.

Smithsonian Institution On-Call Erosion/Flooding Tasks

Washington, DC & Front Royal, VA



Owner

Smithsonian Institution

Services Provided

Civil Engineering
Surveying
Permitting
Environmental Consulting
Stormwater Management
Hydrology/Hydraulic Modeling

Description

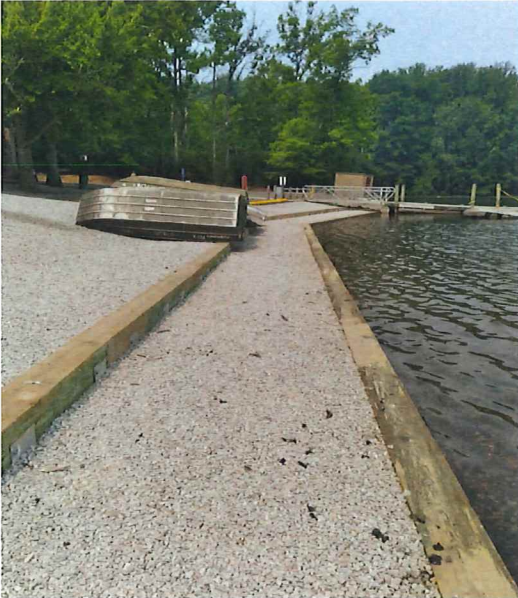
Since 2018, Bowman has been a trusted consultant on Indefinite Delivery – Indefinite Quantity contracts for projects at Smithsonian Institution (SI) facilities, including the National Zoological Park (NZIP) and the Conservation Biology Institute (SCBI). Notable projects and task types are described below.

On-Call Erosion and Flood Mitigation Consultation. Due to the nature of the NZIP and SCBI, Bowman is regularly called upon to provide emergency flooding inspection and design consultation to ensure no adverse impacts to animal life, critical facilities, or on-going experiments. Resolution of issues often require creative, non-traditional design approaches, such as preserving natural drainage patterns, stabilizing and redirecting runoff, and incorporating detention and conveyance measures to protect animal complexes from future flooding events.

Creek Stabilization and Bridge Abutments. This project involved the design and construction of bridge abutment scour and slope failure countermeasures. Using HEC-RAS modeling, Bowman provided scour analysis on two of the three historic bridges along Rock Creek leading to the NZIP. The team also conducted slope stability analysis for a section between two of the bridge structures that was failing and could potentially erode. Scour countermeasure designs consisting of riprap armoring and the construction of a rock cross vane in the Rock Creek streambed were developed by the team to repair and protect the bridge abutments while preserving the natural beauty of the Rock Creek channel and banks. The stream stabilization measures were designed to direct water toward the middle of Rock Creek and away from the edges, protecting a road which was sloughing into the creek due to embankment erosion.

Shoreline and Park Improvements at Burke Lake Park

Fairfax County, VA



Owner

Fairfax County Park Authority

Services Provided

Civil Engineering
Surveying
Permitting
Environmental Consulting
Stormwater Management
Construction Administration

Description

Bowman, through a long-term contract with the Fairfax County Park Authority (FCPA), addressed several operational and environmental issues at Burke Lake Park. Services provided included field surveys, environmental permitting, cost estimating, construction bid documents, construction administration and inspections, and an as-built survey.

At the marina, inadequate storm drainage caused significant erosion and siltation at the boat launch area, making it too shallow for launches. Bowman implemented a two-stage step-down solution using 12"x12" timbers and helical piers at the normal shoreline elevation and also at a lower elevation (to which the water level is dropped every summer to control invasive vegetation). Additional drainage solutions included upsizing an existing, overwhelmed parking lot inlet, installing a new trench drain and basin to intercept sheet flows to the shoreline and convey them to a stable outfall, and regrading the shoreline to reduce slopes in the boat launch area, thereby minimizing erosion and sedimentation.

Another problem at the park was a pedestrian viewing area along the shoreline that was degraded due to wave action from the lake and heavy foot traffic. Bowman developed various concepts for the shoreline stabilization including living shorelines stabilized with coir logs and native wetland plants as well as more hardened solutions. FCPA chose an imbricated stone shoreline stabilization to accommodate high foot traffic and protect the lake from sedimentation.

In the campground area, Bowman designed an accessible stage for campers and Boy Scout ceremonies, including a ramp, viewing area, and trail to the parking area.

