



STATEMENT OF QUALIFICATIONS

AT-THE-READY CONSULTANT ENGINEERING SERVICES FOR MUNICIPALITIES

MUNICIPAL PROJECT MANAGEMENT SERVICES

1.6.2017



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PREPARED FOR:
VERMONT AGENCY OF TRANSPORTATION

SUBMITTED BY:
RSG



AT-THE-READY CONSULTANT ENGINEERING SERVICES FOR MUNICIPALITIES

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1.0 COVER LETTER



55 Railroad Row 802.295.4999
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January 6, 2017

Nydia Lugo
Municipal Assistance Bureau
Agency of Transportation
One National Life Drive
Montpelier, VT 05633-5001

**RE: Statement of Qualifications, At-The-Ready Consultant Engineering Services
for Municipalities – Municipal Project Management Services**

Dear Ms. Lugo:

RSG is excited to offer our services to the cities and towns throughout the State of Vermont by submitting our qualifications to enter the Municipal Assistance Bureau's (MAB) At-The-Ready Consultant Roster for **Design** and **Municipal Project Management** services. The MAB provides valuable tools for municipalities across the state to access federal grant programs and implement projects that may otherwise be out of reach to our small community. Including RSG in the MAB At-The-Ready consultant roster would grant these municipalities access to our **focused expertise** and successful project history in transportation planning, permitting, and engineering. We are headquartered in the Upper Valley of Vermont with offices in select locations throughout the country. We have 30 years of experience providing insight, analysis, and engineering to communities across the state, working with some of the smallest towns and the largest cities, agencies, institutions, and employers to make informed decisions. We empower our neighbors, friends, family, and the people and organizations of Vermont to shape their future.

Just as important as what we are, it is important to acknowledge what we are not. We are not a one-stop-shop, do it all engineering firm. We will not be the right planning and engineering experts for every project. We will not bid on every project as every project will not be appropriate for us. We are not a hammer, ready to treat every project as a nail. What we are is a specialized group of individuals with distinct skills – **we are the right tool for the right job** – the star-shaped peg for the star-shaped hole, and an important arrow to be in every municipality's quiver, *at-the-ready*.

Our "star-shaped holes," the projects where RSG's skills are best suited and where municipalities will find their greatest partner, are projects where data and design make a difference. We thrive in helping municipalities better understand their transportation system and identify where improvements can be made to best invest limited funds for greatest



impact. We design these improvements efficiently, integrating the existing transportation system into the new. We are experienced in navigating the often complex state and federal permitting process. These projects can be contentious, either locally or from outside groups; we work hard to ensure the decision making process is collaborative and transparent. And most importantly, we have always been and will continue to be committed to the long-term success of our projects and the communities we serve. Specific examples are discussed in greater detail in the following proposal, but two notable examples of projects that apply RSG's skills to the needs of the municipality follow:

- The **Burlington Waterfront Access North** project is an example of our team approach to complex municipally managed projects and our long-term commitment to successful outcomes and relationships. We understand our strengths, and we were not experts in the diverse range of issues to arise in this project. Through our project scoping efforts, we were able to identify the storm water, soil contamination, and geotechnical complexities and **coordinate the appropriate team of expert subconsultants** for success. The result is an award-winning public space on the Burlington Waterfront. We remain committed to the project and the City of Burlington through ongoing efforts to finalize components of the project.
- The **Putney Village Sidewalks** projects are perfect examples of RSG's long-term commitment to project management. Since 2008, RSG has managed and led three separate MAB projects, all federally funded, all on the State Highway System, from conceptual design into construction. Each project has had its distinct challenges: shifting the highway centerline, Right-of-Way impacts, historic properties, and more; yet RSG and Town partnership have persisted with the final phase of sidewalk to be constructed in 2008.

These two projects are intended to illustrate the value the RSG team brings to the At-The-Ready Consultant Roster: a committed planning and engineering team that specializes in assisting municipalities make informed infrastructure investments, and a team that is knowledgeable of the state and federal project development process.

We look forward to the opportunity to work with VTrans and municipalities across the state. We are committed to responsive support, clear communication, and transparent process development; our team is ready and eager to join the consultant roster serving the people of the great state of Vermont.

Sincerely,

RSG


JONATHAN SLASON
Senior Engineer

2.0 GENERAL FIRM INFORMATION

RSG, in coordination with Hartgen Archaeological Associates, Inc. (Hartgen) and Vermont Survey and Engineering, Inc. (VSE) are pleased to submit this statement of qualifications (SOQ) to join the Vermont Agency of Transportation (VTrans) MAB At-The-Ready (ATR) Consultant Roster. The goal of the ATR Roster is to provide the municipalities of Vermont a streamlined system for selecting qualified consultants to provide technical planning, engineering, and project management services for federally funded transportation projects. Our intention in this SOQ is to demonstrate the value the RSG team offers to municipalities of all sizes across the state.

The RSG team is seeking qualification in the Design and Municipal Project Management consultant service categories. This proposal documents the RSG team's qualifications in the **Municipal Project Management Services** category.

