



Route 606



Loudoun County Parkway/Old Ox Road Reconstruction and Widening

From: Route 621 Evergreen Mill Road To: Route 267 Dulles Greenway
Loudoun County, Virginia

August 27, 2013

Qualifications submitted by:



August 27, 2013

John Daoulas, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: Statement of Qualifications
Route 606 Loudoun County Parkway/Old Ox Road
Reconstruction and Widening
State Project No.: 0606-053-983
Federal Project No.: STP-5A01 (165)
Contract No.: C00097529DB64

Dear Mr. Daoulas:

Branch Highways, Inc. (Branch) is pleased to submit one (1) original paper version of our Statement of Qualifications, with full supporting documentation, which bear original signatures; one (1) CD-ROM containing the entire Statement of Qualifications in a single cohesive Adobe PDF file; and ten (10) abbreviated paper copies of the original Statement of Qualifications (SOQ) to the Virginia Department of Transportation (VDOT) to provide Design-Build (D-B) services for the Route 606-Reconstruction and Widening in Loudoun County, Virginia. We have thoroughly analyzed the Request for Qualifications (RFQ) and the RFQ Information Package. Branch has devoted multiple visits to the site and was present at the Project Information Meeting.

Branch Highways, Inc. is a subsidiary of The Branch Group, Inc. and 100% employee owned. We strive to satisfy our clients and have been successfully ranking in the *ENR* Top 400 list of contractors. We are dependent on a vibrant community and achieve dependable performance. Continuing strong with Design-Build, Branch is reconstructing Route 58 between Stuart and Hillsville, Virginia. Using Virginia's PPTA program there are also projects for VDOT in Charlottesville, Prince William and George Mason University in Fairfax, Virginia. Branch dedicates the time to be trustworthy and share visions.

3.2.1 Full Legal Name and Address of Offeror.

Branch Highways, Inc.
P.O. Box 40004
Roanoke, VA 24022

3.2.2 Offeror's Point of Contact Information. Branch Highways, Inc., will hold **Mr. Gale Tschuor**, Chief Estimator, to be the official representative and designated Point of Contact for all project-related communications. His contact information is as follows:

| | |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Gale Tschuor, Chief Estimator | Phone: (540) 982-1678, Fax: (540) 982-4216 |
| Branch Highways, Inc., P.O. Box 40004, Roanoke, VA 24022 | Email: gale.tschuor@branchhighways.com |

3.2.3 Principal Officer Information. The Principal Officer of Branch who will write the D-B contract is **Mr. Michael P. Higgins**, Vice President. His contact information is as follows:

| | |
|----------------------------------------------------------|---------------------------------------------------------------------------------|
| Michael P. Higgins, Vice President | Phone: (540) 982-1678, Fax: (540) 982-4216 |
| Branch Highways, Inc., P.O. Box 40004, Roanoke, VA 24022 | Email: mikeph@branchhighways.com |

3.2.4 Offeror's Corporate Structure. Branch Highways, Inc. is a Corporation registered in the Commonwealth of Virginia. Branch will be the Offeror, the point of contact, and legal entity that will execute a final contract with VDOT. Branch will have no liability limitations on this project. Separate sub-agreements will be entered into between Branch and Rinker Design Associates, P.C. (RDA).

3.2.5 Identity of Lead Contractor and Lead Designer. Branch Highways, Inc. will be the Lead Contractor, and Rinker Design Associates, P.C. will be the Lead Designer.

3.2.6 Affiliated/Subsidiary Companies. All information regarding Affiliated or Subsidiary Companies can be found on Attachment 3.2.6 located in the Appendix.

3.2.7 Debarment Forms. Signed "Certification Regarding Debarment" Form for Primary Covered Transactions can be found on Attachment 3.2.7(a) and "Certification Regarding Debarment" Form for Lower Tier Covered Transactions can be found on Attachment 3.2.7(b). Both are located in the Appendix.

3.2.8 Offeror's VDOT Prequalification Evidence. Branch Highways, Inc. is currently prequalified with VDOT as Vendor No.: B319. A copy of this prequalification certificate is located in the Appendix.

3.2.9 Evidence of Obtaining Bonding. The letter of reference from Scott Insurance, our insurance agent, stating that Branch is capable of obtaining a performance and payment bond based on the current estimated contract value of \$105,000,000, is located in the Appendix.

3.2.10 SCC and DPOR Registration Documentation (Appendix). Full size copies of SCC registration for each business entity on the Offeror's team, DPOR registration for each office practicing/offering services in Virginia, DPOR license for each Key Personnel practicing in Virginia and DPOR detailing not regulated by Board of Architects, Professional Engineers, Land Surveyors, Certified Interior Designers, Landscape Architects can be found on Attachment 3.2.10 in the Appendix.

3.2.11 DBE Statement within Letter of Submittal (14%). Branch formally commits to achieving VDOT's fourteen percent (14%) Disadvantaged Business Enterprise (DBE) participation goal for the entire value of the contract on the Route 606-Reconstruction and Widening in Loudoun County.

Branch and RDA have a successful background in serving VDOT on numerous projects. As an integrated D-B Team, we will design and construct Route 606 to fully ensure the ultimate success. We will produce a transparent working relationship with VDOT and any third party stakeholders to promote trust, confidence and collaboration. Please contact Gale M. Tschuor if you have any questions or need additional information.

Respectfully submitted,
BRANCH HIGHWAYS, INC.



Gale M. Tschuor
Chief Estimator

3.3

Offeror's Team Structure

3.3 Offeror’s Team Structure

Branch and RDA have assembled a team of qualified professional experience in working with VDOT D-B similar to the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening project. Branch, will be ultimately responsible for the delivery of this project to VDOT including coordinating all interested parties – subcontractors, designers, VDOT, utility companies and stakeholders – as well as providing overall construction management. In addition, Branch will serve as the Lead Contractor, self-performing much of the construction while managing qualified subcontractors and maintaining the project DBE requirements. RDA will serve as the Lead Designer. Other team members and their assigned roles include:

- Quinn Consulting Services—Quality Assurance (QA) Management and QA Inspection
- Schnabel Engineering—Geotechnical Engineering and Dam Structural Design
- Michael Baker Jr.—Structural Engineering
- DMY Engineering Consultants—QC Testing
- Froehling & Robertson (F&R)—QA Testing

3.3.1 Identity of and Qualifications of Key Personnel. The Branch/RDA Team’s key personnel are highly qualified with relevant experience in their respective project roles and have a long history working with VDOT on transportation projects as well as experience working on recent D-B projects in Virginia. **The Branch/RDA Team will keep these Key Personnel, as well as all identified support team members, on this project for the duration of this contract.** Our Key Personnel each possesses extensive D-B experience including the unique experience of all working together on previous projects throughout the Northern Virginia District. The Design-Build Project Manager, Design Manager, and Construction Manager, have together, successfully executed numerous D-B/PPTA contracts throughout the Commonwealth. One of these is the Route 15 project in Prince William County, most similar to the Route 606 project as identified including widening characteristics, typical section, and design speed.



*Completed Route 15 PPTA/Design-Build Project
Prince William County, VA*

3.3.1.1 Design-Build Project Manager—Michael Higgins (Branch Highways, Inc.)

Michael Higgins, serving as the Design-Build Project Manager will oversee the project to include design, construction, construction quality management, and contract administration. He has over 25 years of construction experience and is Branch’s Vice President of Operations and Design-Build Services. Mike’s Design-Build Project Manager experience includes the extremely successful Route 58 Corridor PPTA projects

(Hillsville Bypass, Meadows of Dan Bypass and Laurel Forks) and the award-winning Route 15 PPTA/D-B project for Prince William County.

Mike actively participates in the Virginia Transportation Construction Alliance (VTCA), where his industry peers elected him (and he is currently serving as) Joint Chairman of the Design-Build Committee, which consists of both VDOT and industry members whose purpose is to identify and address concerns and issues arising from the D-B procurement and construction process.

As Design-Build Project Manager, Mike will report directly to VDOT at an executive level for all project activities including contract administration, schedule, design, construction and quality. He will manage all the Key Personnel.

3.3.1.2 Quality Assurance Manager—John Vicinski, P.E., DBIA (Quinn Consulting Services, Inc.)

John Vicinski of Quinn Consulting Services, Inc. will serve as the Quality Assurance Manager (QAM) on this project. In this role, Mr. Vicinski will be independent of the Contractor QC team and will be responsible for overseeing compliance with the approved project specific QA/QC Plan as well as the VDOT Minimum Standards for D-B and PPTA Projects. As the QAM, Mr. Vicinski will have the authority to stop work on the project, should it significantly deviate from the QA/QC Plan, and will also be responsible for generating Non-Compliance Reports (NCRs) and deficiency logs for non-conforming work.

Included in Mr. Vicinski's 30 years of construction management and inspection experience is an extensive D-B track record on transportation projects. In the last 7 years, Mr. Vicinski has served as a Quality Assurance Manager (QAM) on 11 D-B transportation projects that were administered by VDOT and the FHWA. In addition to serving as a QAM, Mr. Vicinski has also worked as a Resident Engineer for Quality Control (QC) on projects such as the \$1.4 billion I-495 Express Lanes project in Northern Virginia.

On the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening project, Mr. Vicinski's responsibilities will include: holding preparatory meetings before the start of each new contractor activity; overseeing QA inspection staff; assuring that the minimum testing and inspection frequencies as defined in the tables of the Minimum Standards for Design-Build projects are met for both QA and QC; reviewing and signing monthly Contractor pay estimates; developing and following through to successful resolution project NCRs and deficiencies; and assuring that all project QA/QC records are kept up-to-date and in accordance with the approved project QA/QC Plan.

The experience of the Branch/RDA Team and Quinn combined, along with the lessons learned on other D-B projects, will provide the Department with the distinct advantage and benefit of having an experienced team of D-B professionals who have a successful track record of administering and delivering D-B projects in Virginia.

3.3.1.3 Design Manager—Mo Kim, P.E., DBIA (Rinker Design Associates, P.C.)

Mo Kim will be responsible for the *design* quality control and quality assurance (QA/QC) requirements, as outlined in VDOT's *Minimum Quality Control and Quality Assurance Requirements for Design-Build and PPTA Projects*, dated January 2012, specifically as outlined in Section 3 and 4 of that document. Mr. Kim fully understands the challenges of ensuring the quality of a D-B project versus a traditional bid-build project, having served previously as the Design Manager on several PPTA/ D-B projects and high volume roadway improvement projects throughout Northern Virginia.

Mr. Kim shall be responsible for overall management of the QA/QC programs for design and will report directly to the Design-Build Project Manager. He will be responsible for overseeing all QA/QC activities associated with multi-discipline design elements of this project. Mr. Kim shall maintain close communication with the Design-Build Project Manager and shall ensure the Project is completed in accordance with the requirements of the contract documents. He will be assisted by Mr. John Giometti, PE, who will provide an independent QA review; Mr. Giometti is not part of the day-to-day production team. Mr. Giometti fully understands the QA role having most recently served as the L&D Engineer for the Culpeper District in nearly 20 years of service to VDOT. Mr. Kim shall perform all of the design oversight reviews along with Mr. Giometti. Design QC will be performed at the office where the work will be conducted by a qualified

independent staff person of each team member [per section 4.1.4 of the current minimum requirements] but will also be technically reviewed by Mr. Giometti for QA. Under this procedure, Mr. Kim will provide VDOT with draft design plans for review and approval to confirm that the design work complies with the requirements of the Contract Documents, prior to initiation of construction activities on the Project.

Emphasis will be placed on providing high quality in the development of construction plans. In the design process, Mr. Kim is responsible for project design management, compilation of plan assembly and determination of when plans have been developed to the point that Quality Reviews are to be made. He is both responsible and accountable for the quality of all of the plans.

3.3.1.4 Construction Manager—Pete Kramer (Branch Highways, Inc.)

The Construction Manager, **Pete Kramer**, will plan, schedule, and execute the construction work, ensuring the work and materials used on the project meet or exceed the contract requirements and the “approved for construction” plans and specifications. Mr. Kramer has nearly 25 years of roadway construction experience, including 16 years with Branch Highways. Among his accomplishments as Construction Manager for Branch are the award-winning Route 15 PPTA/D-B project for Prince William County. Mr. Kramer’s proven experience on Route 15 attests to his capabilities of effective communication between Key Team Personnel in delivering an on-time, on-budget project, meeting or exceeding the contract requirements. Currently, he is a member of VTCA’s Contractor Leadership Committee as well as the Contract Administration Committee. He has served as Construction Manager on numerous D-B projects throughout the Commonwealth including:

- Dulles Greenway
- I-95 HOT Lanes
- GMU—Campus Drive
- Route 288—Richmond
- Prince William Parkway

3.3.1.5 Lead Geotechnical Engineer—Matthew Wager, P.E. (Schnabel Engineering)

Matthew Wager's areas of expertise includes geosynthetics, structural, and geotechnical design of both shallow and deep foundations; slope stability analysis using computer modeling; concrete and geosynthetic reinforced earth retaining structures; design of rigid and flexible pavement; groundwater control; and in-situ testing during construction. Mr. Wager's responsibilities have included geotechnical design of roadways and structures; management of soil and groundwater sampling programs; slope inclinometer evaluation; geotechnical construction monitoring; bearing capacity and settlement analysis of proposed structures; and site characterization for a variety of projects including soil, groundwater, and surface water sampling. As an Associate for Schnabel Engineering, Mr. Wager was the Project Manager responsible for providing geotechnical engineering recommendations for the Fairfax County Parkway Extension. The \$117 million project includes two miles of a four-lane highway, seven new bridges, an interchange, an access road, and an extension of Boudinot Drive. This project incorporated the drilling of 500 test borings. Schnabel also performed soil laboratory testing for classification, strength, compressibility, corrosion, pH, and evaluation of pavement support characteristics.