Urban Stream Valley Restoration at Ken Lawrence Park

Tysons, VA



Owner

Fairfax County Park Authority

Services Provided

Civil Engineering

Surveying

Landscape Architecture

Environmental Consulting

Stormwater Management

Hydrology/Hydraulic Modeling

Description

Bowman provided civil design, environmental permitting, and surveying services for the restoration of approximately 800 linear feet of stream valley along an unnamed perennial tributary to Scotts Run in Tysons, VA. The stream was drastically degraded due to severe erosion to stream banks, resulting in significant undercutting and channel destabilization.

Bowman designed and implemented several Natural Channel Design (NCD) techniques to repair, stabilize, and improve the stream. Such elements included plunge pools, energy dissipaters, cross-vanes, J-hooks, cascading pools, flow deflectors, grade controls, and vegetative stream bank stabilization. Implementation of these elements have resulted in a healthy, stabilized stream valley supporting various flora and fauna.

The improved water quality has resulted in the return of benthic life to the tributary. Complimentary to the stream restoration, a stream valley trail was designed and constructed and has since become a public amenity.

This fast-tracked project (through Fairfax County Board of Supervisors and the Park Authority) was designed, permitted, and constructed within twenty-one months and delivered to the Park Authority two months ahead of schedule.

Pond Retrofit/Outfall Restoration at Lower Potomac Ballfield

Lorton, VA



Owner

Fairfax County Department of
Public Works and Environmental
Services

Services Provided

Stormwater Management
Construction Administration
As-built Verification
Environmental Compliance
Geotechnical Services
Arborist
Topographic Survey

Description

This project included the development of design plans and construction documents for the installation of pond retrofits to the existing stormwater management facility at Lower Potomac Ballpark Facility, located in Lorton, VA. The facility has an overall contributing drainage area of approximately 30 acres.

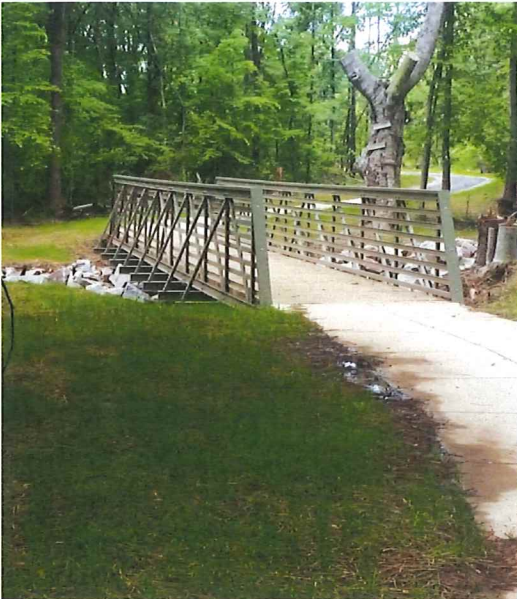
The design retrofit provides enhanced water quality treatment for the drainage area to the subject facility. The retrofit design included Constructed Wetlands (High and Low Marsh), Cascading Micro-Pools, and a Reinforced Plunge Pool. While the design proposed the complete reconstruction of the principal spillway, it was able to retain the existing embankment and outfall pipe.

The existing facility was analyzed to determine the current water surface elevations of the pond during 2-, 10-, and 100-year hydrologic events. Bowman was able to maintain the same respective water surface elevations and increase the effective BMP volume of the facility. An Adequate Outfall Analysis for the 1-, 2-, 10-, and 100-year hydrologic events was performed per PFM § 6-0201.2. Bowman cooperated with the Maintenance and Stormwater Management Division to design a non-proprietary system to capture floatables prior to entering the facility.

Working closely with Fairfax Stormwater Planning Division, Bowman was able to identify additional water quality benefits for improving the degraded and eroded outfall channel using Natural Channel Design principals. The resulting outfall improvements incorporated a Reinforced Plunge Pool, Cross-Vanes, and Cascading Rock Steps.