2.1 | INTRODUCTION TO CONSULTANT TEAM

RSG is the prime consultant of the Consultant Team; no subconsultants are proposed for Municipal Project Management Services.

RSG

RSG applies state-of-the-art modeling and analytics to transportation planning, design, market strategy, environmental management, and custom software development, helping organizations make critical decisions with confidence. Since its founding by Dartmouth professors in 1986, RSG has provided actionable insights through the skilled application of advanced, creative, and customized techniques and tools to serve a broad portfolio of public- and private-sector clients locally, regionally, nationally, and internationally. RSG is a 100% employee-owned (ESOP) company and has been honored with several national workplace excellence awards. RSG is headquartered in White River Junction, Vermont, and has additional offices in Burlington, Vermont; Arlington, Virginia; Evansville, Indiana; Chicago, Illinois; Salt Lake City, Utah; Portland, Oregon; and San Diego, California.

For 30 years, RSG has influenced innovations in transportation nationwide. Comprehensive transportation planning requires a multidisciplinary approach to identifying and developing appropriate solutions; RSG's blend of transportation and market knowledge, and our unique set of multidisciplinary capabilities, yields innovative, actionable, and cost-effective results.

RSG is familiar with state and federal transportation programs. RSG is currently on several VTrans retainers, including Policy and Planning Consultant Services (2015), Roadway and Safety Engineering Consultant Services (2015), and Bicycle and Pedestrian / Safe Routes to School Consultant Services (2012). RSG is currently under contract with a number of cities and towns providing planning and engineering services through the MAB program. Each project delivered through the MAB program has required thorough understanding of state and federal requirements at all stages of project development, from consultant selection through construction. RSG is committed to applying this understanding in the development in future MAB projects with municipalities across the State.

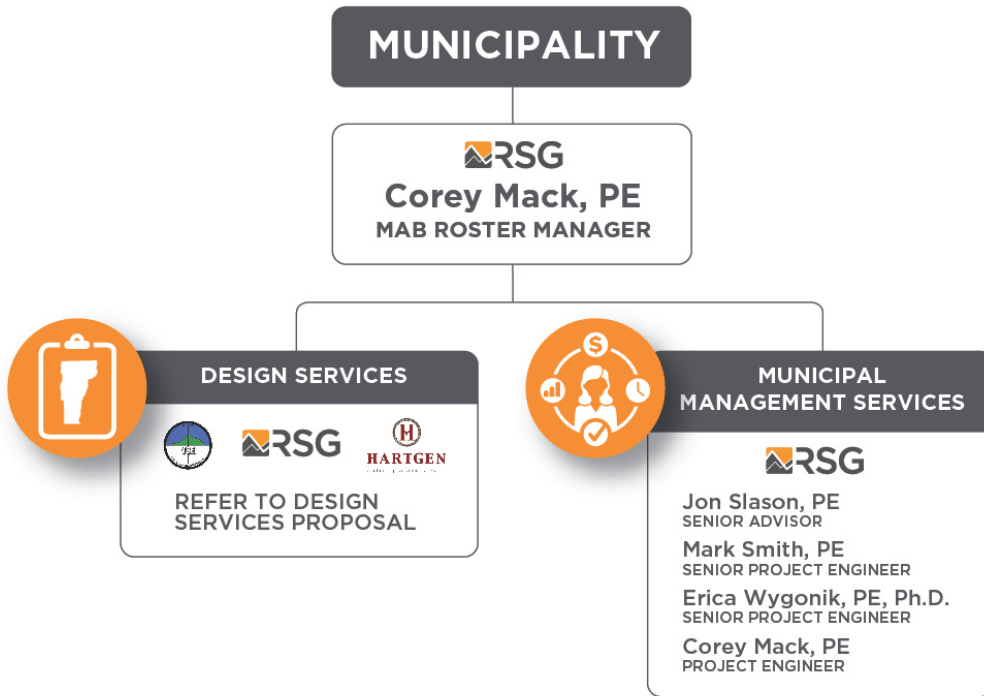


FIRM NAME	ADDRESS	TELEPHONE	EMAIL	ESTABLISHED
Resource Systems Group, Inc.	Headquarters 55 Railroad Row, White River Junction, VT 05001	(802) 295-4999	jonathan.slason@rsginc.com	1986

2.2 | ORGANIZATION CHART

The RSG team organization chart, is shown below and includes the name and title of key individuals that are proposed to manage or perform tasks resulting from contracts developed through the MAB Roster. Additional details on the qualifications of the project team members is provided in their respective service proposals and Section 4–Resumes.

FIGURE 1: ORGANIZATION CHART



2.3 | AVAILABILITY CHART

The RSG team is committed to providing responsive client support and timely project development. All staff members are currently committed to other projects, but availability can be worked into project schedules to meet specific demands. In addition, it is understood that MAB projects typically have a long duration; in the case of municipal project management, this can be over three years. RSG will be responsive to all inquiries of our services and discuss the specific features of the project with town staff within three business days of the initial request. RSG is confident that we will continue to propose on projects that are the best fit for our staff, our interests, and where we provide the best value to the Town with our abilities, insight, and expertise.