3.3.1.6 Dam Design Specialist—William Missell, P.E. (Rinker Design Associates, P.C.)

William (Bill) Missell will be responsible for the critical work of redesigning the Horsepen Pond Dam to properly function with the upgraded road. Mr. Missell has been with RDA since he started his engineering career in 1989. Having recently completed a dam upgrade for Lake Caroline, Mr. Missell is familiar with rectifying any potential issues that may arise on this type of project. The dam at Lake Caroline holds 3,094 acre-feet in volume and has a surface area of 277 acres. Should there be a catastrophic failure of this critical facility, water could overtop Route 1 by 11 feet and I-95 by 6 feet.

Mr. Missell, a Principal at RDA, has also been involved in pond inspections and reporting for more than 15 years. RDA is currently inspecting ponds for Fairfax County—over 400 public and private facilities were inspected in 2012. To date, RDA has completed over half of the 550+ public and private facilities that they have been tasked to inspect this year. We will be able to properly evaluate the condition of the existing facility and provide a design that will function safely even under a Probable Maximum Flooding (PMF) event.

3.3.1.6 Dam Structural Design Specialist—Mark Landis, PG, P.E. (Schnabel Engineering)

Mark Landis is a Senior Level Engineer/Engineering Geologist at Schnabel Engineering for projects involving dam design, geotechnical evaluations, geological and hydrogeological evaluations, and geophysics. He has significant construction consulting experience for large dams and other earthwork projects. Mr. Landis has performed evaluations, design, and routine dam inspections for small to large earthen and concrete dams in Virginia, North Carolina, South Carolina, and Maine. His recent focus has been associated with the design of new large earth dams with labyrinth spillways, as well as rehabilitation options for old dams. He is currently project manager for a new offline water supply reservoir located adjacent to the James River in central Virginia. This new dam will be 165 feet high, 4,200 feet long, and impound 15 billion gallons in a 1,100-acre reservoir. This will be one of the largest offline pump storage projects in the country. He has also performed engineering for power plant ash handling to include dike design for sluice ponds, slurry wall design, and quarry/mining permitting/ evaluation for large roller compacted concrete (RCC) dams.

3.3.1.6 Dam Construction Specialist—Jake Hensley (Branch Highways, Inc.)

Jake Hensley is a Superintendent at Branch. In 1985–1986, Mr. Hensley was involved in the reconstruction of several flood control earthen dams that were washed out during the flood of 1985. In 1996, he was involved in the construction of a RCC dam for Stafford County. This work consisted of raising the existing dam an additional 20 feet and then facing the front with RCC and the construction of a new raw water intake structure, outlet tower and new construction of the principal spillway. In 1997–1998, Branch, with assistance provided by Mr. Hensley, placed RCC on the face of the dam at Douthat State Park and completed some reconstruction of the principal spillway.

3.3.2 Organizational Chart Narrative. *The Project Team Organizational Chart is located in this section on Page 8.* The Team organization was developed to join firms that have a proven record of providing superior services through effective communication within the Team and with our clients.

Branch and RDA fit well together based on the following key factors:

- ✦ **Flat Organizations:** Their respective senior executives are very close to the day-to-day activities of their companies, enabling quick decision-making.
- ✦ **Cultural Alignment:** They share the common values of hard work, high integrity, detailed oversight and striving to provide low cost/high quality services.
- ✦ **Similar Type and Size of Projects:** Both Branch and RDA are comfortable working on projects of this magnitude.

Description of Functional Relationships and Communication among Participants. Our organizational chart demonstrates clear lines of **accountability and responsibility** of each key Team member. Team members mutually expect from one another a strong commitment to perform and deliver quality, timely results. Our well-defined organization, relationships, responsibilities, and expectations, along with continual interaction and communication among all Team members, will provide the understanding needed to enable the Team to deliver a top-quality, on-time project within VDOT’s budget.

The Design-Build Project Manager will bear **full responsibility** and **accountability** for the overall communication and coordination on the project. As part of his primary responsibilities, Mr. Higgins will create a work environment that promotes a collaborative, result-oriented atmosphere and leads team members and other parties, including VDOT and other third parties, to function in an **“open but formal”** environment through his personal interaction with Key Personnel. This kind of environment will **optimize understanding, mutually protect** the parties from contractual nonconformities, and **empower** our respective **functionaries** to operate in an environment where they can make decisions appropriate to their level of responsibility. While the team concept is critical to the success of the project, it must be subordinated to the authority of the individual and company accountable for the outcome, in this case, Mr. Higgins from Branch.

“Open but formal” provides outstanding functional balance: lines of authority and responsibility are limited and clear, but communication and interaction are encouraged to occur throughout the organization among any

of the participants at any time. In terms of contractual issues, contract administration, reporting, and regulatory issues, our communications and relationships will be formal and well documented for the purpose of keeping all the parties within their contractual obligations and protecting one another from potentially harmful contractual non-conformities.

For the purposes of planning and executing the work, problem solving, coordinating our various activities, design reviews, etc., we will create a series of structured interactions, designed to foster trust, continual communication, and collaboration.

By structuring the interaction of participants in a manner that forces them to regularly address planning, progress, and issues, a boundary-less, open, work environment develops and the problems and mistakes often associated with poor communication or a lack of understanding are minimized. Over the life of the project, stakeholders can anticipate **meeting regularly** to prepare, plan, evaluate, and adjust the performance (including design) and coordination of project activities and responsibilities. We will accomplish this primarily through:

- ✦ **Weekly Progress Meetings** conducted by the DBPM.
- ✦ **Topical Meetings** to discuss specific project issues.
- ✦ **End of Shift Meetings** conducted by CM for project personnel including QA/QC.
- ✦ **Morning Huddles** conducted by foremen at the crew level.
- ✦ **Executive Committee Meetings** including all key personnel and VDOT throughout the project duration.
- ✦ **Risk Management Meetings** conducted by the DBPM to ensure the focus of the Team remains on minimizing identified project risks.
- ✦ **Other Miscellaneous Meetings Issues:** Local law enforcement, emergency services, community leaders, and other government officials to facilitate communications with stakeholders and provide timely and proactive responses.

Throughout the design process, the design team will solicit and consider input from various team members, including the client, other agencies, adjacent property owners, and other parties whose input will provide value to the client, the project and the community. At a minimum, they will solicit input on actual site conditions; safety, traffic, environmental, and community issues; project goals; constructability; and efficient and effective phasing. They will evaluate suggestions for design changes and improvements throughout the design and construction of the project.

Communications of Participants with VDOT and Stakeholders. Design-Build Project Manager, Mike Higgins, will be the single point of contact dealing with VDOT at an executive level on all project matters. Also, several of the Key Personnel and other team members will be in direct contact with outside agencies, VDOT staff and various stakeholders during project design and construction. The following describes some of the anticipated direct communication between Branch/RDA Team members, VDOT and third parties.

The Design-Build Project Manager plays a **critical role** in the success of the project. He is essentially a communication hub to the rest of the Key Personnel. The functional relationship and open communication among the CM, DM, and the QAM are critical to the success of the project. Yet, where formal communication or interaction is needed, Mr. Higgins will be the Single Point of Contact for VDOT's representative.

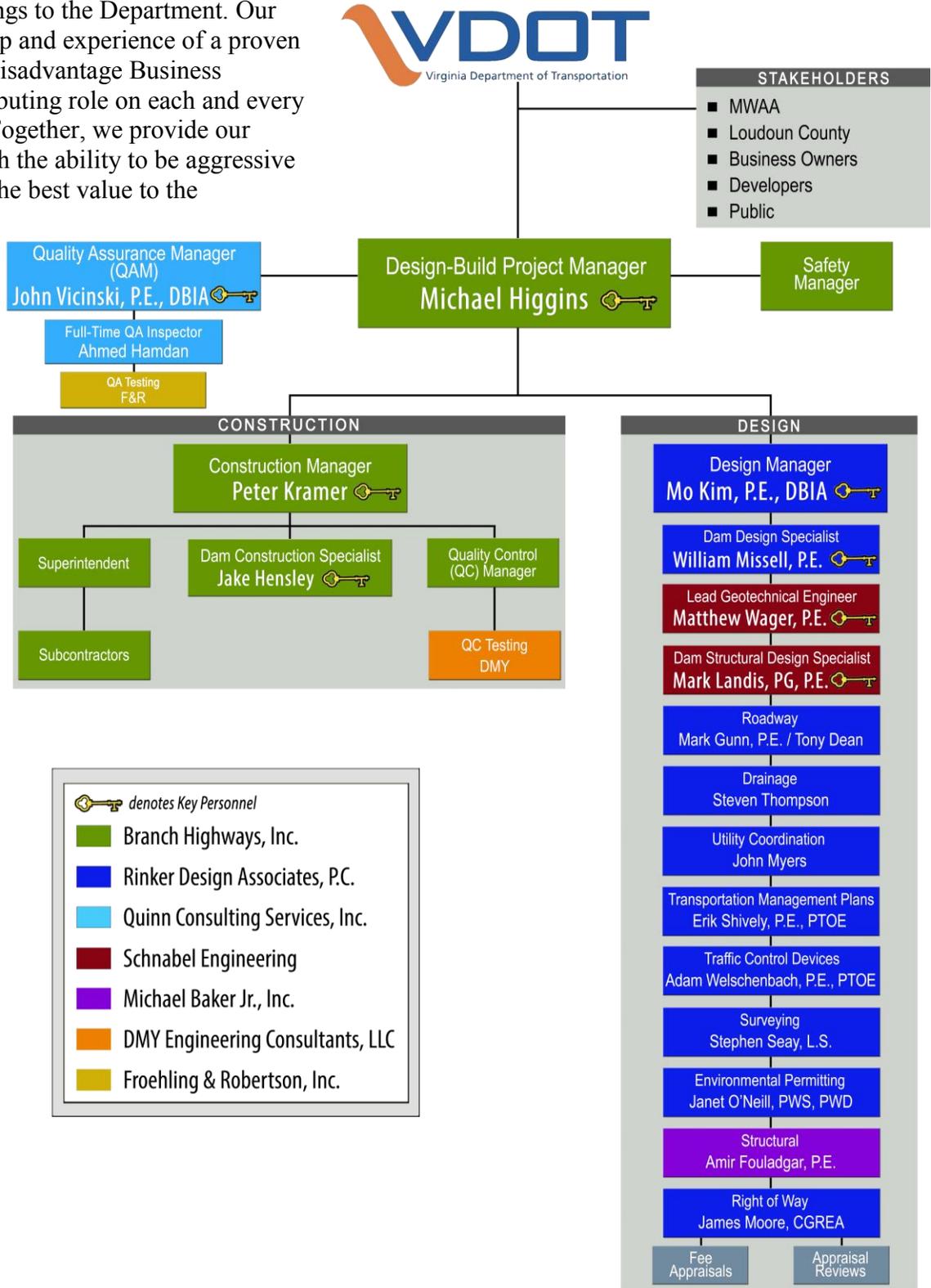
Design Manager, Mo Kim, P.E., DBIA, will interact directly with VDOT project representative, review staff to coordinate design oversight reviews and gain design approvals. The Design Manager will conduct comment resolution meetings and coordinate directly with VDOT staff as necessary to ensure the design intent is clear and that oversight review comments provided by VDOT are addressed properly and in a timely fashion.

Structure of Our Team. The competitive D-B market leaves little room for taking chances with the unknown or learning on the job in delivering projects. It is imperative that the lead contractor, lead designer and especially the Key Personnel are well versed in D-B project delivery. A stronger bond of having successfully completed a similar project together, each serving similar if not identical capacities, is the most ideal. This is exactly what the Branch/RDA Team brings to the Department. Our Team couples the leadership and experience of a proven

D-B team while allowing Disadvantage Business Enterprises to play a contributing role on each and every phase of the D-B process. Together, we provide our strongest qualifications with the ability to be aggressive and competitive, bringing the best value to the Department.

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Right of way work will include all items necessary to acquire the right of way. RDA is prequalified with VDOT to perform right of way acquisition services. Appraisal services will be performed by a licensed, VDOT prequalified appraiser. A VDOT-prequalified appraisal reviewer will perform appraisal reviews. The Branch/RDA Team will ensure independent appraisal and review providing the best value to the Project. All right of way acquisitions and relocations will be performed in accordance with the VDOT Right of Way Manual and all applicable state and federal laws and regulations.



3.4

Experience of Offeror's Team

3.4 Experience of Offeror’s Team

The Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening Project entails the unique project element of the Horsepen Dam, which is owned by the Metropolitan Washington Airports Authority (MWAA). The experiences of Branch and RDA are also unique in that both firms have successfully delivered projects with similar elements of scope and work to the Route 606 project, including the Horsepen Dam—and, based on our successes, we recognize that utilizing a dam as an arterial roadway for vehicular traffic in the path of an emergency spillway is not the most ideal situation. The experience our Team possesses in mitigating these circumstances will be instrumental on this VDOT D-B project. The cohesive partnership that Branch and RDA have developed through our PPTA and D-B projects in this region with similar challenges will serve as an asset to the Department. Together, we have the proven experience of delivering these challenges while maintaining sensitivity to all stakeholders and the public.



Branch Highways, Inc. (Branch), the Offeror submitting this Statement of Qualifications, has been a heavy highway construction company based in Roanoke, Virginia since the mid 1960s. Our business experience has included projects in Virginia, North Carolina, Tennessee, Mississippi, Pennsylvania, West Virginia, and Maryland. Our resume of projects over nearly 50 years runs the gamut of traditional and non-traditional procurement methods. Our construction-only and combined D-B projects for both public and private clients have included numerous large and complex projects, many located specifically within the Culpeper and Northern Virginia districts. Branch has been active in these regions since the 1980s and is well staffed with employees that are dedicated to improving their own communities within. A Regional Operations office is located in Manassas to provide local support for our employee-owners and clients within the region.

Branch has a history with VDOT that continues to yield prosperous projects. Honors include the State Quality Award for work on the Route 263 Staunton Bypass in 2003 and the Staunton District Quality Award in 2011 for Port Republic Road Project. The leaders assembled within Branch for Route 606 Loudoun County Parkway/Old Ox Road Widening and Reconstruction in Loudoun County, Virginia operated as essential contributors to those projects. Branch anticipates these employees to bring a wealth of relevant experience and expertise to the Route 606 Project undergoing consideration. As evidenced in our current involvement on the I-95 Express Lanes in bringing the new construction to subgrade, Branch has the expertise and resources to move large volumes of dirt in highly sensitive and visible areas, essential to the success for the Route 606 project.