Stream Valley Trail Developments

Fairfax County, VA



Owner

Fairfax County Park Authority

Services Provided

Civil Engineering
Surveying
Permitting
Environmental Consulting
Stormwater Management
Hydrology/Hydraulic Modeling

Description

Bowman has completed the design of many stream valley trail projects for the Fairfax County Park Authority (FCPA) ranging in scope from replacement of individual pedestrian bridges to several thousand feet of new trails. The settings of these trails naturally result in challenges relating to floodplain impacts; structural bridge designs that can withstand varying frequencies of inundation and hydraulic forces; wetlands locating, avoidance, permitting, and mitigation; tree inventory, health assessments, and preservation; and accessibility and constructability considerations. Bowman provides the full range of surveying, environmental, arborist, and civil engineering services to assist FCPA in developing and permitting plans with as limited environmental impacts as possible.

One example is the Sugarland Run bridge (pictured right), which is in a high-velocity stream valley at an elevation vulnerable to inundation by storms. Bowman performed H&H analysis and designed a steel replacement to better withstand floods, which was installed in July 2023.

Bowman also provided full planning and design services for the 2,800 LF Burke Station Trail (pictured left). Development included design of the 8-foot-wide multipurpose trail, pedestrian bridge crossing, culverts and associated improvements. This trail was the extension of the initial phase (Liberty Trail) of the stream valley trail network and was the catalyst for the subsequent phases (Hillside to Hidden Pond SV trail) to complement the existing trail network within the Pohick Stream Valley Park.



Brad Glatfelter, PE

Lead Civil Engineer

Education

B.S. Civil, Environmental and Infrastructure Engineering, George Mason University, 2008

Licenses/Certifications

Professional Engineer:

Virginia (#0402050992)

Maryland (#46134)

Washington, DC (#PE907970)

VA Construction Contracting Officer

DEQ Certified Erosion and Sediment Control Combined Administrator (DCA 0108)

DEQ Stormwater Combined Administrator Certification, Virginia (DCA 0108)

Professional Certificate in Sustainability

DCR Certified Nutrient Management Planner (CN 802)

Brad is a project manager with more than ten years of stormwater management (SWM) compliance, civil engineering, and construction experience. He has extensive knowledge of all stages of design, construction, asset management and program management, with emphasis on SWM. Brad has substantial experience managing complex projects, including inspection programs, civil, structural and geotechnical engineering services, survey, and coordination with federal, state, and local governmental agencies. Brad oversees a team that specializes in SWM program development and compliance. Brad assists the Virginia DEQ as a subject matter expert for erosion & sediment control and SWM.

Experience

On-Call Erosion and Flood Mitigation, Smithsonian Institution | *Washington, DC & Front Royal, VA*

Civil project manager. Oversees emergency inspections and remediation designs for flooding issues at the National Zoological Park (NZIP) and Conservation Biology Institute. Subject sites have included the NEON Trail, cheetah complexes, and crane yards.

Creek Stabilization and Bridge Abutments, Smithsonian NZIP | *Washington, DC*

Civil project manager. Oversaw scour analysis per the requirements of HEC-18 and countermeasure design using HEC-23 methods for two historic bridges over Rock Creek leading to the NZIP. Led the design of a solution to protect a portion of North Road that was sloughing into Rock Creek due to erosion at the toe of the embankment using Natural Channel Design techniques.

Marina Shoreline Stabilization at Burke Lake Park | *Fairfax County, VA*

Project manager. Oversaw the development of solutions for shoreline erosion and siltation at Burke Lake Marina. Implemented a two-stage step-down solution with timbers on helical piers for easier boat launches. Improved drainage and shoreline grading to minimize future erosion. Stabilized a pedestrian viewing area with an imbricated stone shoreline to handle heavy foot traffic and prevent sedimentation.

Pond Retrofit and Outfall Restoration at Lower Potomac Ballfield | *Lorton, VA*

Project manager. Oversaw Bowman's survey, civil engineering, arborist, and landscape architecture services to retrofit an outdated dry stormwater pond. Retrofits included custom trash collection, step-pools, low- and high-marsh, and armored spillways. Additionally, the design included an armored plunge pool and restoration of approx. 250 LF of open-channel conveyance.

Emergency Replacement of Moseby Drive Culvert | *Manassas Park, VA*

Project manager for the restoration of a collapsed dual culvert under Moseby Drive to restore the vital roadway connection to a townhouse community, as well as severed water and sanitary utilities. HEC-RAS modeling and FEMA coordination was required. The roadway was reopened to traffic in less than six weeks from the collapse.