TABLE 1: AVAILABILITY CHART

KEY STAFF	AVAILABILITY
RSG MPM SERVICES STAFF	
Jon Slason, PE	20%
Erica Wygonik, PE	20%
Mark Smith, PE	30%
Corey Mack, PE	30%



3.0 MUNICIPAL PROJECT MANAGEMENT SERVICES

Consultant management of locally administered, federally funded projects (MAB projects) is a relatively new concept being applied to the project development process in Vermont. As federal regulations have become increasingly complex over the years, it has become apparent that not only must the Design Consultant and VTrans be experts of this process, but the Municipal Project Manager (MPM) must as well. In all the RSG-led MAB projects discussed in the Design Services section of this SOQ, not a single project was municipally managed by a consultant – all projects were administered by Public Works Staff, Planning Staff, Town Administrators, or Town Managers. In all cases, the MAB project was but one of many priorities held by these managers and often fell down the list as more immediately pressing matters rose. Consultant management would likely have resulted in a better understanding of the process moving forward, allowing the project to progress more consistently and smoothly.

The most recent Transportation Alternatives Grant Application specifically stated to identify “Municipal Project Management Costs (minimum of 10% of total PE, ROW, and Construction Phases)”. By requiring this additional cost accounting, it is more likely that Town’s will seek Consultant MPMs to assist in timely delivery of the project.

RSG is committed to quickly determining if the proposed MAB project is compatible with RSG skills and ambitions, as well as if our abilities compliment the municipalities specific needs. RSG pledges to:

1. Respond to the initial request for MAB MPM services within one business day;
2. Hold an in-person or online meeting with the potential RSG Project Manager, town staff, and VTrans MAB supervisor (as appropriate) to develop a better understanding of the project details within three business days; and
3. Develop a scope of work, project schedule, and MPM Services cost estimate within five business days of the initial request for services.

3.1 | QUALIFICATIONS AND EXPERIENCE

RSG has extensive experience as a consultant design manager. As noted earlier, when the MPM is not involved with MAB projects or the requirements of a federally funded project, there is often shock and amazement at the timeline and costs associated. RSG has been navigating this system for 30 years; often the Design Consultant must hold the Town Staff MPM accountable to ensure the project progresses, just as the Town Staff MPM must also communicate with us as the design engineer.

While RSG has not directly administered municipal project management services, the countless MAB design projects led by RSG have required significant communication directing the Town towards the next steps. As an MPM, RSG recognizes its role in holding the Design Consultant accountable for delivery, review of the deliverables through project

development, Right-of-Way consultations with neighbors, construction progress monitoring and scheduling, and overall project accounting.

The MAB Guidebook recommends the following general qualifications for MPMs. RSG meets and exceeds all qualifications. From the MAB Guidebook in **bold**:

- **Familiarity with applicable state and federal regulations, or demonstrated experience with similar regulations.** As documented below, RSG has successfully completed more than 10 MAB projects in the past five years, with at least eight MAB projects currently in development, and many more Chittenden County Regional Planning Commission (CCRPC) scoping studies. Each one of the projects requires that all applicable state and federal, and in some cases, local regulations must be followed. We are active members of the Institute of Transportation Engineers, the American Council of Engineering Consultants, and we receive regular updates to changes in state and federal processes. We are active participants and experts in the project development process.
- **Demonstrated experience with public participation and meeting facilitation.** All the 18 previously noted MAB and countless other CCRPC planning and scoping projects require a minimum of three public meetings: local concerns, alternatives presentation, and final presentation and acceptance. RSG prides itself on our public communication abilities, even modifying the CCRPC Equity Impact Worksheet to develop a Public Participation Action Plan. While it will be the Design Consultant’s responsibility to develop project specific meeting materials, RSG is willing and ready to work with the municipalities to plan and facilitate the required public meetings, but also provide regular updates to the Town regulatory board.
- **Demonstrated experience with financial management, particularly regarding development of individual projects.** As an experienced Design Consultant, financial management is known to be a critical component to project development. From the very beginning of design, understanding the conceptual costs as they relate to final costs is critical to successful projects. RSG makes a practice of including total project costs and available funding on all cost estimates at every design stage. Similarly, in our experience managing subconsultants (and as consultants ourselves), we understand the importance of professional service budgeting. RSG is committed to regular project updates, including project status and next steps, expended budget, remaining budget for each stage (MPM, Professional Engineering, Right-of-Way, and Construction), and project schedule; this practice will continue as MPM.

CLIENT TESTIMONY

“RSG has been responsive to our specific concerns, working hard with VTrans to shift the centerline on Main Street to maintain on-street parking, developing custom design features to minimize impacts to existing infrastructure, and communicating with adjacent landowners to maintain their vision of the street and their property.”