One VDOT District Administrator recently wrote that Branch senior management is *“competent, highly qualified, of good character and honest and reliable in their dealings with the Department.”* Furthermore, Branch has *“become one of..., if not the most professional and cooperative construction firms with which we do business.”* And lastly, *even in the rare instances in which we are unable to reach an agreement it is clear to me that a high value is placed on maintaining good communication and a good working relationship.”*

The sentiments noted above are reinforced by Branch Highways 2010 “Outstanding Contractor” award from Prince William County, Virginia for our work on Route 15 (James Madison Highway) PPTA/D-B and maximizing all project incentive milestones on the Port Republic Road in Harrisonburg, Virginia. Branch works hard and is able to show a high upright reputation for delivery ahead of schedule and staying within budget on VDOT projects. A recent VDOT project was Goodman Crossing Road in Campbell County, which finished six months early and under original awarded contract amounts. The individuals responsible for the construction of this project will also be assigned to Route 606.

These projects represent a strong case of what can be expected from the team Branch Highways can assemble. In addition, Branch Highways has been a statewide leader in the PPTA/D-B environment, with over \$153 million successfully completed, twice that currently in progress. Branch Highways has grown proficient in the processes involved; we solicit and coordinate professional service providers, subcontractors and suppliers, including SWaM and DBE-certified businesses, which can testify to our ability to manage the complexities of a successful D-B project.



Branch has selected **Rinker Design Associates, P.C. (RDA)**, a local Virginia-certified SWaM

firm (DMBE Certification #652784), as the Lead Designer for their proven efforts in providing value-added solutions and innovations in their approach to D-B projects. Providing professional services throughout the Commonwealth since 1982, RDA is a leading provider of professional civil, transportation and environmental engineering, surveying, land planning, right of way acquisition, and permitting services to both the public and private sectors.

RDA and Branch share a similar philosophy focused on integrity and quality. Branch has a strong history with RDA in Northern Virginia, which includes a very successful working relationship on the Route 15 PPTA/D-B (for Prince William County) and George Mason University’s Campus Drive D-B projects, in which both firms gained valuable, first-hand, local D-B experience. RDA’s project experience also includes the Sudley Manor Drive PPTA/D-B project (for Prince William County), Stringfellow Road (Route 645) Widening, I-95 Express Lanes, I-81 Exit 310 Improvements, Middle Ground Boulevard Extension, Route 36 Improvements and I-581/Elm Avenue Interchange Improvement projects (for VDOT). RDA exhibits overall strength in managing multi-discipline D-B projects with a thorough understanding of the Department’s design and D-B requirements. RDA has recently managed the design of numerous PPTA and D-B projects exceeding \$200 million in Virginia. Together, Branch and RDA have selected the ideal subcontractor and subconsultant partners that share in our commitment to provide the best value solutions and whose fortes match the required practice areas identified in this procurement. We have carefully chosen a group of diverse and skilled team members to advantageously use the D-B process with a viable and functioning team structure that capitalizes on the strongest attributes of our respective capabilities.



Quinn Consulting Services Incorporated (QCS) is a 100% woman-owned DBE/WBE engineering consulting firm that provides quality control and/or quality assurance services on D-B projects for contractors, design engineers, and owners. QCS has supported our clients from all perspectives on large and small D-B projects. QCS has worked as owner QA representatives, contractor QC inspectors, and consultant engineer quality assurance managers where they have served as an integral part of project QA/QC teams delivering a quality product by working in partnership with owners, design engineers, and contractors. Some of QCS’s representative D-B projects include:

- Dulles Metrorail Extension, Phases 1 and 2
- I-495 HOT Lanes
- Fairfax County Parkway, Phase III
- Waxpool Road
- I-81 Truck Climbing Lanes
- Route 50 Traffic Calming near Gilberts Corner



Schnabel Engineering, with its subsidiary, Lachel & Associates, has become a preeminent provider of geotechnical, dam and tunnel engineering services. Schnabel’s specialized services include geotechnical and geostructural engineering, as well as dam and tunnel engineering, environmental services, geophysical and geosciences services, construction monitoring, and resident engineering. These coordinated geo-related efforts provide an integrated approach to every project from subsurface explorations and soil testing, through engineering analysis, design, and construction support. Schnabel is very familiar with the local soil conditions from numerous current and completed projects in VDOT’s NOVA District. Their experience with the local soil and bedrock conditions on this D-B project will enable the design team to proceed with preliminary concepts and schematic designs in the early stages of the project and through final design.

Schnabel served as the lead designer on the Smith Lake reservoir and dam constructed by Branch Highways in Stafford County and is an industry leader in dam construction design. Schnabel as also provided geotechnical engineering services on a variety of bridge and roadway projects in Virginia, many of which were located in Northern Virginia. Specifically, Schnabel is currently or has provided geotechnical engineering services on several project in VDOT’s Region IV – NOVA District including:

- Gum Springs Relocation (Loudoun County)
- Algonkian Parkway & Route 7 Interchange (Fairfax County)
- Route 15 Widening (Prince William County)
- Fairfax County Parkway Extension with a bridge over Accotink Creek (Fairfax County)
- Route 657 Widening (Fairfax County)
- Spriggs Road Widening (Prince William County)

Baker

Michael Baker Jr., Inc. (Baker) is a national consulting firm well-established in transportation planning, design, and construction services. In business for more than 70 years, Baker has a significant presence in Virginia with offices in Falls Church, Manassas, Alexandria, Richmond, and Virginia Beach. Consistently ranked among the top 10% of the 500 largest U.S. engineering firms, Baker ranks 12th in transportation design and 7th in bridge engineering. In Virginia alone, Baker employs dozens of licensed bridge, roadway, traffic, utility, and drainage engineers, most of which have extensive VDOT design experience. Furthermore, Baker’s Mid-Atlantic region includes hundreds of professionals and support staff in all disciplines of engineering and planning, and nationally employs more than 3,200.

Over the past 8 years, Baker’s Virginia design team has developed roadway designs and construction plans for 15 projects totaling \$300 million in construction. Throughout the development of these projects, Baker’s engineers have proved their ability to provide common-sense solutions to complex problems. Unique among transportation engineering firms, Baker has established a D-b group comprised of highly experienced and talented engineers who specialize in project management and design services for D-b and alternative delivery projects. In the past 12 years, Baker has pursued more than \$8 billion in D-b construction and has been successful on more than \$3 billion of those pursuits. Baker has led the design effort for D-b projects ranging from \$5 million to \$1.1 billion and are dedicated to the D-b delivery system and will spare no expense to maintain their reputation as a leader in this industry.



DMY Engineering Consultants, LLC (DMY) was founded in 2009 with a mission to offer practical and cost-effective engineering solutions to clients in the Mid-Atlantic region including Virginia, DC, and Maryland. DMY is a minority-owned business and is certified as a **Disadvantaged Business Enterprise (DBE/MBE/LDBE)** as well as a Small, Women-owned, and Minority-owned Business (SWaM). DMY has in-house, AASHTO-certified soil and concrete laboratories for geotechnical and construction materials testing needs as well as in-house drilling capabilities.

DMY is specialized in QC testing/inspection, geotechnical site investigation, and geotechnical design/analysis. DMY and its engineers have extensive experience in design and construction of transportation projects. Examples of our current projects providing geotechnical services and QC testing and inspections with the lead designer, RDA, include: Northfax Drainage and Intersection Improvements (City of Fairfax), George Mason University Campus Drive (Fairfax), and Prince William Parkway Widening (Prince William County).



Froehling and Robertson, Inc. (F&R), founded in 1881, is headquartered in Richmond, Virginia with multiple offices throughout the Commonwealth (including Dulles, Virginia) that will provide QA Lab Services for this contract. F&R is one of the nation’s oldest consulting engineering firms, providing full-service construction materials testing and inspections, laboratory testing and analysis, geotechnical and forensic engineering, environmental consulting services, and construction management and inspection services for projects throughout the Mid-Atlantic.

Quality Assurance Laboratory Materials Testing. F&R will report to the team’s Quality Assurance Manager (QAM), providing Quality Assurance Materials Laboratory Testing, and shall ensure all materials used for the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening are in conformance with the contract requirements and "approved for construction" plans and specifications, and meet requirements in accordance with VDOT’s *Minimum Requirements for Quality Assurance and Quality Control for Design-Build and Public-Private Transportation Act Projects*, revised January 2012; as well as all special provisions developed for the proposed alterations to Horsepen Dam that were included in the RFP.

Dam Experience. F&R’s professional engineering staff have completed numerous, complex dam projects for VDOT and other project stakeholders. F&R has superior capabilities working with Department of Conservation and Recreation (DCR) high-hazard dams, and dam, roadway and bridge construction projects. In addition to previous experience with Horsepen Dam, F&R has provided dam consulting services related to the design and construction of earth, rockfill, roller-compacted concrete, and concrete gravity dams. F&R has extensive experience providing dam safety inspections including site observations and visual assessment of embankment and spillway structures to identify deficiencies and potential problems such as erosion, animal burrows, settlement, slope instability, excess seepage, unsuitable vegetation, or structure deterioration.

3.5 Project Risks

The Branch/RDA Team has carefully studied the key work elements for the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening Project to determine the following three critical Project Risks. In our risk assessment, we considered numerous potential risks to the project including maintenance of traffic, right of way, geotechnical considerations, utility coordination, and environmental coordination, but have concluded that the [Horsepen Dam](#), [Utilities](#), and [Stormwater Management](#) may be the most critical due to their uniqueness and potential impacts to the success of this Project.

RISK 1—HORSEPEN DAM

Risk Description and Criticality. Establishment of a reliable and safe Route 606 corridor to serve transportation and emergency access needs for a rapidly developing area is the primary purpose for this project. The current facility does not accomplish this objective because of the existing at-grade roadway crossing the Horsepen Dam embankment and overflow spillway, which has numerous documented closures due to roadway inundation. There are three major areas of concern for this dam: the **structural design of the dam and bridge**, the **proposed construction activities**, and the **operation of the emergency spillway**.

Structural Design of the Dam and Bridge: The current RFQ Plans propose a 256-foot bridge to span the dam emergency spillway and elevate the roadway to prevent Horsepen inundation. The preliminary bridge plan reveals a two-span structure with a pier located in the middle of the floodway. The primary concern is safety and maintenance of the bridge located over the emergency spillway of a “high hazard” classified embankment, as substantial alteration of the existing dam will be required to support the proposed improvements. Scour of the emergency spillway around the pier is a risk, as removal of material to construct the piers and abutments will impact spillway flow conditions and could produce a dam safety issue.

Based on the boring information at the Dam, rock surface elevation varies considerably between borings, and Rock Quality Designation (RQD) values vary between 0 and 58 in the first 15 feet of coring, with an average RQD value of 18 in this zone. While this rock generally has a high compressive strength, it may be susceptible to scour due to its high degree of fracturing. Also, considering the variability of the rock surface, it is possible that deep foundations may need to extend deeper than 5 feet into the potential rock surface to achieve the full structural capacity of the socketed H-piles planned because of the high degree of fracturing and jointing in this rock mass.

The existing dam will be subject to substantial changes in load characteristics. In this project, fill heights up to 50 feet are planned to expand the existing dam and widen Route 606. Much of the low plasticity clay and clayey sand soils will be subject to settlement resulting from the placement of this fill. Settlements could be significant, but we anticipate that this settlement will occur during construction, since the existing geotechnical report did not indicate saturated conditions.

Proposed Construction Activities: Past grading for Route 606 may have cut or filled through the natural topography, especially near the Dulles Greenway and Horsepen Dam. We anticipate that rock will be shallow throughout much of the roadway and SWM sites. If so, excavation hoe rams or other similar techniques may be required but could propose a safety hazard if not properly performed and monitored. The potential exists for boulders located within portions of the existing dam embankment. Because (depending upon their size and the amount of soil fill surrounding these boulders) fill containing boulders will not be suitable for placement of compacted fill in roadway areas or support of bridge foundations, measures such as excavation and replacement may be necessary to prepare a stable subgrade for pavement and retaining wall support. In addition, the structural integrity of the existing box culvert that outlets through the Horsepen Dam will be evaluated considering the additional earth loads that will be placed above these features.

Operations of the Emergency Spillway: The design of the bridge across the emergency spillway requires construction of two abutments and a pier in the center of the spillway. This dam is classified as a high hazard dam, and therefore must meet minimum requirements for capacity of the emergency spillway. In order to refrain from endangering the safety of the dam, it will be necessary to demonstrate that the design does not significantly alter the hydraulic capacity of the emergency spillway. If this turns out to be an issue, one mitigation strategy would be to widen the spillway slightly to make up for the capacity lost to the abutments and piers. Consideration will also be given to the potential for capacity loss due to the increased likelihood of debris, including bushes and trees, which could build up in structures at the emergency spillway.

Impact. The impacts associated with existing and anticipated safety and maintenance risks involve additional planning, engineering and preparation specifically targeted at eliminating as many hazards associated with construction activities and long term operation of the bridge and fill walls. Any breach associated with the Horsepen Dam and emergency spillway could be catastrophic with severe downstream impacts and jeopardize traffic circulation around Dulles Airport with lengthy road closures.

Mitigation. Our previous experiences as a team will help ensure that the existing structure is properly evaluated and that facilities are properly protected. This will be achieved through detailed and thorough field investigation and coordination with the Department. The assessment of conditions will be incorporated in the design to maximize safety, constructability and facilitate long-term operation of the roadway. Of critical importance will be the geotechnical design of the bridge/spillway and abutment/retaining wall foundations. Due to rock and settlement conditions discussed, lowering the pile bearing elevation and possibly casing the rock socketed hole may be necessary to maintain the stability of the rock socket and provide sufficient bearing capacity. Alternative foundations, such as rock-socketed drilled shafts, will be considered during design. To mitigate the risk related to scour of the spillway, bridge, and piers in accordance with the current plans, our Team will design the footings and the shape of the bridge pier to minimize the potential for scour during flow through the emergency spillway as well as armoring in these areas. The design of the pier will be as such to withstand possible lateral loads from debris and to prevent debris from accumulating against the pier nose. This work will reduce the risk from any failure of the existing dam. Having the revised emergency spillway properly sized will ensure that any catastrophic storms are carried safely by the dam. Proper construction and oversight will ensure that new roadway will be constructed as designed so that it will not fail during any catastrophic event. Careful compaction around the spillway along with cast in place MSE wall footing will help to minimize impacts during construction. In addition, we would look at the feasibility and practicality of providing a single span structure to eliminate the risks associated with the center pier within the confines of the Alteration Permit with DCR.