Stormwater Management Basic Ordering Agreement | *Fairfax County, VA*

Project manager. Managed numerous projects since 2014, designing and implementing water quality and quantity control measures, conducting inspection and maintenance programs, and providing technical support to the County and residents. Also assisted with public relations. Projects included pond retrofits, stream restorations/stabilizations, and various BMP retrofits.



Joe Riley-Ryan, PE, CFM

Senior Civil Engineer

Education

M.S., Environmental & Water Resources Engineering, Virginia Tech, 2019

B.S., Civil and Environmental Engineering, Virginia Tech, 2013

Licenses/Certifications

Professional Engineer:

Virginia (#0402058773)

Maryland (#58106)

DEQ Certified Erosion and Sediment Control Combined Administrator

DEQ Stormwater Combined Administrator Certification

ASFPM Certified Floodplain Manager
#US-24-13130

Joe is a water resources-focused project manager with nine years of extensive experience in stormwater management in Northern Virginia. He has a strong background in developing and implementing watershed management plans, hydrologic/hydraulic analysis and design, stormwater BMP design and project implementation, current SWM issues and approaches, capital project management, governing regulations/policies relevant to stormwater projects, community relations and coordination with a wide array of stakeholders.

Experience

Creek Stabilization and Bridge Abutments, Smithsonian NZP | Washington, DC

Lead civil engineer. Performed scour analysis per the requirements of HEC-18 and countermeasure design using HEC-23 methods for two historic bridges over Rock Creek leading to the NZP. Designed a solution to protect a portion of North Road that was sloughing into Rock Creek due to erosion at the toe of the embankment using Natural Channel Design techniques.

Marina Shoreline Stabilization at Burke Lake Park | Fairfax County, VA

Senior civil engineer. Developed solutions for shoreline erosion and siltation at Burke Lake Marina. Implemented a two-stage step-down solution with timbers on helical piers for easier boat launches. Improved drainage and shoreline grading to minimize future erosion. Stabilized a pedestrian viewing area with an imbricated stone shoreline to handle heavy foot traffic and prevent sedimentation.

Pond Retrofit and Outfall Restoration at Lower Potomac Ballfield | Lorton, VA

Lead civil engineer for the construction oversight and design revisions for an approximately 250 LF step pool restoration of a pond outfall. Provided daily construction inspections and reports to the County Staff, designed an extension of the outfall restoration to better tie in the project downstream, and performed as-built survey review to ensure the outfall channel was built per plan.

Dead Run Stream Restoration - Segment I | McLean, VA

Lead civil engineer in the restoration of approx. 1 linear mile of the headwaters of Dead Run. Successfully balanced the design objectives, constraints, and community requirements including the desire to preserve existing trees to the maximum extent.

Annual Stream and Outfall Watershed Planning | Fairfax County, VA

Lead civil engineer who led teams of capital project managers, ecologists, and stormwater maintenance specialists on field scoping visits to approximately 20 stream and outfall sites annually. Scored reaches using the GIS collector app for their restoration potential based on access, land rights, utilities, erosion, potential for future erosion, and existing riparian vegetation. Site rankings were updated annually and were used to develop the Fairfax County Stormwater Management Division's 5-year capital management plan for stream and outfall restoration projects.

Courtney Drive Drainage Study & Storm Sewer Upgrades | Manassas Park, VA

Project manager for a comprehensive drainage study and preliminary design of solutions to reduce the occurrence and magnitude of flooding in a 140+ acre single-family residential development. Oversaw a detailed inventory, survey, and condition assessment of existing storm drainage system which includes over 100 structures and outfalls. Developed a HEC-RAS floodplain model of the watershed. A PCSWMM model was used to develop three different potential solutions.



Jacob Miller, PE, CFM

Senior Civil Engineer

Education

B.S., Civil Engineering, Virginia Tech,
2016

Licenses/Certifications

Professional Engineer:

Virginia (#0402063929)

DEQ Certified Stormwater Inspector
and Program Administrator

Rosgen Level 1: Applied Fluvial
Geomorphology

ASFPM Certified Floodplain Manager

Jacob is a water resources project engineer with more than 5 years of site development and stormwater management experience. He works on a professional design team that specializes in water resources projects, including FEMA floodplain modeling and compliance, hydrologic studies, dam breach analyses, and scour analyses for bridges and retaining walls.