Cynthia Stoddard, Putney Town Manager



- **Demonstrated experience with preparing requests for proposals and scopes of work for hiring consultant services, with preparing, executing and managing such contracts and/or experience with similar type procurement.** As Design Consultants, we are familiar with responding to MAB Requests for Proposals (RFPs) and contracting terms. Perhaps even more importantly, we are familiar with the repercussions of poorly defined scopes of work (SOWs), working outside of the contract, and other contracting pitfalls. In addition, in our experience advertising and assisting with construction advertising and contracting, we are familiar with mechanisms for advertising for services, such as the Vermont Bid System and VTrans contracting requirements.
- **Demonstrated experience with construction projects from start to finish, including general oversight.** As the final stage of Design Services, RSG has provided construction administration services on a number of MAB projects. This has included developing the contract for the contractor, responding to design questions, and reviewing submittals and material specifications. In addition, RSG has provided Construction Inspection services, more closely monitoring contractor progress, payments, wage rates, and ensuring construction techniques match technical specifications. While it is understood that Construction Inspection would be provided by a separate firm than the MPM, knowledge of the process informs our ability to provide the services.

Beyond those general qualifications, RSG is an experienced design engineering firm familiar with the requirements of the MAB Guidebook. As MPM, RSG is prepared to ensure the Design Consultant follows the project development process described in the MAB Guidebook, and provides regular project schedule and accounting updates to the Town.

3.2 | PROJECT EXAMPLES

The following project examples are a sample of MAB projects led by RSG. The projects were all municipally managed by city or town staff, largely unfamiliar with the MAB project development process, resulting in significant management guidance by the RSG project manager.

TABLE 2: MAB SCOPING OR DESIGN PROJECT EXAMPLES

PROJECT	YEAR	KEY MILESTONES*			
		CE	1111	ROW	100%
Manchester BP15(5) – Depot Street Redesign	Ongoing				
Norwich SRIN(22) – Church Street Sidewalk	Ongoing	✓	✓		
Putney TA14(1) – Village Sidewalk Phase 3	Ongoing	✓	✓		
Highgate TA13(1) – Lamkin Street Sidewalk	Ongoing	✓	✓	✓	

PROJECT	YEAR	KEY MILESTONES*			
		CE	1111	ROW	100%
Putney TA13(2) – Village Sidewalk Phase 2	Ongoing	✓	✓	✓	
Burlington EH10(19) - Waterfront Access North	2016	✓		✓	✓
St Johnsbury SBVT11(3) – Waypoint Center	2016	✓		✓	✓

*CE – Categorical Exclusion; 1111 – VTrans Highway Access Permit; ROW – Right-of-Way Clearance; 100% – Contract Plans

BURLINGTON WATERFRONT NORTH: SCOPING, CONCEPTUAL ENGINEERING, FINAL DESIGN, AND CONSTRUCTION SUPPORT

In 2009, the City of Burlington, Vermont retained RSG to lead development of a preferred alternative for improving access to its Waterfront North District. For this scoping and project definition study, RSG assessed traffic and pedestrian counts, environmental constraints, historical and archaeological resources, and parking demands to arrive at a set of feasible alternatives for consideration. RSG’s leadership of this scoping and project definition effort resulted in expeditious approvals and permitting, allowing the project to proceed into the final design and construction stage.



The project, from concept to construction, has been active from 2008 and is expected to be fully completed in 2017. Most construction activities are finished, but the contractor is expected to return and correct minor flaws. RSG has been active throughout these stages, guiding the City’s Public Works and Economic Development staff through the project development process. In the end, there were over 20 funding sources (federal transportation grants, brownfields restoration, HUD funds, TIF district funds, and many more), each with distinct reporting and outcome requirements. RSG collaborated with the City to manage these varied aspects throughout project development.

Reference: David Allerton, DPW Project Manager, dallerton@burlingtonvt.gov, (802) 865-5830

PUTNEY VILLAGE U.S. 5 SIDEWALK SCOPING & FINAL DESIGN

The Town of Putney obtained a Transportation Enhancement grant, and later two Transportation Alternatives Grants, from the Vermont Agency of Transportation (VTrans) to study pedestrian improvement alternatives along Main Street, including a connection to Landmark College, and along Old Route 5. The purpose of the grant was to increase the pedestrian safety and accessibility in the village area. With the Town Manager acting as the Municipal Project Manager, RSG provided much of the project leadership, directing the project through the



Project Development Process in all three phases of MAB projects: Phase 1 was constructed in 2012, Phase 2 is expected to be constructed in 2017, and Phase 3 in 2018. Issues arising during project development included revisions to the existing typical section, shifting the highway centerline to accommodate on-street parking, the need for right-of-way easements and utility relocation, and application of stormwater BMPs. RSG's commitment to managing and successfully delivering this project will continue until final acceptance sidewalk and all projects have been administratively completed.

Reference: Cynthia Stoddard, Putney Town Manager, tm@putneyvt.org, (802) 387-5862 x11

3.3 | KEY PERSONNEL

RSG will assign Municipal Project Management Services projects to our most experienced project managers familiar with VTrans MAB projects. All project managers are well versed in community engagement, public presentations, and the MAB project development process.