VDOT's Role. As critical as design and construction will be the process involved with negotiation and coordination of the Alteration Permit and acquisition of easements from MWAA. Given that this is a DCR-regulated embankment that is owned and operated by MWAA, it is mandated that MWAA is the author of the Alteration Permit with DCR. MWAA will continue to be liable for safety and operation of the altered embankment, it is understood that as the operator they may have additional input to design criteria. VDOT, in working with MWAA, will be obtaining this permit from DCR.

RISK 2—UTILITIES

Risk Description and Criticality. Utility Coordination on any given project can be a lengthy process that at times can be unpredictable and difficult to resolve. Upon close examination of the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening project, the Branch/RDA Team has identified numerous subsurface and aerial utilities along both sides of Route 606.

The current design depicted in the RFQ information package shows an alignment that impacts aerial distribution electric and communications, water line, gas line, a multiple line underground communications duct bank, a major sewer line, and transmission electric towers.

Impact. The majority of utilities involved in the project should not be any more complicated than any other standard roadway project. However, there are possible impacts to the project from the transmission towers, major sewer line, and utility complications with the proposed work to the existing dam structure.

The alignment presented in the RFQ Plans shows that parts of the roadway in the area of Pebble Run Drive could very possibly come within the 25-foot “no disturbance” zone to the transmission towers that are present. If these towers should need to be relocated, there would be a minimum time frame of one year necessary to conduct the relocation, with the tower itself requiring extensive engineering and special order manufacturing before the relocation work could even begin in the field. There would also be a large expense to the project for this relocation as the poles are NOT currently located within existing right of way. There is also a further complication to the project in the areas of proposed ROW encroaching on the Virginia Power Transmission easement. It is VERY possible that the project would need to acquire an encroachment agreement from Virginia Power to enter into the existing agreement anywhere for construction.

The proposed bridge at the Dulles Toll Road terminus of the proposed project could have impacts on an existing 42-inch sewer line, “DC WASA Potomac Interceptor,” running through that area. Relocation of this line would be a MAJOR construction operation with several possible complications from MOT, pumping of the existing line, environmental impacts, etc.

The designated work to the existing dam structure could be complicated by a multiple duct Verizon South line and an existing 16-inch waterline that is currently traveling along the dam. The additional material added to the structure could force a relocation of these facilities that could further complicate the construction and impact the schedule.

Mitigation. The Branch/RDA Team fully intends to look at all possible options to AVOID the utility lines addressed above, with relocation being the last possible option when no other alternative is available. We believe major impacts can be avoided, which will decrease schedule delays and increase the success of the project. Our Lead Designer, RDA, will carefully examine the plans, seeking to enhance proposed elements of design (such as drainage) layout to minimize impacts to some of the utilities. Having recently completed some of the area’s most complex roadway improvement projects involving utilities in Northern Virginia, our utility coordinator will systematically execute the proper coordination of each and every utility. The Branch/RDA Team has been successful in proactively working with utility owner to ease the stress and tension that can arise when utilities have a difficult time meeting schedule or even committing to one. Our Team plans to provide detailed locations and assist utility owners with temporary and or permanent measures (such as conduits and sleeves) to promote progress and minimize impacts.

VDOT’s Role. The Department’s role is anticipated to be one primarily of oversight and guidance concerning utilities. The Branch/RDA Team would follow the VDOT Utility Policies and only look to engage VDOT personnel to clarify policy or provide support should a utility company be unresponsive to the point of jeopardizing the project schedule. Although uncommon, should a utility company become unresponsive to their responsibilities to relocate their facilities for the project, we would seek VDOT support and guidance if the unresponsiveness merited an escalation to further action to complete the utility relocation. All other issues will be thoroughly pursued with the utility company until such a time that no understanding can be reached before involving the Department’s Utility personnel.

RISK 3—STORMWATER MANAGEMENT

Risk Description and Criticality. The RFQ Plans identify locations and grading for 12 Stormwater Management Basins and one bio-retention facility associated with the project. Migratory birds have been known to be hazardous to aircraft when encountered in the flight path during take-off and landings. They have been documented to have caused engine failures and fatalities when large species suffer direct impact with the turbine intake manifold or the cockpit of smaller planes. Given the proximity to Dulles Airport, these facilities will be subject to safety regulations outlined in FAA Advisory Circular 150/5200-33b, which are intended to control the presence of hazardous wildlife in the airport operations area. The proposed aboveground SWM

systems will require implementation of an Airport Wildlife Mitigation Plan (AWMP) as approved by MWAA and the FAA. This will limit design flexibility because open water and other current “enhanced” facilities may be prohibited.

Impact. The FAA Advisory recommends that new SWM facilities be designed and operated for a maximum 48-hour detention time and to be completely dry between storms. This is intended to facilitate control of hazardous wildlife in proximity to the airport by discouraging potential new habitat. These guidelines indicate that conventional SWM/BMP “dry pond” design will be acceptable, but “wet” and “enhanced” extended detention facilities, which have greater pollutant removal efficiency, will be prohibited. Based upon the nature of proposed improvements, water quality requirements associated with the project may require a water quality design which cannot be met with conventional “dry pond” techniques.

Mitigation. A comprehensive stormwater treatment strategy early in the design phase is vital to effective roadway drainage design. An early assessment of water quality coverage requirements will provide required coordination to develop an effective AWMP. Working closely with the Department, our Team will ensure that the SWM program is incorporated into the AWMP and will satisfy both airport safety and water quality criteria and long-term maintenance needs.

Based upon our experience with current projects, the Branch/RDA Team is very familiar with the latest Stormwater Management Regulations and water quality design techniques. Our approach is to find innovative methods to maximize treatment coverage within limited Right of Way, which reduce offsite impacts and resulting damage claims. Our Drainage Team includes professionals and LEED-certified designers fully versed in the latest regulations and innovative compliance methodologies to provide constructible and simply maintained stormwater management plans.

VDOT's Role. Advanced design coordination with the owner and operator (VDOT) will help mitigate this project risk. Our Team will initiate coordination meetings with the Department and MWAA to present stormwater management design options early in the process. We intend to work as a team to provide a design that satisfies FAA regulations and minimize offsite impacts, and this will be balanced against minimization of maintenance and operation effort.

- SOQ Checklist
- Form C-78-RFQ
- List of Affiliated and Subsidiary Companies
- Debarment Forms
- Offeror's VDOT Prequalification Certificate
- Surety Letter
- SCC and DPOR Information Tables
- Full Size SCC and DPOR Supporting Documentation
- Key Personnel Resume Forms
- Work History Forms

ATTACHMENT 3.1.2

Project: 0606-053-983, P101

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|-----------------------------------------------------------|--------------------------------------------|----------------------------|---------------------------------------|---------------------------|
| Statement of Qualifications Checklist and Contents | Attachment 3.1.2 | Section 3.1.2 | no | Appendix |
| | | | | |
| Acknowledgement of RFQ, Revision and/or Addenda | Attachment 2.10 (Form C-78-RFQ) | Section 2.10 | no | Appendix |
| | | | | |
| Letter of Submittal (on Offeror's letterhead) | | | | |
| Authorized Representative's signature | NA | Section 3.2.1 | yes | 2 |
| Offeror's point of contact information | NA | Section 3.2.2 | yes | 1 |
| Principal officer information | NA | Section 3.2.3 | yes | 1 |
| Offeror's Corporate Structure | NA | Section 3.2.4 | yes | 1 |
| Identity of Lead Contractor and Lead Designer | NA | Section 3.2.5 | yes | 2 |
| Affiliated/subsidiary companies | Attachment 3.2.6 | Section 3.2.6 | no | Appendix |
| Debarment forms | Attachment 3.2.7(a) Attachment 3.2.7(b) | Section 3.2.7 | no | Appendix |
| Offeror's VDOT prequalification evidence | NA | Section 3.2.8 | no | Appendix |
| Evidence of obtaining bonding | NA | Section 3.2.9 | no | Appendix |

ATTACHMENT 3.1.2

Project: 0606-053-983, P101

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|--------------------------------------------------------------------------------------------------------------------|----------------------|----------------------------|---------------------------------------|---------------------------|
| SCC and DPOR registration documentation (Appendix) | Attachment 3.2.10 | Section 3.2.10 | no | Appendix |
| Full size copies of SCC Registration | NA | Section 3.2.10.1 | no | Appendix |
| Full size copies of DPOR Registration (Offices) | NA | Section 3.2.10.2 | no | Appendix |
| Full size copies of DPOR Registration (Key Personnel) | NA | Section 3.2.10.3 | no | Appendix |
| Full size copies of DPOR Registration (Non-APELSCIDLA) | NA | Section 3.2.10.4 | no | Appendix |
| DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal | NA | Section 3.2.11 | yes | 2 |
| | | | | |
| Offeror's Team Structure | | | | |
| Identity of and qualifications of Key Personnel | NA | Section 3.3.1 | yes | 3 |
| Key Personnel Resume – DB Project Manager | Attachment 3.3.1 | Section 3.3.1.1 | no | Appendix |
| Key Personnel Resume – Quality Assurance Manager | Attachment 3.3.1 | Section 3.3.1.2 | no | Appendix |
| Key Personnel Resume – Design Manager | Attachment 3.3.1 | Section 3.3.1.3 | no | Appendix |
| Key Personnel Resume – Construction Manager | Attachment 3.3.1 | Section 3.3.1.4 | no | Appendix |
| Key Personnel Resume – Lead Geotechnical Engineer | Attachment 3.3.1 | Section 3.3.1.5 | no | Appendix |
| Key Personnel Resume – Dam Design and Construction Specialist (optional) | Attachment 3.3.1 | Section 3.3.1.6 | no | Appendix |
| Organizational chart | NA | Section 3.3.2 | yes | 8 |
| Organizational chart narrative | NA | Section 3.3.2 | yes | 6 |
| | | | | |

ATTACHMENT 3.1.2

Project: 0606-053-983, P101

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15- page limit? | SOQ Page Reference |
|-----------------------------------------------------------|----------------------|--------------------------------|------------------------------------------------|-----------------------------------|
| Experience of Offeror's Team | | | | 9 |
| Lead Contractor Work History Form | Attachment 3.4.1(a) | Section 3.4 | no | Appendix |
| Lead Designer Work History Form | Attachment 3.4.1(b) | Section 3.4 | no | Appendix |
| Dam Construction Work History Form | Attachment 3.4.1(c) | Section 3.4 | no | Appendix |
| Dam Design Work History Form | Attachment 3.4.1(d) | Section 3.4 | no | Appendix |
| | | | | |
| Project Risks | | | | |
| Identify and discuss three critical risks for the Project | NA | Section 3.5.1 | yes | 12 |

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00097529DB64
 PROJECT NO.: 0606-053-983, P101

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this acknowledgement in the SOQ may result in the rejection of your SOQ.

By signing this Attachment 2.10, the Offeror acknowledges receipt of the RFQ and/or following revisions and/or addenda to the RFQ for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFQ 07/12/2013
(Date)
2. Cover letter of RFQ Addendum No. 1 08/09/2013
(Date)
3. Cover letter of _____
(Date)



 SIGNATURE

08-14-13

 DATE

List of Affiliated and
Subsidiary Companies

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project No.: 0606-053-983

1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

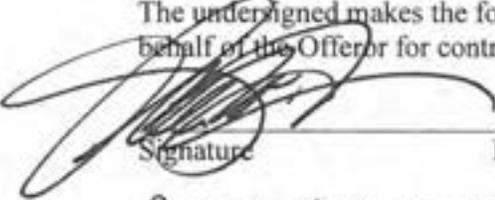
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and

d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.


Signature

Date

08-02-13

Chief Estimator

Title

Branch Highways, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 August 20, 2013
Signature Date

Vice President of Operations/Dir. of Transp.
Title

RINKER DESIGN ASSOCIATES, P.C.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

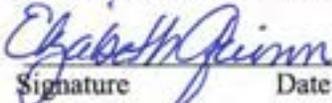
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

| | | |
|-----------------------------------------------------------------------------------|-----------------|-----------|
|  | August 12, 2013 | President |
| Signature | Date | Title |

Quinn Consulting Services, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

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The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Susan Quisio August 6, 2013 Secretary
Signature Date Title

Schnabel Engineering Consultants, Inc.
Name of Firm

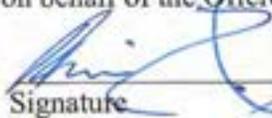
ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

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The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 8/6/2013
Signature Date

Vice President
Title

Michael Baker Corporation
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 August 6, 2013 Vice President
Signature Date Title

DMY Engineering Consultants, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0606-053-983

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- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

| | | |
|-----------------------------------------------------------------------------------|------------------------|--------------------------------|
|  | <u>August 12, 2013</u> | <u>Regional Vice President</u> |
| Signature | Date | Title |

Froehling & Robertson, Inc.
Name of Firm

TRNSPORT - E22
LSPPREQ

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PREQUALIFIED VENDORS SORTED BY VENDOR NAME
THIS LIST INCLUDES ALL PREQUALIFIED LEVELS
AS OF 08/02/2013

08/02/2013
11:04 AM
PAGE 63

- B -

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B319
BRANCH HIGHWAYS, INC.
PREQ. EXP : 02/28/2014

--PREQ ADDRESS ----- WORK CLASSES (LISTED BUT NOT LIMITED TO)
P. O. BOX 40005 002 - GRADING
ROANOKE, VA 24022-0004 003 - MAJOR STRUCTURES
PHONE : 540-982-1678 045 - UNDERGROUND UTILITIES
FAX : 540-982-4217

BUSINESS CONTACT: KARBACH, JAMES WILLIAM
EMAIL: ESTIMATING@BRANCHHIGHWAYS.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT: N/A
=====

10 Franklin Road, SE
Suite 550
Roanoke, VA 24011
Tel (540) 343-8071
Fax (540) 345-2958

Employee Owned



Est. 1864

Charlotte
Greensboro
Knoxville
Lynchburg
Nashville
Raleigh
Richmond

July 24, 2013

Mr. John Daoulas, PE
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Branch Highways, Inc.
Project: Route 606 Loudoun County Parkway/Old Ox Road Reconstruction
and Widening
State Project No.: 0606-053-983
Federal Project No.: STP-5A01(165
Contract ID No.: C00097529DB64

Dear Mr. Daoulas:

Branch Highways, Inc. has been a client of The Hartford Insurance Group for nearly 20 years. During that time, we have supported The Branch Group in their pursuit of projects in the \$125,000,000 range and total programs in excess of \$750,000,000.