Experience

Creek Stabilization and Bridge Abutments, Smithsonian NZP | Washington, DC
Project engineer. Performed scour analysis per the requirements of HEC-18 and countermeasure design using HEC-23 methods for two historic bridges over Rock Creek leading to the NZP. Designed a solution to protect a portion of North Road that was sloughing into Rock Creek due to erosion at the toe of the embankment using Natural Channel Design techniques.

Marina Shoreline Stabilization at Burke Lake Park | Fairfax County, VA

Project engineer. Developed solutions for shoreline erosion and siltation at Burke Lake Marina. Implemented a two-stage step-down solution with timbers on helical piers for easier boat launches. Improved drainage and shoreline grading to minimize future erosion. Stabilized a pedestrian viewing area with an imbricated stone shoreline to handle heavy foot traffic and prevent sedimentation.

Courtney Drive Drainage Study & Storm Sewer Upgrades | Manassas Park, VA

Project engineer for a detailed H&H study within a 140+ acre area in Manassas Park. Quantified flooding and illustrated the extents of overland flow within residential neighborhoods using PC-SWMM modeling software. Performed an existing floodplain analysis using HEC-RAS software and provided several concept plans with the intent of minimizing flooding risk to homes and other property.

Lower Kent Drive Drainage Study | Manassas Park, VA

Project engineer for a detailed H&H study within a 60-acre area in Manassas Park. Quantified flooding and illustrated the extents of overland flow within residential neighborhoods using PCSWMM modeling software. Also performed an existing floodplain analysis using HEC-RAS software and provided several concept plans for minimizing flooding risk to homes and other properties.

Stormwater BMP and Outfall Inspections | Loudoun County and Fairfax, VA

Lead inspector for the evaluation of stormwater BMPs and outfalls throughout all of Loudoun County and the City of Fairfax, VA. Created GIS databases and mapping for all inspected BMPs and outfalls, detailing outstanding maintenance requirements.

NIH Building 15 Drainage Study | Bethesda, MD

Project engineer for a drainage study performed to address stormwater management and flooding concerns for the entire north side of the NIH campus. Delineated drainage areas and field verified stormwater as-built information. Modeled the campus stormwater network using Civil3D pipe design tools and computed flow through each pipe. Used computed flows to identify undersized stormwater structures and pipes and to analyze overland flow. Compiled a comprehensive drainage study report to discuss findings and methods of flood mitigation for the site.



Jeremy Matosky, PE

Branch Manager (VT), Principal

Education

B.S. Civil Engineering '95
University of Vermont
A.S. Civil Engineering '91
Springfield Technical College

Licenses/Certifications

Professional Engineer:
Vermont (#7167)

Jeremy Matosky manages the daily operations, administration and finances at TCE, a Bowman company while working hard to fulfill the mission and vision of the firm and prepare a future generation of company leaders. Jeremy enjoys working on complex projects and provides strategy, engineering design and technical expertise. He interacts with clients, regulatory agencies, provides expert testimony and often attends public hearings.

With close to 30 years of construction and civil engineering experience, Jeremy has a keen eye for detail, and is adept at problem solving complex site issues and excels at critical strategic thinking. Prior to the acquisition by Bowman in February 2024, Jeremy was the CEO & owner of TCE, Inc. and oversaw the continuous growth of that firm for the 20+ years, with 30 employees and \$4.8M in NSR in 2024.

Experience

Costco Gas Station | Colchester, VT

Jeremy has been the lead for this contentious project, which began as a concept in 2005 and took over 10 years of permitting and court battles with another nearby gas station owner opposing the addition of a member-only fueling facility adjacent to the Costco Wholesale Store off Lower Mountain View Drive. Jeremy provided expert testimony and served as the lead witness in the Environmental Court proceedings. The project was constructed in 2017 and finally opened in 2020 after a "reduced hours" approval was secured until VTTrans intersection improvements can be made to allow the station to operate on a normal schedule and a planned warehouse expansion to be constructed.

South Forty Solar | Burlington, VT

Jeremy oversaw this 2.2MW solar array constructed on a 40 acre parcel off of Starr Farm Road in the North End of Burlington. This project had numerous legal, design, and environmental challenges that were overcome by Jeremy and the project Team. This array constructed in 2017, is the largest in the City of Burlington, and has a stormwater system designed to help mitigate existing downstream stormwater problems that have plagued the Appletree Bay neighborhoods and been a source of numerous legal battles. The result was clean power is being generated stormwater impacts were reduced on downstream properties.