COREY MACK, PE, will serve as **MAB Roster Manager**. Corey supports RSG's traffic operations, transportation planning, and engineering design practices. He is proficient in computer modeling, assembling conceptual plans, and preparing construction documents, and he excels at guiding public conversations through the transportation decision process. Corey leads many of RSG's projects resulting from the VTrans Bicycle and Pedestrian / Safe Routes to School Consultant Services retainer contract, plus several MAB projects.



JONATHAN SLASON, PE, He has over 10 years of experience working to plan, design, and connect our built environment to the people surrounding it. Jonathan's education in economics and civil engineering combine to enable him to take the conceptual and translate that into tangible action. He manages RSG's traffic operations, transportation planning, and engineering design practices. Jonathan currently manages the VTrans retainer contracts for Policy and Planning Consultant Services (2015), Roadway and Safety Engineering Consultant Services (2015), and the CCRPC Consultant Services Contract.



ERICA WYGONIK, PHD, PE, excels at identifying optimal strategies across all transportation modes to reduce local and system-wide impacts. With expertise ranging from bikes to trucks, her technical focus is on leveraging a wide range of modeling and mapping tools to evaluate the implications of transportation and land-use changes. She manages projects in all aspects of transportation work and is active in freight transportation and modeling, traffic impact analysis, and campus and community planning. Erica led the Vermont On-Roads Bicycle Plan, Phase 1, is currently engaged in Phase 2, and leads many service contracts for the New Hampshire Department of Transportation.



MARK SMITH, PE, is an experienced civil engineer who has provided assistance and project management services for projects involving highways, traffic operations, and bicycle / pedestrian facilities. Mark complements his extensive design experience with expertise in traffic network computer simulation (Synchro, Paramics, and VISSIM) and general transportation planning. Mark has led many Final Design and Scoping contracts for VTrans, the CCRPC, and private clients.

4.0 RESUMES





COREY MACK, PE

Project Engineer

NUMBER OF YEARS WITH FIRM | 8 Years

EDUCATION BEng, Civil, McGill University

LICENSES/CERTIFICATIONS | Licensed PE in Vermont (#63093)

Licensed PE in California (#72780)

BIO

Corey Mack, PE, supports RSG's traffic operations, transportation planning, and engineering design practices. With over 10 years of experience, Corey excels at analyzing, designing, permitting, and constructing transportation facilities, from freeways and highways to bike paths and sidewalks, and from project initiation and grant applications through final design and construction administration. He enjoys working with communities to identify their challenges, inform discussion, and develop right-sized solutions through public engagement. Proficient in computer modeling, assembling conceptual plans, and preparing construction documents, Corey finds real excitement guiding public conversations through the transportation decision process.

PROJECT EXPERIENCE

Manchester BP15(5) – Depot Street Redesign, Vermont. Leading the conceptual planning in design phases of the redesign of the Depot Street commercial district corridor. Assisted in the selection of a preferred alternative which removes the center turn lane in favor of bicycle lanes, green space, and street trees; green space and street trees to be designed to allow stormwater infiltration and treatment before flowing into the Batten Kill. Prepared conceptual design and environmental permitting package, with Final Design scheduled in 2018. (2016-ongoing)

Burlington STP 5000(17) C-5 - Waterfront North/Lake Street Extension Project, Vermont. Assisted in the design and permitting of the highly visible waterfront project in Burlington, Vermont, including contributing to the only successful federally funded TIGER grant application in the State of Vermont. Project elements include a 1500-foot extension of Lake Street, a new concrete skate park, gravel wetland water treatment, utility relocation and undergrounding, and associated improvements. Construction completed in the summer of 2016, and received 2016 ACEC Merit Award for excellence in engineering. (2009-ongoing)

Putney TA13(2) / TA14(1) – Village to Landmark College Connection, Vermont. Leading the design, permitting, and bidding services of a sidewalk construction project connecting the Village of Putney to Landmark College. Enhancements included improved stormwater drainage, new granite curb, a steep reinforced rock slope and new concrete headwall, and nearly one-half mile of new concrete sidewalk. No utilities will be relocated, designing the sidewalk and curbing around the existing water, sewer, and storm collection systems. Construction of the first phase of improvements is expected to begin in the summer of 2017. (2014-ongoing)

Bethel EH08(7) - Bethel Village Sidewalks, Vermont. Prepared conceptual, final, and construction documents for the federally funded and locally managed sidewalk construction project. Project elements include reconstruction of sidewalk segments along North Main Street and Church Street within the town, redevelopment of the Post Office Drop-Off Area, and relocation of an ornate stair set to a historic church. Provided construction inspection and resident engineering services. Construction completed summer of 2014. (2013-2014)

Burlington BP15(17) – Winooski-Howard-St Paul Intersection Bicycle and Pedestrian Study, Vermont. Leading the investigation and analysis of bicycle improvements at this emerging neighborhood intersection.