As surety for Branch Highways, Inc., Hartford Fire Insurance Company with an A.M. Best Financial Strength Rating of A and Financial Size Category of XV will furnish a 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

The Hartford expressly reserves the right to review the terms and conditions of the contract, contract amount, and bond form, evaluate pertinent underwriting data, and verify the adequacy of project financing prior to the issuance of bonds for the referenced project. Our consideration and issuance of bonds is a matter solely between The Branch Group, Inc., and The Hartford, and we assume no liability to third parties or to you by the issuance of this letter.

Hartford Fire Insurance Company is listed on the U.S. Treasury Department List and is licensed to transact fidelity and surety business in the Commonwealth of Virginia.

This letter will expire 180 days from this date.

We recommend this contractor highly and should you have questions, please let us know.

Sincerely,

A handwritten signature in blue ink that reads "Theresa S. Stump".

Theresa S. Stump

cc: Branch Highways, Inc.
Hartford Fire Insurance Company

scottins.com

Insurance, Bonds, Benefit Services and Financial Management
With Captive Insurance Operations in Grand Cayman
Founded 1864

ATTACHMENT 3.2.10

State Project No. 0606-053-983

SCC and DPOR Information

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.

| SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2) | | | | | | | |
|---------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|-------------------|--------------------------------------------------------------|-------------------------------------------|---------------------------------|-----------------------------|
| Business Name | SCC Information (3.2.10.1) | | | DPOR Information (3.2.10.2) | | | |
| | SCC Number | SCC Type of Corporation | SCC Status | DPOR Registered Address | DPOR Registration Type | DPOR Registration Number | DPOR Expiration Date |
| Branch Highways, Inc. | 02956183 | Corporation | Active | PO Box 40004 442 Rutherford Ave NE Roanoke, VA 24016 | Class A Contractor | 2701029434 | March 31, 2015 |
| Rinker Design Associates, P.C. | 02270627 | Corporation | Active | 9385 Discovery Blvd Suite 200 Manassas, VA 20109 | Professional Corporation | 0405000502 | December 31, 2013 |
| | | | | | Appraisal Business | 4008001684 | February 28, 2015 |
| | | | | 927 Maple Grove Dr Suite 105 Fredericksburg, VA 22407 | Professional Corporation Branch Office | 0410000156 | February 28, 2014 |
| Quinn Consulting Services, Inc. | 04925517 | Corporation | Active | 14160 Newbrook Dr Suite 220 Chantilly, VA 20151 | Business Entity | 0407003733 | December 31, 2013 |
| Schnabel Engineering Consultants, Inc. | 07126741 | Corporation | Active | 46020 Manekin Plaza Suite 110 Sterling, VA 20166 | Business Entity Branch Office | 0411000701 | February 28, 2014 |
| Michael Baker Jr., Inc. | F0260747 | Corporation | Active | 3141 Fairview Park Dr Suite 575 Falls Church, VA 22042 | Business Entity Branch Office | 0411000829 | February 28, 2014 |
| DMY Engineering Consultants, LLC | S3134972 | Limited Liability Company | Active | 45662 Terminal Dr Suite 110 Dulles, VA 20166 | Business Entity | 0407005631 | December 31, 2013 |
| Froehling & Robertson, Inc. | 00272112 | Corporation | Active | 22923 Quicksilver Dr Suite 111 Sterling, VA 20166 | Business Entity Branch Office | 0411000051 | February 28, 2014 |

ATTACHMENT 3.2.10

State Project No. 0606-053-983

SCC and DPOR Information

| DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4) | | | | | | |
|------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------|------------------------|---------------------------------|-----------------------------|
| Business Name | Individual's Name | Office Location Where Professional Services will be Provided (City/State) | Individual's DPOR Address | DPOR Type | DPOR Registration Number | DPOR Expiration Date |
| Rinker Design Associates, P.C. | C. Mo Kim, PE, DBIA | Manassas, VA | 12530 Brenmill Lane Manassas, VA 20112 | Professional Engineer | 0402032943 | July 31, 2015 |
| Quinn Consulting Services, Inc. | John Vicinski, PE, DBIA | Chantilly, VA | 4609 Marble Rock Court Chantilly, VA 20151 | Professional Engineer | 0402026380 | August 31, 2013 |
| Rinker Design Associates, P.C. | William Missell, PE | Fredericksburg, VA | 6 Mustang Court Spotsylvania, VA 22551 | Professional Engineer | 0402025906 | February 28, 2015 |
| Schnabel Engineering Consultants, Inc. | Matthew Wager, PE | Sterling, VA | 5055 North 26 th Road Arlington, VA 22207 | Professional Engineer | 0402032881 | July 31, 2015 |
| Schnabel Engineering Consultants, Inc. | Mark Landis, PG, PE | Sterling, VA | 241 Shad Lane Apex, NC 27523 | Professional Engineer | 0402044594 | August 31, 2014 |
| | | | | Professional Geologist | 2801 001772 | August 31, 2013 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

3.2.10.1 SCC Registrations

SCC eFile
Business Entity Details

[Help](#)

BRANCH HIGHWAYS, INC.

SCC eFile

SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 02956183
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 11/25/1986
Status: Active
Shares Authorized: 5000

Principal Office

P O BOX 40004
442 RUTHERFORD AVE NE
ROANOKE VA24016

Registered Agent/Registered Office

MELANIE F WHEELER
442 RUTHERFORD AVE NE
ROANOKE VA 24016
ROANOKE CITY 217
Status: Active
Effective Date: 1/11/2008

Select an action

[File a registered agent change](#)
[File a registered office address change](#)
[Resign as registered agent](#)
[File an annual report](#)
[Pay annual registration fee](#)
[Order a certificate of good standing](#)
[Submit a PDF for processing \(What can I submit?\)](#)
[View efile transaction history](#)

Screen ID: e1000

SCC eFile
Business Entity Details

[Help](#)

Rinker Design Associates, P.C.

SCC eFile

SCC eFile Home Page
Check Name
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FAQs
Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 02270627
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 2/24/1982
Status: Active
Shares Authorized: 20000

Principal Office

9385 DISCOVERY BOULEVARD
SUITE 200
MANASSAS VA20109

Registered Agent/Registered Office

JOHN S WISIACKAS
ODEN FELDMAN & PITTLEMAN PC
1775 WIEHLE AVENUE STE 400
RESTON VA 20190
FAIRFAX COUNTY 129
Status: Active
Effective Date: 8/27/2012

Select an action

[File a registered agent change](#)
[File a registered office address change](#)
[Resign as registered agent](#)
[File an annual report](#)
[Pay annual registration fee](#)
[Order a certificate of good standing](#)
[Submit a PDF for processing \(What can I submit?\)](#)
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SCC eFile
Business Entity Details

QUINN CONSULTING SERVICES INCORPORATED

SCC eFile

- [SCC eFile Home Page](#)
- [Check Name](#)
- [Delinquency](#)
- [Business Entity Search](#)
- [Certificate Verification](#)
- [FAQs](#)
- [Contact Us](#)
- [Give Us Feedback](#)

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 04925517
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 10/24/1997
 Status: Active
 Shares Authorized: 5000

Principal Office

14160 NEWBROOK DRIVE
 SUITE 220
 CHANTILLY VA20151

Registered Agent/Registered Office

JOHN H QUINN JR
 2208 S KNOLL ST
 ARLINGTON VA 22202
 ARLINGTON COUNTY 106
 Status: Active
 Effective Date: 10/24/1997

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)

SCC eFile
Business Entity Details

Schnabel Engineering Consultants, Inc.

SCC eFile

- [SCC eFile Home Page](#)
- [Check Name](#)
- [Delinquency](#)
- [Business Entity Search](#)
- [Certificate Verification](#)
- [FAQs](#)
- [Contact Us](#)
- [Give Us Feedback](#)

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 07126741
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 8/12/2009
 Status: Active
 Shares Authorized: 10000

Principal Office

1054 TECHNOLOGY PARK DR
 GLEN ALLEN VA23059

Registered Agent/Registered Office

CT CORPORATION SYSTEM
 4701 COX RD STE 301
 GLEN ALLEN VA 23060
 HENRICO COUNTY 143
 Status: Active
 Effective Date: 6/16/2011

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

Screen ID: e1000

SCC eFile
Business Entity Details

MICHAEL BAKER JR., INC.

SCC eFile

SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: F0260747
Entity Type: Foreign Corporation
Jurisdiction of Formation: PA
Date of Formation/Registration: 10/13/1992
Status: Active
Shares Authorized: 100

Principal Office

AIRSIDE BUSINESS PARK
100 AIRSIDE DR
MOON TOWNSHIP PA15108

Registered Agent/Registered Office

CT CORPORATION SYSTEM
4701 COX RD STE 301
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 1/5/2004

Select an action

[File a registered agent change](#)
[File a registered office address change](#)
[Resign as registered agent](#)
[File an annual report](#)
[Pay annual registration fee](#)
[Order a certificate of good standing](#)
[View efile transaction history](#)
[Manage email notifications](#)

Screen ID: e1000

SCC eFile
Business Entity Details

DMY Engineering Consultants, LLC

SCC eFile

SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: S3134972
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 1/11/2010
Status: Active

Principal Office

45662 TERMINAL DR STE 110
DULLES VA20166

Registered Agent/Registered Office

WEIYI MA
45662 TERMINAL DRIVE
SUITE 110
DULLES VA 20166
LOUDOUN COUNTY 153
Status: Active
Effective Date: 6/23/2011

Select an action

[File a registered agent change](#)
[File a registered office address change](#)
[Resign as registered agent](#)
[Pay annual registration fee](#)
[Order a certificate of fact of existence](#)
[Submit a PDF for processing \(What can I submit?\)](#)
[View efile transaction history](#)



SCC eFile
Business Entity Details



FROEHLING & ROBERTSON, INCORPORATED

SCC eFile

- SCC eFile Home Page
- Check Name
- Distinguishability
- Business Entity Search
- Certificate Verification
- FAQs
- Contact Us
- Give Us Feedback

Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 00272112
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 10/11/1924
 Status: Active
 Shares Authorized: 1100000

Principal Office

3015 DUMBARTON ROAD
 HENRICO VA 23228

Registered Agent/Registered Office

WILLIAM H HOOFNAGLE III
 1900 ONE JAMES CENTER
 901 E CARY ST
 RICHMOND VA 23219
 RICHMOND CITY 216
 Status: Active
 Effective Date: 9/21/2011

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

Screen ID: #1000

3.2.10.2 DPOR (APELSCIDLA) Licenses for Offices

EXPIRES ON
12-31-2013

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
 9960 Mayland Dr., Suite 400, Richmond, VA 23233
 Telephone: (804) 367-8500

NUMBER
0405000502

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
 AND LANDSCAPE ARCHITECTS**
PROFESSIONAL CORPORATION REGISTRATION

PROFESSIONS: ENG, LS

RINKER DESIGN ASSOCIATES PC
 9385 DISCOVERY BOULEVARD
 SUITE 200
 MANASSAS, VA 20109



Gordon N. Dixie
Gordon N. Dixie, Director

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
02-28-2014

NUMBER
0410000156

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION**

PROFESSIONS: ENG, LS

RINKER DESIGN ASSOCIATES PC
927 MAPLE GROVE DR STE 105
FREDERICKSBURG, VA 22407



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
12-31-2013

NUMBER
0407003733

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY REGISTRATION**

PROFESSIONS: ENG

QUINN CONSULTING SERVICES INC
14160 NEWBROOK DR
SUITE 220
CHANTILLY, VA 20151



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
02-28-2014

NUMBER
0411000701

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION**

PROFESSIONS: ENG

SCHNABEL ENGINEERING CONSULTANTS, INC
46020 MANEKIN PLAZA
SUITE 110
STELING, VA 20166



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON: 02-28-2014 NUMBER: 0411000829

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

MICHAEL BAKER JR INC
3141 FAIRVIEW PARK DRIVE
SUITE 575
FALLS CHURCH, VA 22042



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON: 12-31-2013 NUMBER: 0407005631

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG

DMY ENGINEERING CONSULTANTS, LLC
45662 TERMINAL DRIVE
SUITE 110
DULLES, VA 20166



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON: 02-28-2014 NUMBER: 0411000051

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

FROEHLING & ROBERTSON, INC
22923 QUICKSILVER DR STE 111
STERLING, VA 20166



Gordon N. Dixon
Gordon N. Dixon, Director

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3.2.10.3 DPOR (APELSCIDLA) Licenses for Key Personnel

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
07-31-2015

NUMBER
0402032943

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE**

CHUN M KIM
12530 BRENMILL LANE
MANASSAS, VA 20112



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
08-31-2013

NUMBER
0402026380

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE**

JOHN KEVIN VICINSKI
4609 MARBLE ROCK CT
CHANTILLY, VA 20151



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
02-28-2015

NUMBER
0402025906

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE**

WILLIAM EDWARD MISSELL
6 MUSTANG CT
SPOTSYLVANIA, VA 22551



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
07-31-2015

NUMBER
0402032881

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE**

MATTHEW WILLIAM WAGER
5055 NORTH 26TH ROAD
ARLINGTON, VA 22207



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
08-31-2014

NUMBER
0402044594

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE**

MARK ETHERIDGE LANDIS
241 SHAD LANE
APEX, NC 27523



Gordon N. Dixon
Gordon N. Dixon, Director

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3.2.10.4 DPOR (Non-APELSCIDLA) Licenses