Swenson Granite | Woodbury, VT

Jeremy oversaw an expansion and new access for an existing granite quarry in Woodbury, VT. The new ¼ mile access road was designed to provide safer ingress and egress for trucks to the 100+ year old quarry. A new gravel wetland stormwater system was designed to treat runoff.



Andy Raichle, PE

EVP of Climate Resiliency

Education

M.S. Ocean Engineering, University of Delaware, 1992

B.S. Civil Engineering, University of Delaware, 1990

Licenses/Certifications

Professional Engineer:

New York (#077338-1)

New Jersey (#24AGE04188900)

Florida (#50072)

OSHA Hazardous Waste Site
Operations Health & Safety
Certification

Commissioner - New Jersey State
Tidelands Commission

Andy is a civil and marine engineer with over 35 years of experience in a broad range of coastal, stormwater and waterfront development projects throughout the US. His diversity of experience and expertise makes him a valuable addition to government and ownership teams that require a comprehensive understanding of the technical, fiscal, regulatory and institutional challenges that confront project delivery.

Andy has a three decade history of responding to manmade and natural disasters, with a focus on initial emergency response and long-term planning and infrastructure improvements to prevent future damages. Highlights of his career include involvement in declared natural disasters such as hurricanes (Maria, Katrina, Sandy, Andy, etc.), severe rain / snow events and the 9/11 attacks. Andy is accomplished at assembling and organizing teams of diverse expertise for disaster response that vary from grant/funding experts to surveyors, planners and engineers. His toolbox of solutions ranges from traditional armoring to ecologically-sensitive living shorelines, and he considers aesthetics, habitat and community impacts among the most important project design factors.

Experience

The Big U Coastal Resiliency Project | *Manhattan, NY*

Principal investigator for multi-billion dollar flood protection projects that protect Lower Manhattan against anticipated increases in the frequency and intensity of coastal storms and rainfall events.

FEMA Map Modifications & Appeals | *Nationwide*

Principal investigator for over 100 FEMA letter of map revisions and preliminary map appeals throughout the nation. Perform hydraulic and coastal analyses in support of map changes.

Passaic River Flood Mitigation | *Essex County, NJ*

Multi-jurisdictional hydraulic flooding evaluation that evaluated the impact of flood control projects upon proposed redevelopment in the floodplain. Coordination of results with NJDEP and FEMA to demonstrate "no impact" analysis for multiple developments.

Hudson Rebuild by Design | *Hudson County, NJ*

Multi-jurisdictional flood protection project designed to address existing and future flooding risks originating from high intensity rain events and coastal flooding.

Hurricane Maria Response & Recovery | *Puerto Rico*

Assembled, deployed and managed a team of engineers, ecologists, divers, surveyors and permitting specialists to facilitate recovery of Puerto Rico's commercial and recreational maritime facilities after Hurricane Maria. Coordinated closely with FEMA to plan infrastructure repairs that would be resilient to future storm damage events.



Jennifer Desautels, PE

Senior Project Manager, Civil

Education

B.S. Civil Engineering '00
University of Vermont

A.S. Civil Engineering Technology '97
Vermont Technical College

Licenses/Certifications

Professional Engineer: Vermont
(#8917)

ANR Compliant Designer's License

Jennifer has over 20 years of experience in the construction and engineering industries. Her prior engineering experience in both Delaware and Arizona along with more than a decade of work in Vermont, give her a unique perspective on design solutions for her current projects. Jennifer manages commercial and residential projects of all sizes. She assists with day-to-day operations of the business including staffing and business development. She is also an advocate for her clients, assisting them with navigating Vermont's complex permitting process. She has excellent communication skills and is adept at giving presentations at public hearings, legal mediation sessions and negotiating with public boards and regulators.

Experience

Sandbar Restaurant & Townhomes | *South Hero, VT*

TCE, a Bowman company assisted the client with design and permitting the redevelopment of the former Sandbar Restaurant & Motel site. The site is nestled between busy Route 2 and Lake Champlain, so shoreland, wetland, water supply and wastewater all presented unique challenges. We negotiated with several state agencies to resolve competing interests and bring the project over the permitting finish line.