Located where three Burlington neighborhoods meet and along a primary roadway from downtown Burlington to points south, the intersection includes a mix of residential and commercial land uses. The wide intersection poses a challenge to bicyclists and pedestrians with steep grades, no pedestrian signals, skewed geometry with long crossing distances, and high traffic volumes. Leading the effort to document these issues and identify short and long term strategies to address; proposing a demonstration project in summer 2017. (2016-ongoing)

Windsor SRIN(16) - Kennedy Pond Walkway, Vermont. Developed conceptual and final design plans for the reconstruction of a sidewalk adjacent to the Kennedy Pond Recreation Area in Windsor, Vermont. The preferred sidewalk alignment will impact the access drive to the Kennedy Pond Recreation Area; the resulting project elements include realignment of the access drive, guardrail, and a slope reinforcement system. The project was constructed in the spring and fall of 2015. (2013-2015)

Williston Road Complete Streets Pilot Study and Implementation Plan. Assisted with the analysis of a road diet along US-2 / Williston Road, reducing the through travel lanes from two in each direction to one. Coordinated striping plans as a change order to a Vermont Agency of Transportation paving project underway along the corridor. Prepared final sign and striping plans, quantities, and estimated costs in support of the construction change order. Striping was implemented as a temporary pilot study, with final striping closely resembling the original intent. (2012)

St Albans EH09(9) - Taylor Park Pervious Walkway, Vermont. Led the development of a linear segment of porous concrete sidewalk in a historic urban park in Saint Albans, Vermont. Assisted community outreach, presented alternative pervious material designs at public meetings, and supported the Categorical Exclusion environmental documentation. Project features included underdrain infrastructure, crosswalk striping and signs, an accessible ramp, and a pervious walkway medium. Construction was completed in the summer of 2011. (2011)

corey.mack@rsginc.com



JONATHAN SLASON, PE

Senior Engineer

EXPERIENCE | 10 Years

EDUCATION | BS, Civil and BS Economics, RPI

LICENSES | P.E. Vermont #9353

BIO

Jonathan Slason, PE, focuses on our connections with our built environment through the ways we plan for, design, and continue to maintain and fund our infrastructure. He manages RSG's traffic operations, transportation planning, and engineering design practices bringing over ten years of consulting experience analyzing, designing, permitting and constructing transportation facilities locally and abroad. Jonathan's education in economics and civil engineering combine to enable him to take the conceptual and translate that into tangible action.

PROJECT EXPERIENCE

Project Management. Jonathan has managed planning and design projects from \$10k to \$600k, using appropriate tools of schedules, risk registers, QA/QC processes, public engagement, and client engagement. Central to his approach is frequent and clear communication with all stakeholders – especially the direct client. Building trust to facilitate transparency is key. Notable project was the successful delivery of constrained time and budget for the North Avenue Road Diet Pilot Project opinion survey. The Burlington Railyard Scoping study is a complex on-going project requiring significant project management to align all parties and move toward completion.

ITS Design. Managed and designed numerous traffic signal designs and fiber interconnects in Vermont and New Zealand. From isolated traffic signals to interchanges, to complicated rail and transit pre-emption designs. Jonathan was responsible for preliminary through construction supervision for over forty traffic signals since 2008. Vermont designs include I-89 Exit 12, Battery St-Cherry St in Burlington, UVM-Morrill Hall.

Local Design. Developed roadway and intersections designs from preliminary to construction supervision for private and public clients. Projects include Susie Wilson Road widening at VT 15, conceptual layouts for Cliff Street sidewalk in Burlington, conceptual cycle way designs for over a dozen cycle routes in Auckland, NZ, and led the conceptual and preliminary design of a two- to five-lane road widening for Albany Highway in Auckland, NZ.

Corridor and Regional Transportation Studies. Managed and technically led over a dozen corridor or regional transportation studies identifying existing and future deficiencies and providing a range of possible solutions. Projects include comprehensive studies for Port Villa, Vanuatu and the Country of Belize to more focused studies at Severance Corners in Colchester, I-89 Exit 16 Management Plan which led to the original cost share approach developed for the area, US 2 and VT 15 Corridor studies in Chittenden County as well as VT 15 corridor in Newport, VT. Through the informed use of regional travel model data as well as localized traffic patterns, Jon understands how to see the bigger picture in the details to tell the bigger story. Important for local municipalities is to find the larger purpose for their constituents. Jonathan has worked with municipalities and cities to identify pragmatic solutions to help solve their transportation problems.

Impact Fees and Innovative Financing. Jonathan is a leader in the State of Vermont and now working nationally on impact fee studies. Engaged with TRB innovative project finance committee and the Growth and Infrastructure Consortium, he is staying up to date with the latest trends and legal issues. Currently engaged to complete the planning for the first Transportation Impact Fee District in Vermont he is on the cutting edge. Recent work includes: Town of Essex sidewalk and recreation impact fees, Town of Williston transportation impact fees, Town of St. Albans alternative local financing options, and the City of Jacksonville, FL impact fee update.