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
03-31-2015

NUMBER
2701029434

**BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS H/H SDS**

BRANCH HIGHWAYS INC
PO BOX 40004
ROANOKE, VA 24022-0004



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
02-28-2015

NUMBER
4008 001684

**REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION**

RINKER DESIGN ASSOCIATES PC
9385 DISCOVERY BOULEVARD SUITE 200
MANASSAS VA 20109



Gordon N. Dixon
Gordon N. Dixon, Director

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
08-31-2013

NUMBER
2801 001772

**BOARD FOR GEOLOGY
CERTIFIED AS A PROFESSIONAL GEOLOGIST**

MARK ETHERIDGE LANDIS
241 SHAD LN
APEX, NC 27523



Gordon N. Dixon
Gordon N. Dixon, Director

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | MICHAEL HIGGINS / VICE PRESIDENT OF OPERATIONS AND DESIGN-BUILD SERVICES |
| b. Project Assignment: | 3.3.1.1 DESIGN-BUILD PROJECT MANAGER |
| c. Name of Firm with which you are now associated: | BRANCH HIGHWAYS, INC.  |
| d. Years experience: With this Firm <u>13</u> Years With Other Firms <u>14</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <p>Branch Highways, Inc. [Vice President of Operations and Design-Build Services, February 2010–Present]. Mr. Higgins is responsible for functions in each division of Branch that include operational, logistics and training/safety. At all levels of the company he provides resource assignments, employee staffing and scheduling, and regularly refining cash flow. He strongly enforces company policies and encourages only the best practices for the field. In conjunction with the Chief Estimator, he works proudly to reach the company’s business plan goals and obtain the Vision 2020 goal. He continues working to ensure staffing levels are adequate and meet all contractual deadlines and completion dates on all projects. Mr. Higgins actively participates in the Virginia Transportation Construction Alliance (VTCA) and has served as co-chairperson of the Design-Build Committee. Duties and responsibilities as Director of 2010 Design-Build Services still apply as outlined below:</p> <ul style="list-style-type: none"> • Director of Design-Build Services/Senior Project Manager, March 2008–February 2010. Responsibilities for this position include managing large complex construction projects while providing oversight and direction of the process for Design-Build. Mr. Higgins develops and oversees management practices and also reports for ongoing projects. Being Project Manager he serves as the primary point of contact with the owners and local public entities. He has a high understanding of construction knowledge and the requirements associated with right-of-way acquisitions, environmental permitting and mitigation. He holds a proven record with both the Route 58 and Route 15 PPTA projects for utility relocations in house and those associated with 3rd party utility owners as well. • Director of Project Management/Project Manager, January 2003–March 2008. Holding this position, Mr. Higgins managed various projects for Branch including, Route 58 PPTA and provided direction to project management operations. He was accountable for establishing and developing project management methods along with mentoring current management/engineering staff. Guidelines set forth mirrored those of VDOT for design build projects and highly assisted Branch towards its efforts in creating clear, accountability for our organization and Design-Build Team for this project. • Senior Estimator, October 1999–December 2002. Fulfilling the duties required for the company’s procurement process in acquiring new work was performed. These findings included design-bid-build and design-builds in Virginia and North Carolina. Responsibilities were to prepare bids, quantifications, solicit subcontractors/vendors, identification of new business opportunities and develop potential projects. <p>The Lane Construction Corporation [Project Engineer in Charge, January 1998–September 1999]. As Project Engineer, Mr. Higgins, implemented project management duties for the reconstruction of the Buena Vista Floodwall Project, this was for the District of the USACE in Buena Vista, Virginia. Areas of focus included development, implementation and oversight for the projects Quality Control and Operations, serving as the primary point of contact with owner and local public entities. He continued on with the oversight and management of all documentation for contract requirements, payment process, project scheduling and updating, public information and subcontractor/vendor procurement and management. The field staff contained over ten (10) supervisors which include superintendents and foremen and an office staff of six (6) engineers/office personnel.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | West Virginia Institute of Technology (Montgomery, WV) / BS / 1985 / Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | N/A |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. | <ol style="list-style-type: none"> 1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each assignment.</i> |
| (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | |

Route 58 Hillsville Bypass PPTA, VDOT

Acted as **Design-Build Project Manager** in charge for coordination and oversight. This included being the authorized representative for contractor and PPTA Project Manager for project design, construction quality, management and contract administration. Mr. Higgins managed the planning and scheduling of all project related activities, design coordination, ROW acquisitions, utility relocation, permitting and environment monitoring. Significantly was involved in the Quality Assurance/Quality Control procedure and implementations as well as construction management. In order to provide local government, business and residents with information regarding the project he held public meetings and continually interacted with all parties to address any questions/concerns throughout the entire construction process. In addition he was responsible for subcontractor and vendor procurements as well as project tracking and reporting.

Company: *Branch Highways, Inc.*

Dates: *October 2007–November 2011*

I-64/Route 895 Connector at the Richmond International Airport

Project Manager responsible for being primary point of contact with the Owner and Owners Design Engineer. Obligations included contract administration, such as coordination with Owner and Design Engineer for constructability issues, as well as, coordination and tracking of EEO and DBE/MBE reporting requirements. He was significantly involved in the grand plan development, project schedule (updating and reporting) and subcontractor and major material procurement which comprises of contractual paperwork. The Quality Control plan was implanted by Mr. Higgins and he coordinated the QC testing and reporting program. Construction submittals and oversight was also a duty performed during this project.

Company: *Branch Highways, Inc.*

Dates: *June 2007–February 2009*

Route 58 Meadows of Dan Bypass PPTA, VDOT

A **Design-Build Project Manager** responsible for initial PPTA negotiations involving analysis and pricing. Mr. Higgins was an authorized representative for contractor and PPTA Project Manager for overall design, construction, quality, management and contract administration. He coordinated project planning/scheduling, ROW acquisitions, utility relocation and permitting and environmental monitoring. Quality Assurance and Quality Control were performed while also performing construction management. In order to provide local government, business and residents with information regarding the project he held public meetings and continually interacted with all parties to address any questions/concerns throughout the entire construction process. In addition he was responsible for subcontractor and vendor procurements as well as project tracking and reporting.

Company: *Branch Highways, Inc.*

Dates: *March 2004–December 2005*

Centrepont Parkway, Stafford County, VA

Authorized representative for contractor and project manager responsible for contract administration activities that include coordination with Owner and Design Engineer. This involves constructability issues, coordination and tracking of EEO and DBE/MBE reporting requirements. He provided the oversight of grand planning development, project schedule (updating and reporting) and major material procurement working with subcontractors. Developing the Quality Control plan and contractual paperwork as well, with Quality Control test/reporting program. He was involved in construction oversight and submittals and was actively involved with engaging the Owner regarding ongoing construction and specific project needs.

Company: *Branch Highways, Inc.*

Dates: *August 2004–October 2005*

James Madison Highway (Route 15) PPTA/Design-Build, Prince William County, VA

Design-Build Project Manager responsible for the design and construction of improvements to Route 15 in Prince William County. He was ultimately involved in project management, roadway and bridge design and the quality assurance and control procedure/implementation. Acted as a contract administrator while planning and scheduling all project activities. Ultimately responsible for relations with 3rd party reviewers, ROW acquisitions, utility relocation activities and environmental monitoring. Mr. Higgins gave support to the Owner developing public awareness to local government, business and residents for the project and continued throughout the construction process to address any questions or concerns.

Company: *Branch Highways, Inc.*

Dates: *February 2007–December 2009*

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | JOHN VICINSKI, P.E., DBIA / QUALITY ASSURANCE MANAGER (QAM) |
| b. Project Assignment: | 3.3.1.2 QUALITY ASSURANCE MANAGER |
| c. Name of Firm with which you are now associated: | QUINN CONSULTING SERVICES, INC.  |
| d. Years experience: With this Firm <u>5</u> Years With Other Firms <u>25</u> Years | |
| Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | |
| <p><i>Quinn Consulting Services, Inc. [QAM, June 2008–Present]</i>—Worked exclusively on design-build projects in lead QA & QC roles:</p> <ul style="list-style-type: none"> • March 2012–Present—QAM for the VDOT Design-Build Route 27/244 Interchange Reconstruction project (Arlington) • September 2011–Present—QAM for the VDOT Design-Build Route 50 Widening Project West of Route 28 (Fairfax and Loudoun Counties) • February 2012–Present—QAM for the VDOT Design-Build Pacific Boulevard Extension Project (Loudoun County) • March 2012–December 2012—QAM for the FHWA Design-Build project Fort Lee Garrison “A” Gate Roundabout (Prince George County) • January 2011–March 2013—Client: Dewberry. QAM for the FHWA Fairfax County Improvements (Phase III) Design-Build Project • April 2010–December 2010—QAM for the VDOT Waxpool Road and Loudoun County Parkway Interchange Improvements Design-Build Project • November 2008–March 2010—Area Quality Control Engineer on the VDOT/FHWA PPTA Design-Build Project adding HOT Lanes to 14 miles of the Virginia side of the Capital Beltway • June 2008–November 2008—QAM for the VDOT Pacific Boulevard Design-Build Project • June 2008–November 2008—QAM for the VDOT Battlefield Parkway Design-Build Project • June 2008–November 2008—QAM for the VDOT Design-Build Gilberts Corner Project near the intersection of Route 15 and Route 50 (Loudoun County) <p><i>Alpha Corporation [Vice President & Director of Transportation Services, September 1998–June 2008]</i>—As Vice President and Director of Transportation Services in Virginia, managed up to 25 contracts simultaneously primarily providing CEI services on design-build, district-wide, and project specific projects for VDOT and other transportation clients:</p> <ul style="list-style-type: none"> • January 2008–June 2008—QAM for the VDOT Battlefield Parkway Design-Build Project • January 2008–June 2008—QAM for the VDOT Design-Build Gilberts Corner Project (Loudoun County) • 2007–2008—QAM on \$56 million, 5.6-mile rail and roadway design-build project (Portsmouth, VA) • 2006–2008—Project Director in charge of providing CEI inspectors and support services on I-66 Gainesville Interchange project • 2005–2008—Project Director on construction of \$500 million container terminal in Portsmouth • 2005–2008 and 1995–1998—Inspector Coordinator on VDOT Northern Virginia District-wide CEI Contracts • 1998–2008—Inspector Coordinator on three consecutive VDOT Culpeper District-wide CEI contracts • 2004–2008: Project Director and task manager on task order contract providing constructability review and CPM scheduling services and Project Director in charge of providing CEI services on multiple transportation projects • 2006–2008—Project Director in charge of providing CEI services on Monroe Street Design-Build project • 2005–2008—Project Director in charge of providing CEI services on transportation projects (Prince William County) • 2004–2006—Project Director in charge of providing CEI services on I-81 Maury River Bridge Replacement Project near Lexington, VA • 2003–2006—Project Director in charge of providing transportation inspectors to the Town of Herndon • 2005–2008—Project Director in charge of providing CEI services on environmental and building projects (Fairfax County) • 2002–2007—Inspector Coordinator in charge of providing bridge and painting inspectors in Northern Virginia, Culpeper, and Fredericksburg • 2000–2003—Inspector Coordinator in charge of providing inspectors throughout the VDOT Staunton District | |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | University of Pittsburg at Johnstown, Johnstown, PA / BS / 1982 / Civil Engineering Technology |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 1992 / Professional Engineer / 0402 026380 |

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your specific responsibilities and authorities for each assignment, not those of the firm.*
 2. *Note whether experience is with current firm or with other firm.*
 3. *Provide beginning and end dates for each assignment.*

(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)

Route 50 Widening Design-Build Project, Fairfax and Loudoun Counties, VA

QAM for this approximately \$58 million design-build project to widen Route 50 in Fairfax and Loudoun Counties between Route 742 (Poland Road) to Route 28 (Sully Road) from a four-lane divided highway to a six-lane divided highway. Responsibilities include oversight of the QA team that works closely with the Contractor's QC team to assure that the project adheres to the project specific QA/QC Plan and the Minimum Requirements for QA and QC as set forth in the VDOT Design-Build Manual. Responsibilities of the QA team include: scheduling and chairing activity preparatory meetings; performing the required QA inspection and testing; monitoring the performance and documentation of the QC team, reviewing and approving monthly pay estimates, developing project punch lists, and addressing non-conforming items with contractor QC personnel.

Company: *Quinn Consulting Services, Inc.*

Dates: *September 2011–June 2015*

I-495 HOT Lanes Design-Build Project, Fairfax County, VA

Area Quality Control Engineer on the design-build widening of 14 miles of the Capital Beltway. The \$1.5 billion project adds two-lanes in each beltway direction, replaces more than 50 bridges and overpasses, upgrades 10 interchanges, and improves bike and pedestrian access. Responsible for managing teams of inspectors to provide quality control inspection and testing services in accordance with the project specific quality assurance/quality control plan and VDOT's *Minimum Quality Control & Quality Assurance Requirements for Design Build & Public-Private Transportation Act Projects*. Responsibilities also include interfacing with project design engineers on RFIs, field design changes (FDCs), and non-compliance reports (NCRs) and daily coordination with QA and general engineering consultant (GEC) personnel.

Company: *Quinn Consulting Services, Inc.*

Dates: *November 2008–April 2009*

Gilberts Corner Design-Build Project, Loudoun County, VA

Quality Assurance Manager (QAM) on construction of (4) new traffic circles installed near the intersection of Route 15 and Route 50 in Loudoun County. Responsible for overseeing all QA and QC activities and assuring that work was performed in accordance with the project specific QA/QC plan and VDOT's Minimum Quality Control & Quality Assurance Requirements for Design Build & Public-Private Transportation Act Projects. In the initial stages of the project, helped write the QA/QC plan and assemble a team of QA inspectors and QC technicians that had the required experience and certifications to implement the plan and track all project documentation. Reviewed and signed monthly pay estimates after comparing pay requests with actual progress and compliance with minimum QA/QC technical standards.