Bacon St. Properties (former Kaigles Gas Station) | *South Burlington, VT*

Our team was hired by Champlain Development Group to convert the former gas station site into a mixed use building with retail, commercial and residential units at the corner of Shelburne Road & Bacon St. in So. Burlington.

Coolbeth Subdivision | *Georgia, VT*

Jennifer assisted the landowner with a 9 unit residential subdivision along Lake Champlain in Franklin County. Low-impact design elements were implemented to reduce environmental impacts and protect the lake.

Shoreland Protection & Erosion Control Prevention Projects | *Colchester, No. Hero & So. Hero, VT*

Jennifer managed a team of consultants including environmental, structural, erosion control and landscape professionals to design, permit and construct a series of block and boulder seawalls to prevent further bank erosion. In each case, the engineering designs have allowed landowners to regain control of their shorelines and establish permanent erosion control solutions.

Environmental Project Management | *Various Locations, VT*

Jennifer has assisted municipalities, private landowners, and developers in identifying environmental constraints on properties. Since 2020, she has led a team of environmental specialists with backgrounds in wetland science, wildlife biology and environmental engineering. By utilizing a proactive environmentally forward approach, clients are able to make decisions about environmental constraints early in the project process, saving both time and cost.



Gerald Stockman, LLS

Senior Land/Project Surveyor

Education

Associates in Land Surveying 2005
Paul Smiths College

Licenses/Certifications

Licensed Land Surveyor:
Vermont (#109298)
Part 107 Commercial UAS License
Project Management Certificate
NSPS Certified Floodplain Surveyor

Gerald is a licensed land surveyor bringing a wide range of experience and skill sets to his projects with a diverse experience that includes work in municipal, state, federal and private sectors.

Experience

Public Infrastructure Surveys | Various Locations, VT

Gerald has performed and/or oversaw several topographic and bathymetric surveys on multiple flood control dams in Vermont, Massachusetts and Pennsylvania. He has also been involved in multiple topographic surveys of general aviation airports in Vermont, New Hampshire, Massachusetts and Maine, as well as contributing to several multi-mile route surveys of VT State Highways including statutory resurveys of Williston Road and VT Route 17 in Addison.

Boundary Surveys | Various Locations, VT

Gerald has completed several large boundary surveys in the New England area. Some examples include the Middlebury State Airport in Vermont, and 3,200 acres of Wildlife Management Area for the New Hampshire Fish & Game Department.

Woolen Mill | Winooski, VT

Our team performed ALTA & HUD for the historical Woolen Mill in Winooski, which have been converted to apartments. This project required many layers of research and historical data to take into account for complicated surveys, and was also on an expedited timeline. Gerald was able to successfully accomplish all that was needed within the tight turnaround.

Green Mountain College | Poultney, VT

For the now former Green Mountain College campus in Poultney, TCE, a Bowman company performed both a boundary and an existing conditions survey. This project utilized an unmanned aerial systems, or UAS, drone survey in order to aid with the re-purposing of the campus.



Andrea Poulos, PE

Environmental Engineer/Assistant Project Manager

Education

B.S. Environmental Engineering, Minor in Geospatial Technologies, University of Vermont, 2016

Licenses/Certifications

Professional Engineer: Maine, New Hampshire, Vermont (#018.0135032)

VT Wetland Delineation Certification

VT Shoreland Erosion Certification

HydroCAD Certification

Andrea provides well-rounded assistance to all departments. Andrea specializes in stormwater design, wetland and stream delineations, design and modeling for hydraulic and hydrologic studies, GIS analysis, GPS data collection, and State, Federal and local permitting. Andrea is a hard-working and committed to her work. She has demonstrated excellent attention to detail, admirable communication, a comprehensive perspective and understanding of projects, efficient organization, and a strong will to further her skills and education.

Experience

Meadow Ridge Community Stormwater | Williston, VT

Over the last several years, the team has been hired by the Meadowridge Community Association and the Town of Williston to provide feasibility analysis, design, permitting, and construction oversight for three stormwater ponds within the Meadowridge Community. As part of a stormwater retrofit project in compliance

with the Town's MS4 program, Andrea exhibited in-depth knowledge of stormwater modeling, regulated treatment requirements, and design as she worked diligently to revise design and construction plans to cut down construction and permitting costs. Additionally, Andrea provided weekly erosion control observations during the construction of the ponds and responded quickly and efficiently when design changes were necessary.