Recent Project Examples

Williston Vermont Growth Center Transportation Impact Fee District – Pilot, Williston, VT. Project manager and technical lead to develop the first transportation impact fee district in Vermont to collect fees for impact on the state highway system. The study looks to integrate and account for local impact fees, develop a fee mechanism to meet applicable impact fee laws and requirements, and provide a clear and logical method of funding future multi-modal transportation infrastructure. (2016 – ongoing)

North Avenue – Diocese/Burlington College Housing Development, Burlington, VT. Lead analyst for the traffic study and mobility components for a large 700-unit residential development in the north end of Burlington. The study reviews site access, mobility within the site, parking needs, and assesses site impacts on the adjacent street network. (2016)

Town of Essex, Vermont Sidewalk and Recreation Impact Fee Study. Project manager and technical lead to develop a sidewalk impact fee in the Town of Essex, Vermont and update the recreation impact fee. Developing a rationale nexus and fee estimates for residential and non-residential development of transportation infrastructure and the applicable credits. (2016 – ongoing)



MARK SMITH, PE
Senior Engineer

NUMBER OF YEARS WITH FIRM | 3 Years

EDUCATION | MS, Civil Engineering - Transportation, University of Vermont; BS, Civil Engineering, University of Vermont

CERTIFICATIONS | Professional Engineer in the State of Vermont (#6526); Member, New England ITE – Vermont Chapter; Member, Vermont Society of Engineers

BIO

Mark Smith, PE, is an experienced civil engineer who has provided assistance and project management services for projects involving highways, traffic operations, and bicycle / pedestrian facilities. Mark complements his extensive design experience with expertise in traffic network computer simulation (Synchro, Paramics, and VISSIM) and general transportation planning.

PROJECT EXPERIENCE

City of Burlington / CCMPO – Waterfront South Redevelopment

Study. Developed several alternatives for redevelopment of this brownfield area that includes a regional rail trans-load facility. Alternatives considered economic and development potential for several new City blocks and interconnected streets, projecting and analyzing future traffic generation using a microsimulation model. Bike/pedestrian and parking accommodations were considered, and comprehensive cost estimates were provided in a summary report.

Town of Williston / CCMPO – VT2A / James Brown Drive Scoping.

Project Manager for scoping intersection improvement alternatives along a ½ mile section of this congested arterial. The main challenge involved minimizing added delay to the arterial while providing safe access from side roads.

Town of Colchester / CCMPO – Exit 16 Circulation Study. Project Manager and analyst for the study of a heavily congested arterial adjacent to an interstate interchange. Tasks included developing comprehensive growth projections, traffic simulation model development using Synchro and VISSIM, mitigation alternative analysis, improvement plans and cost estimates, as well as the exploration of the potential for TDM measures and innovative congestion management measures.

Town of Hinesburg / CCRPC – Sidewalk Scoping. Project Manager for scoping new sidewalks in several areas where future growth is expected, including connections to the Community School.

VTrans/Town of Cornwall, Vermont –VT30 Shoulder Widening.

Project Manager for this VTrans Local Transportation Facilities Project (Enhancement Program) which included widening 3 miles of VT30 for bicycle and pedestrian access. Process included conceptual design, public participation, NEPA process resolution and environmental permitting, final design, and construction services.

Town of Jericho / CCRPC – Jericho Bicycle and Pedestrian Facility Master Plan. Project Manager for comprehensive study to document existing conditions and future needs for sidewalks, paths, road shoulder improvements and trails throughout the town.

Lowes - Town of Essex, Vermont. Susie Wilson Road Reconstruction: Project Manager for design and construction oversight of reconstructed

roadway corridor to include; widening for added center turning lanes, new curbing, sidewalk, retaining wall, storm drains and traffic signal system.

VTrans – Sykes Mountain Avenue / US 5 Intersection; Hartford, Vermont. Project Manager for planning, public review, and redesign for full reconstruction. This project was also funded through the VTrans LTF program. The project included signal alternatives, a multilane (hybrid) roundabout, a smaller roundabout on Sykes Mt. Ave, extensive access management improvements, widening, drainage improvements, sidewalks and curbs. Conceptual Design Plans were developed for the preferred alternative – a roundabout.

Lowes - Susie Wilson Road Widening; Essex, VT. Project Manager for planning and complete design, including contract documents, for the reconstruction and widening of Susie Wilson Road, a five lane arterial, in Essex, Vermont. Work included replacing curb and sidewalk, a retaining wall, storm drainage and water supply improvements, pavement overlay, restriping and signage, and a new traffic signal system as well as corridor wide signal retiming.

Town of Middlebury, Vermont – US 7 Corridor Signalization. Project Manager for this VTrans LTF corridor signal study and final design involving the upgrade of six coordinated signalized intersections. Services included corridor traffic capacity analysis, geometric and signal improvement recommendations, CORSIM simulation, signal timing, phasing and coordination, a public participation process, final signal and intersection design, and right-of-way services.