Company: *Quinn Consulting Services, Inc.*

Dates: *February 2010–March 2013*

Fairfax County Parkway Design-Build Project, Fairfax County, VA

QAM on this \$22 million interchange and roadway FHWA/VDOT Design-Build project. Project elements included: the construction of a six-lane divided limited access highway; the Franconia-Springfield Parkway interchange improvements; a shared use path alongside a portion of relocated Rolling Road; sound barriers along relocated Rolling Road and Ramp D; and a new bridge (B692) over the Fairfax County Parkway. Responsibilities included overseeing QA and QC staff to make certain the project was completed in accordance with the contract documents and the VDOT Design-Build Minimum Standards. Other responsibilities included facilitating preparatory meetings before new activities were begun, documenting asphalt and aggregate testing within the FHWA QL Pay System, and coordinating QA laboratory testing services as required on the project.

Company: *Quinn Consulting Services, Inc. & Alpha Corporation*

Dates: *January 2008–November 2008*

Route 27/244 Interchange Design-Build Project, Arlington County, VA

Quality Assurance Manager (QAM) on this \$50 million interchange project in Arlington. This project included the replacement of the Washington Boulevard bridge over Columbia Pike that was built in the 1940s by the War Department as part of the Pentagon Roadway Network. The new bridge has many architectural and aesthetic features including: decorative pylons in each corner, haunched steel fascia girders with a two-tone paint scheme to mimic the previous arch, a relief pattern incorporated into the vertical outer surfaces, a concrete block pattern on retaining and abutment walls, and medallions with images reflecting the historical significance of Freedmen's Village, for which the bridge will be named. Responsibilities on this project included overseeing all of the QA oversight and testing as well as monitoring the QC program for compliance with the project specific QA/QC plan as well as the Virginia Department of Transportation (VDOT) *Minimum Requirements for Quality Assurance & Quality Control on Design-Build & Public-Private Transportation Act Projects*.

Company: *Quinn Consulting Services, Inc. & Alpha Corporation*

Dates: *March 2012–August 2015*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | MO KIM, P.E., DBIA / DIRECTOR OF TRANSPORTATION |
| b. Project Assignment: | 3.3.1.3 DESIGN MANAGER |
| c. Name of Firm with which you are now associated: | RINKER DESIGN ASSOCIATES, P.C.  |
| d. Years experience: With this Firm <u>19</u> Years With Other Firms <u>1</u> Year Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <p><i>Rinker Design Associates, P.C. (formerly Rinker-Detwiler and Associates, P.C.) [Director of Transportation, 2003–Present]—</i>Principal-In-Charge of overseeing and managing all elements of roadway design, hydrology and hydraulics, construction plans and overall direction of RDA’s Transportation Department and is integrally involved in day-to-day project activities. Duties include Quality Control and Quality Assurance (QA/QC) for all professional services and oversight of all subconsultant work. Strong emphasis is placed on constructability reviews and best value solutions for recent D-B projects with hands on integrated techniques. Recently became a DBIA professional and previously served as the President of the American Society of Highway Engineers–Potomac Section. Served on the ASHE Board of Directors for nearly eight consecutive years (most recently as the Past-President). Also served as a member of the Technical Advisory Committee for the Northern Virginia Transportation Alliance.</p> <p><i>Rinker-Detwiler and Associates, P.C. [Project Manager, 2000–2003]—</i>Primary Point of Contact on numerous roadway improvement projects. Responsible for managing all aspects of design and performing IGRDS to Geopak migration for the firm. Project Manager/Lead Designer on several VDOT L&D projects. Duties included performing geometric layouts, drainage design, stormwater management, flood studies, maintenance of traffic, value engineering and quality control. Also responsible for providing bid assistance, construction support and review of shop drawing as the Engineer of Record.</p> <p><i>Rinker-Detwiler and Associates, P.C. [Senior Transportation Engineer, 1998–2000]—</i>Responsible for elements of roadway design production associated with large widening and infrastructure projects. Duties included reviewing cross sections and performing take-off on construction plans. Team Leader for preparing and assembling plans for constructions, as well as developing the technical capabilities of the junior staff. Provided all elements of geometric and drainage design on an array of projects throughout the Commonwealth.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | University of Virginia (Charlottesville, VA) / BS / 1993 / Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2001 / Professional Engineer / #0402 032943 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each assignment.</i> (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | |
| | <p><i>George Mason University Campus Drive (Design-Build, GMU), City of Fairfax and Fairfax County, VA</i> Design QA/QC Manager responsible for the quality assurance and quality control for multi-discipline construction plans. Duties and responsibilities included the review of roadway widenings and new alignments. Project responsibilities also included the review of open and closed storm drain systems, SWM, TMP, Signals and utility coordination/design. Acted as design QA/QC manager to review the overall submissions and provide review guidance on all design elements for both RDA and subconsultants including bridge plans and phased maintenance of traffic for Route 123. Also responsible for coordinating with Design Manager and project team to ensure that Branch Highways had the largest available time to construct the project—efficiently and under budget. Close coordination with VDOT was essential to begin construction for both ends of the project with in the public right of way.</p> <p>Company: <i>Rinker Design Associates, P.C.</i> Dates: <i>August 2012–January 2014(anticipated)</i></p> |

James Madison Highway (Route 15) PPTA/Design-Build, Prince William County (Haymarket), VA

Design Manager and Engineer of Record responsible for the oversight of all disciplines encompassed under the design elements of work as identified in the Design-Build contract with Branch Highways including Quality Control and Quality Assurance for all design services, work being performed by subconsultants (including work being performed by subconsultants), which included two bridges. Responsible for executing timely design while meeting VDOT and AASHTO design criteria. Also responsible for facilitating coordination meetings between the various stakeholder on the project and overseeing the CEI efforts for construction Quality Control, ensuring design intent is being carried out in the field. The specific responsibilities and authorities associated with this \$54M Design-Build project are similar, if not identical, to the scope set forth in the Walney Road Bridge Replacement and Road Widening RFQ. Managed the project bridge replacements at three separate locations, two along Little Bull Run and one across Catharpin, each with similar characteristic of Flatlick Branch. Although this project is a Prince William County administered project, responsibilities as the Design Manager included close coordination with VDOT for ultimate acceptance and maintenance of a quality product.

Company: *Rinker Design Associates, P.C.*

Dates: *February 2007–January 2010*

VDOT Stringfellow Road (Route 645) Widening, Fairfax County, VA

Project Manager providing engineering services for this 2.02-mile project for right of way and construction plans including roadway design, hydraulic design, traffic engineering design (including traffic data collection and analysis), sign, signal, pavement marking, lighting plans and ITS, retaining wall design, permit sketches, coordination of utility design and supplemental survey data with roadway design and construction coordination and support. Responsible for administering the contract and overseeing all elements of the professional engineering design services. Serve as the primary point of contact for VDOT and responsible for all aspects of design quality and oversight of personnel and subconsultants. Responsible for extensive stakeholder coordination and developing a best value solution to the geometric design due to heavy and extreme utility impacts and Fairfax County stewardship. Worked closely with the Fairfax County Park Authority in minimizing impacts to Poplar Tree Park and Greenbriar Park, a key stakeholder on the Walney Road Bridge Replacement and Road Widening Project. Providing formal partnering support to VDOT during construction to ensure the proper implementation of design elements and to assist in resolving contractor concerns.

Company: *Rinker Design Associates, P.C.*

Dates: *October 2005–Present*

Rollins Ford Road, Phase IV, Prince William County (Manassas), VA

Design Manager for the extension of Rollins Ford Road for approximately 0.9 mile including a 40' high bridge spanning 360' over Broad Run. Responsible for administering the contract and ensuring design quality for all elements of work. Worked closely with various stakeholders such as the Prince William County Park Authority and the City of Manassas Public Works. Responsible for overall management and design QA/QC of geometric design and the oversight of all subconsultants encompassing hydrologic/hydraulic analyses, flood studies and traffic. Performed detailed geometric design for horizontal and vertical geometry. Responsible for the review of all stormwater management and drainage design to ensure adequate outfall and BMP applications. In addition to overseeing the proposed roadway improvements, waterline betterment for the City of Manassas and a hual road facility for the future Rollins Ford Road Community Park were coordinated as part of the project. Project was awarded to Shirley Contracting Company, LLC in November 2012.

Company: *Rinker Design Associates, P.C.*

Dates: *August 2011–December 2012*

Sudley Manor Drive PPTA/Design-Build, Prince William County (Manassas), VA

Design Manager for the first project in Prince William County contracted and constructed in accordance with the Public Private Transportation Act of 1995 in association with CH2MHILL and The Lane Construction Corporation. The construction plans (completed with VDOT approval within an accelerated 180-day schedule) entailed right of way acquisitions, transcontinental petroleum line relocations and utility design/coordination. Responsible for overall management of geometric and hydrologic/hydraulic design on the project and the preparation of the overall construction plans including in plan utility design for VDOT approval. Responsible for coordinating field revisions with CH2MHILL and ensuring the proper stakeout of the revised facilities for The Lane Construction Corporation. Duties included managing and coordinating the new bridge construction over the Norfolk Southern Railroad which required a detailed permitting and acquisition process.

Company: *Rinker Design Associates, P.C.*

Dates: *July 2004–September 2006*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | PETER KRAMER / AREA MANAGER |
| b. Project Assignment: | 3.3.1.4 CONSTRUCTION MANAGER |
| c. Name of Firm with which you are now associated: | BRANCH HIGHWAYS, INC.  |
| d. Years experience: With this Firm <u>16</u> Years With Other Firms <u>8</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <p><i>Branch Highways, Inc. [Senior Project Manager/Area Manager, February 2009–Present].</i> Primary responsibilities involve oversight of all Northern Virginia projects, both public and private sectors. Some of the major areas he was a Project Manager of were Route 15 PPA, Spriggs Road, Low’s and Eli Lilly all located in Prince William County. Several projects to mention: Frederick Douglas Elementary School in Leesburg, Virginia (road and site work), Port Republic Road in Harrisonburg, Virginia and Route 123 in (Lorton) Fairfax County, Virginia. Duties for serving as Area Manager for Northern Virginia currently include field operations and production management as well as Value-Engineering Proposal development/administration. As the Design-Build Project Manager for Route 15 (James Madison Highway PPTA) he was responsible for contract administration, owner relations, internal reporting and overall project monitoring. Under this project he provided oversight authority for design, utility relocation, environmental permitting and ROW procurement. These efforts demand close coordination of all aspects of the PPTA process and full knowledge of the complexities each present. Also requirements to have interactions with Owners, acting as a point of contact person for specific project related property to make sure all needs were reached.</p> <p><i>Branch Highways Inc. [Project Manager, January 1998–February 2009].</i> Mr. Kramer delivered substantial management duties for several construction projects including the I-81/Route 460 Christiansburg/Blacksburg Interchange. He also functioned as the Bridge Construction Manager while providing the functions of other project management duties for approximately three dozen bridge structures through Virginia and North Carolina. Duties included scheduling, requests for information and submittal preparations/monitoring. He provided crew and equipment scheduling for all the bridge crews and overall contract management. This included correspondence, owner and subcontractor notifications and compliance issues.</p> <p><i>Branch Highways, Inc. [Superintendent/Project Engineer, January 1997–December 1997].</i> Duties were to provide management and construction for Beulah Street/Telegraph Road in Fairfax, Virginia and manage final construction. Involved in closeout activities for various ongoing Branch projects such as Liberia Avenue in Manassas, Virginia, Fairfax County Parkway between Route 123 and Hooes Road and Backlick Road in Fairfax County. Significant slope stabilization work on previously constructed portions of Fairfax County Parkway which had several duties. They included managing crews and equipment (daily basis for multiple projects), schedule preparation, materials scheduling and submittal/RFI preparation/monitoring. He was also in charge of correspondence and contract administration activities, budget monitoring and reporting.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | Virginia Military Institute (Lexington, VA) / BS / 1988 / Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2006 / VDOT Erosion & Sediment Control Contractor Certification (ESCCC) / #3156C 2009 / Certified LEED AP, United States Green Building Council / #10444816 2009 / US Army Corps of Engineers—Construction Quality Management for Contractors / CENAO-09-1170 2012 / Virginia Department of Conservation and Recreation (DCR)—Responsible Land Disturber (RLD) / #38667 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. | <ol style="list-style-type: none">1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each assignment.</i> |
| (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | |

Frederick Douglas Elementary School, Town of Leesburg, VA

Recently completing in 2012, Mr. Kramer was the **Construction Manager** for a site project in the Town of Leesburg that consisted of NCRPA relocation on the WO&D Trail. This project needed close coordination with the Town of Leesburg, NVRPA Trail facility and Loudoun County. Mr. Kramer established first off a positive and constructive relationship with the Town of Leesburg. It required enhancing stone headwalls and reforestation of the surrounding area to help provide a feature that was critical to arrest local flooding issues and had to fit aesthetically into the trail system. The project had many competing interest and multiple public bodies which Mr. Kramer was able to manage well and accomplish a successful project.

Company: *Branch Highways, Inc.*

Dates: *May 2011–July 2012*

Route 123 & Hoes Road, VDOT

As **Project Manager**, Mr. Kramer partnered with the NOVA VDOT District to complete a complex and politically charged project successfully. His duties required the formulation of complex traffic maintenance and re-sequencing plan that was implemented by the Department as one of three eventual value engineering proposals. Much like the needs of the Route 3 Widening Project, the traffic and access issues complicated the everyday business of improving a roadway segment in dire needed. Strong Branch and VDOT Teams working toward common goals helped to make Route 3 successful much like this project. Mr. Kramer presented a positive relationship with the Department that can be attested by Mr. John DePasquale, P.E., VDOT NOVA District Construction Engineer, and Ken Connors, currently the Culpeper District Construction Engineer (formally assigned to NOVA District).