Costco Wholesale | Colchester, VT

Our firm has a long history of permitting for the only Costco in the State of Vermont, starting in the early '90s and continuing well in to present day. Andrea quickly became familiar with the site and complicated permit history working on several projects, all which require local and state permitting including stormwater permitting, wetland permitting and Act 250. Andrea has provided in depth review paired with innovative design to bring Costco's projects to life in a strict regulatory environment. Her mix of environmental and engineering knowledge has aided in easing conversations between regulators.

Timeline Residential Subdivision | Alburgh, VT

In 2006, our firm fully permitted a 12-lot subdivision in Alburgh. Almost 12 years later, we were hired to bring all permits back into compliance as none of the lots had been developed. Andrea took the lead on this project, providing the thorough research, design, and permitting needed to bring an old project up to current regulations. Andrea's organization and communication skills resulted in the project coming into compliance as quickly and affordably as possible as she worked with the State Wetlands, Stormwater, Drinking Water & Groundwater, Shoreland and Act 250 departments to find solutions that worked for all parties.



Levi Keszey, PWS

Environmental Scientist III Wetlands/Ecology/Wildlife Biology

Education

B.S. Conservation Biology, St. Lawrence University

Licenses/Certifications

Professional Wetland Specialist

Levi is an Ecologist bringing a wide range of experience and skills from more than a decade in the field. He has worked on projects in Vermont, Maine, New York and California, among others, conducting wetland delineations, plant and wildlife surveys, habitat restoration and monitoring and resource mapping. Levi's passion for ecology and understanding of the intricacies that come with environmental engineering, especially in the state of Vermont make him a valuable team member here our team.

Experience

Wetland Delineations / Determinations | *Various Locations, VT*

Levi has conducted hundreds of wetland delineations and functional assessments across the Northeast as well as California and the Midwest. Levi has conducted delineations for solar projects, utility maintenance and upgrades, railroads, bridges, culverts, rail trails, bike paths, and habitat restoration projects, among others.

Remote Wetland Mapping Model | *Otter Creek Basin, VT*

Levi was also involved in the multi-year NWI+ mapping of the wetlands of Otter Creek, Winooski and Pike River basins. He lead the field verification effort to evaluate the accuracy of the model's geometric output and NWI+ attribution. In addition, Levi developed the model used by Ducks Unlimited to assign LLWW attributes to UVM's remotely sensed wetland polygons.

Field Verification, Missisquoi Basin Remotely Sensed Wetlands | *VT*

While working as a Wetland Technician for the Vermont Wetlands Program, Levi lead the effort to groundtruth the output of St. Mary's remote wetland sensing. This involved field verification of wetland boundaries, water regimes and Cowardin types.

Sequoia National Forest, Meadow Restoration Prioritization

As a Project Coordinator for California Trout, Levi developed a GIS-based prioritization model in order to identify high-value meadows within the Sequoia National Forest to target for restoration. This model incorporated available public layers, including LIDAR, as well as rapid field assessments to rank hundreds of meadows across the large National Forest and lead to the restoration of several priority meadows.

Sierra Meadows Clearinghouse, Remote Hydrogeomorphic Classification

Levi was a major contributor to the Sierra Meadows Clearinghouse, a publicly assessable, interactive database of the meadows of the Sierra Nevada. He remotely mapped and classified according to hydrogeomorphic type, thousands of meadows that now appear on the database.

ENGINEERING SERVICES FOR EMERGENCY WATERSHED PROTECTION PROGRAM

BID FORM

Submit this page along with supporting documents as your complete bid proposal

Lump Sum Engineering Services for 2941 Dugway Rd.

\$: $\$403,362 \times 25\% = \$100,840.50$

Lump Sum Engineering Services for 572 Governor Peck Rd.

\$: $\$ 73,194 \times 25\% = \$18,298.50$

The Town of Richmond reserves the right to accept or reject any or all bids, or parts thereof, or to select the bid to be in the best interest of the Town.

Bid submitted by:

Contractor: TCE, A Bowman Business

Address: 478 Blair Park Road, Williston, VT 05495

Phone: 802-316-5076 E-mail: Jeremy.Matosky@bowman.com

Contractor Authorized Agent Signature: _____

Printed Name and Title: Jeremy Matosky, P.E. - VT Manager | Principal

Date bid Signed: 8/7/2024