Town of Williston, VT – Harvest Lane and Marshall Avenue Coordinated-Actuated Traffic Signal Design. Elements of design included mast arms, a coordinated controller with battery backup and minor sidewalk and accessible ramp reconstruction. Responsible for final design and construction review.

Town of Colchester / CCMPO – Exit 16 Scoping Study. Project Manager and analyst refinement of alternatives from Circulation Study (see above). Further analysis in VISSIM performed on preferred alternatives, including a Double Cross Diamond Interchange. Conceptual design drawings developed in Microstation, along with detailed cost estimates and resource investigation consistent with Scoping and NEPA requirements.



ERICA WYGONIK, PHD, PE
Senior Engineer

NUMBER OF YEARS WITH FIRM | 3 Years

EDUCATION | PhD, Civil & Environmental Engineering, University of Washington
MSE, Civil & Environmental Engineering, University of Washington
BE, Engineering, Dartmouth College
BA, Cognitive Science, Dartmouth College (2000)

LICENSES/CERTIFICATIONS | Licensed PE (NH #12551)

BIO

Erica Wygonik, PhD, PE, excels at identifying optimal strategies across all transportation modes to reduce local and system-wide impacts. With expertise ranging from bikes to trucks, her technical focus is on leveraging a wide range of modeling and mapping tools to evaluate the implications of transportation and land-use changes. Erica integrates innovative public outreach into her work, especially her bicycle and pedestrian planning. She manages projects in all aspects of transportation work and is active in bicycle planning, traffic impact analysis, and campus and community planning. Erica is active in the community, serving locally on the Hanover Bicycle–Pedestrian committee, and nationally on the Urban Freight Transportation and Freight Transportation Planning & Logistics committees for the National Academies of Sciences' Transportation Research Board. She is a former Board Chair for the Upper Valley Transportation Management Association and has served on the Town of Norwich's Design Review Board.

PROJECT EXPERIENCE

Vermont State Highways On-Road Bicycle Facilities Plan. Erica has led the project team in developing a methodology for categorizing the Vermont state highways for on-road bicycling. Leveraging StravaMetro data, data from over 2,000 users of a crowd-sourced online map, and statewide parcel information, along with extensive statewide outreach, the team has categorized the entire state roadway system into high-, medium-, and low-use tiers using estimates of current and potential bicycle use. These use categories will help the state prioritize investments and maintenance activities. The first phase of this project has concluded, and the second phase – which will address gaps on high use roadways – is commencing. (2014+)

Vermont Statewide Park and Ride Facility Plan As project lead, Erica is developing the Vermont state park-and-ride facility plan, covering multimodal access, demand estimation, location selection, and funding allocation for maintenance and operations the state park-and-ride facilities. Erica led this project under a tight deadline and delivered a comprehensive and dynamic tool to plan for geographic and financial needs for state park and ride facilities. (2014-2015)

Marsh-Billings-Rockefeller National Historical Park and Town & Village of Woodstock Public Transportation Service Planning Project Market Analysis. Erica led this project for RSG, supporting Steve Falbel at Transystems. RSG conducted an assessment of demand for a village circulator transit system in Woodstock, VT. The market analysis included collection and review of tax data, visitor use patterns, parking occupancy and residency data, traffic patterns, lodging data, and interviews with local business owners and patrons. The deliverables outlined geographic areas of high demand within the greater Woodstock area, as well as temporal demand patterns during the year, and foliage, summer, and winter seasons. The analysis highlighted ways fixed-route transit and shuttles could activate areas of town not currently accessible by pedestrians. (2007-2008)

VT 22a-South Water Street-MacDonough Drive Intersection Planning Study. Evaluated improvement options at a gateway intersection in Vergennes, Vermont. Developed recommended improvements, conceptual plans, and cost estimates working with a steering committee and within the public process.

Middlebury Bridge. Worked with town staff to model and evaluate potential alignments for a new bridge across the Otter Creek. Seven different locations were tested as well as multiple combinations of them. The results were presented to the town committee overseeing the decision.

Winooski Downtown Revitalization. Calibrated AM CORSIM model of the downtown area. Worked on the analysis of the AM model on the impact of a new mixed-use development, including a new one-way circulation pattern mitigation plan for traffic impact. Created GIS presentation materials.

Hickory Ridge Housing Traffic Impact Study. Erica managed this traffic study for a mixed-type residential community on Sykes Avenue in White River Junction, Vermont. The project involves two phases and is being evaluated on the backdrop of extensive roadway reconstruction in the study area including installation of two roundabouts. (2015)

Burlington Vermont Hill Area Model. Constructed a Paramics microsimulation model of the Burlington, Vermont Hill Area—a center of business and education with a major university, large medical center, a college, and 2 large employers. Evaluated potential roadway and land use changes.

Winooski Vermont Downtown Model. Evaluated circulation alternatives within a redeveloped downtown center including two major state routes using a CORSIM simulation model. A successful installation of a one-way circulator followed our recommendations.