Company: *Branch Highways, Inc.*

Dates: *July 2004–May 2006*

Christiansburg/Blacksburg Route 460 Interchange, VDOT

Of the many projects Mr. Kramer has completed as **Project Manager**, several stand out as complementary to the Route 3 Project under consideration. One of these projects was the I-81 Interchange leading into Virginia Tech at Christiansburg. This highly coupled project incorporated truck climbing lanes under congested, high-speed, limited access, conditions. Completed in the early 2000s, this approximate \$60 million project successfully incorporated NCHRP-350 standards for safety as those, then “new” standards were implanted in Virginia. The understanding gained through his experience on the I-81 Project will bring a familiarity with the challenges of confined work zones and how to best interact with heavy volumes of vehicle traffic traveling at high speeds. His input on both the sequence of construction and maintenance of traffic plans for the Route 3 Project will greatly enhance the safety of the traveling public and the Project Team.

Company: *Branch Highways, Inc.*

Dates: *September 1998–April 2003*

James Madison Highway (Route 15) PPTA/Design-Build, Prince William County, VA

In addition to familiarity with the specific construction elements, Mr. Kramer has extensive PPTA/DB experience, gained while serving as the **Construction Manager** for the Route 15 PPTA/D-B project in Prince William County. Mr. Kramer directly managed all environmental permitting, land acquisition, utility relocations, and acted as the Project’s liaison with landowners and other project stakeholders. Branch received the “Construction Excellence Award” from Prince William County for this project. Though locally administered, VDOT was actively involved in the design reviews and ongoing inspections, all of which required Mr. Kramer’s management and engagement. This completed \$53 million project is a prime example of how Branch, along with our current design partner, RDA, successfully navigated the PPTA/D-B waters to deliver a quality project safely, on time, and within budget, in a highly congested and politically-sensitive environment.

Company: *Branch Highways, Inc.*

Dates: *February 2007–December 2009*

Spriggs Road Improvements, Phase II, Prince William County, VA

Mr. Kramer was the authorized representative for contractor and overall **Project Manager**. Duties included grand plan development, jobsite scheduling and construction oversight, subcontractor and vendor procurement, project tracking and reporting, VEP analysis and presentation, and coordination with various third party utility companies and developers. Also, actively communicated with Owner, various property owners and PWC Board of Supervisor members, regarding ongoing construction and specific needs.

Company: *Branch Highways, Inc.*

Dates: *November 2005–October 2007*

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | MATTHEW WAGER, P.E. / ASSOCIATE |
| b. Project Assignment: | 3.3.1.5 LEAD GEOTECHNICAL ENGINEER |
| c. Name of Firm with which you are now associated: | SCHNABEL ENGINEERING, INC.  |
| d. Years experience: With this Firm <u>6</u> Years With Other Firms <u>19</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <p><i>Schnabel Engineering, Inc. [Associate, June 2007–Present]</i> <i>CTI Consultants, Inc. [Senior Geotechnical Engineer, November 2003–May 2007]</i> <i>Geo-Technology Associates, Inc. [Geotechnical Project Manager, June 2001–October 2003]</i> <i>GTS Technologies, Inc. [Geotechnical Engineer, January 1999–June 2001]</i> <i>Dames & Moore [Geotechnical Engineer/Environmental Scientist, 1998]</i></p> <p>Mr. Wager's areas of expertise includes geosynthetics, structural, and geotechnical design of both shallow and deep foundations; slope stability analysis using computer modeling; concrete and geosynthetic reinforced earth retaining structures; design of rigid and flexible pavement; groundwater control; and in situ testing during construction. His responsibilities have included geotechnical design of roadways and structures; management of soil and groundwater sampling programs; slope inclinometer evaluation; geotechnical construction monitoring; bearing capacity and settlement analysis of proposed structures; and site characterization for a variety of projects including soil, groundwater, and surface water sampling. He also has detailed experience in soil improvement techniques, stormwater management facility design, slope design, tunnel design, construction cost estimates, temporary construction earth bracing systems, project scheduling, storm drain system design, and Quality Assurance/Quality Control programs at sanitary landfills.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | Syracuse University (Syracuse, NY) / BS / 1992 / Geotechnical Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 1999 / Professional Engineer / #0402 032881 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. Note your specific responsibilities and authorities for each assignment, not those of the firm. 2. Note whether experience is with current firm or with other firm. 3. Provide beginning and end dates for each assignment. (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | <p><i>Fairfax County Parkway Extension, Fairfax County, Virginia</i> Project Manager responsible for providing geotechnical engineering recommendations for the design-build Fairfax County Parkway Extension project. The \$117 million project includes two miles of a four-lane highway, seven new bridges, an interchange, an access road, and an extension of Boudinot Drive. This project incorporated the drilling of 500 test borings. Schnabel also performed soil laboratory testing for classification, strength, compressibility, corrosion, pH, and evaluation of pavement support characteristics. This is one of the first projects in Virginia using AASHTO's LRFD method for bridge design. Schnabel prepared six geotechnical design reports which included recommendations for bridge foundations, pavements, embankment fills, noise walls, mechanically stabilized earth walls, soil nail walls, subdrainage, and rock excavations. Extensive PLAXIS modeling was used for embankment stability and settlement. Company: <i>Schnabel Engineering, Inc.</i> Dates: <i>November 2008–April 2010</i></p> <p><i>George Mason University, West Campus Connector, Fairfax, Virginia</i> Project Manager responsible for the geotechnical engineering design services for a new roadway connecting the campuses east and west of Chain Bridge Road (VA Route 123), beginning near Mason Pond Drive in the east, and extending westward to Braddock Road (VA Route 620). The selected roadway will be approximately 4,000-ft long with new intersections at Rapidian River Road and Braddock Road. An intersection at Chain Bridge Road will be eliminated by construction of an underpass. Company: <i>Schnabel Engineering, Inc.</i> Dates: <i>September 2011–January 2012</i></p> |

VDOT Route 637 Replacement Bridge over Big Indian Run (VDOT Project 0637-078-123), Rappahannock County, Virginia

Project Engineer for a single-span replacement bridge that is about 28 ft long and 24 ft wide. The new bridge abutments will be conventional full-height abutments. Cast-in-place concrete cantilever retaining walls will be utilized to accomplish the grade separation. Schnabel provided a subsurface exploration and laboratory testing. Analyses and preliminary recommendations were provided for capacity of the spread footing supporting the abutments and retaining wall, seismic design parameters, liquefaction, scour, earthwork, slope stability, embankment settlement, lateral earth pressures for retaining walls, and pavement.

Company: *Schnabel Engineering, Inc.*

Dates: *February 2013–Ongoing*

North Carolina DOT, 17BP Division Managed Bridge Replacements, Divisions 10, 12, and 13, Statewide, North Carolina

Project Engineer for the replacement of Division 10, Bridge No. 253 on SR 1415 in Anson County. The low impact bridge replacement included corrugated metal pipe (CMP) arches approximately 56 ft long with aluminum head walls and wing walls. The subsurface conditions varied from shallow rock to soft alluvium. However, based on the testing borings, the majority of the head wall and wing wall foundations are founded on rock. Services included preparation of preliminary design recommendations and report.

Company: *Schnabel Engineering, Inc.*

Dates: *July 2012–January 2013*

North Carolina DOT, Low Impact Bridge Replacement in Division 7, Alamance, Caswell, Guilford, Orange, and Rockingham Counties, North Carolina

Project Engineer for the replacement of Bridge No. 47 on SR 1301 located in Caswell County. Schnabel provided design phase services, and currently providing construction phase services. Services included preparation of preliminary design recommendations, field exploration, and laboratory testing and report.

Company: *Schnabel Engineering, Inc.*

Dates: *December 2011–April 2013*

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. | Name & Title: WILLIAM MISSELL, P.E. / GENERAL MANAGER/PRINCIPAL |
| b. | Project Assignment: 3.3.1.6 DAM DESIGN SPECIALIST |
| c. | Name of Firm with which you are now associated: RINKER DESIGN ASSOCIATES, P.C. |
| d. | Years experience: With this Firm <u>23</u> Years With Other Firms <u>0</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): <i>Rinker Design Associates, P.C. [General Manager/Principal, June 1989–Present]</i> —Project Manager/Principal in charge of various projects. Oversee/manage hydrology and hydraulics aspects of roadway and land development projects. Overall management of the Fredericksburg office. Duties include Storm Water Management / Best Management Practice design, drainage design, flood studies, site and road layout, grading etc. Duties also include Quality Control and Quality Assurance (QA/QC) |
| e. | Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Blacksburg, VA / BS / 1989 / Civil Engineering |
| f. | Active Registration: Year First Registered/ Discipline/VA Registration #: 1995 / Professional Engineer / 0402 025906 |
| g. | Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> 1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each assignment.</i> (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) <i>Lake Caroline Weir Rehabilitation, Caroline County, VA</i> Design Manager responsible for preparing all the necessary studies and paperwork required to bring this 1968 dam into current DCR compliance. This work included revising the dam and raising the roadway to reduce potential future failures. An Emergency Action Plans (EAP) for dam failure was developed in conjunction with the Virginia Department of Conservation and Recreation requirements. This also included a Dam Failure Inundation Study. This study reflects the potential for water overtopping Route 1 as well as I-95, which are both downstream and within the inundation zone. The Lake Caroline Dam is considered a High Hazard Dam due to potential impacts on US-1 and I-95 immediately downstream. The EAP and supporting Hydraulic and Hydrologic Analysis (H&HA) computations were developed according to Virginia Impounding Structure Regulations, dated Dec. 22, 2010. The dam itself is 2,000 feet long and stands 30 feet tall. The recreational lake behind it has a surface area of 277 acres, holds 3,094 acre-feet in volume, and has a contributing watershed of 9.6 square miles. The inundation zone study determined the area impacted and the depth for: a ‘Sunny Day’ dam failure, a Probable Maximum Flooding (PMF) rainfall event, and a dam failure with the PMF. The EAP and inundation map provide warning levels and response conditions for those at the HOA and state/local Emergency Response Departments. RDA developed construction plans for the alteration of the emergency spillway of Lake Caroline Dam. The dam itself is also a main road for the development. As the road system is a loop within the single access point development; it is critical to the area. The dam alteration addressed issues with seepage through the antiquated concrete spillway weir wall and corrected a failing section of roadway. The alterations include: raising Lake Caroline Drive to within 6” of the weir wall, installation of a waterproof bituthene layer on the upstream side of the weir wall, and the addition of a maintenance pad with wire guardrail on the Lake side. The completed project is well received by the community. Close work with the Geotechnical Engineer and the POA was required to coordinate the work that needed to be completed. Time was critical to the client since the lake needed to be lowered during this construction. As the development uses this lake for recreation it was critical that this work be completed as quickly as possible to allow enough time for the water level to return to normal levels for the following boating season. DCR granted a Regular Operation and Maintenance Certificate once the EAP and roadway construction were reviewed and approved. Company: <i>Rinker Design Associates, P.C.</i> Dates: <i>August 2010–November 2012</i> |



Ladysmith Lake–Emergency Action Plan and Dam Failure Inundation Study, Caroline County, VA

Design Manager responsible for preparing all the necessary studies and paperwork required to bring this 1972 dam into current DCR compliance. This Significant Hazard Dam is 700 feet long and stands 28 feet tall. Ladysmith Lake has a surface area of 13 acres, holds 100 acre-feet in volume, and has a contributing watershed of 0.2 square miles. Hydraulic and Hydrologic Analysis (H&HA) computations were developed according to Virginia Impounding Structure 2010 Regulations. The H&HA results were utilized to develop the required Emergency Access Plan (EAP).

The existing Conditional Use Certificate was upgraded to a Regular Operation and Maintenance Certificate once our work was approved by DCR.

Company: *Rinker Design Associates, P.C.*

Dates: *August 2010–December 2011*

Crosspointe Centre Roadway Improvements Design-Build (at the Rolls Royce facility), Prince George County, VA

Drainage Lead for 2.2 miles of new roadway construction and 1.5 miles of roadway widening. Performed H&HA analysis, drainage design and phased erosion and sediment control. This project was funded by the Virginia Economic Development Partnership (VEDP) through Transportation Partnership Opportunity Funds (TPOF).

Company: *Rinker Design Associates, P.C.*

Dates: *November 2008–July 2010*

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | MARK LANDIS, PG, P.E. / PRINCIPAL ENGINEER |
| b. Project Assignment: | 3.3.1.6 DAM STRUCTURAL DESIGN SPECIALIST |
| c. Name of Firm with which you are now associated: | SCHNABEL ENGINEERING, INC.  |
| d. Years experience: With this Firm <u>6.5</u> Years With Other Firms <u>22</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <p><i>Schnabel Engineering, Inc. [Principal Engineer, November 2006–Present]</i> <i>Withers & Ravenel [Lead Geotechnical Engineer & Department Manager, February 2000–November 2006]</i> <i>GEI Consultants, Inc. [Geotechnical Division Manager, 1998–January 2000]</i></p> <p>Mr. Landis has experience as a Civil Engineer/Engineering Geologist for projects involving geotechnical engineering, geological and hydrogeological evaluations, geophysics, and dam design and rehabilitation. He has significant construction consulting experience for large earthwork projects. He has performed evaluations, design, and routine dam inspections for small to large earthen and concrete dams in North Carolina, Virginia, South Carolina, and Maine. His recent focus has been associated with the design of new large earth and concrete, as well as rehabilitation options for old dams. He has also performed engineering for power plant ash handling to include dike design for as sluice ponds, slurry wall design, and quarry/mining permitting/evaluation for large roller compacted concrete (RCC) dams.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | North Carolina State University (Raleigh, NC) / Master of Civil Engineering / 1990 / Civil Engineering University of North Carolina (Chapel Hill, NC) / BS / 1981 / Geology |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2007 / Professional Engineer / #0402 044594 2007 / Professional Geologist / #2801 001772 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. Note your specific responsibilities and authorities for each assignment, not those of the firm. 2. Note whether experience is with current firm or with other firm. 3. Provide beginning and end dates for each assignment. (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | <p><i>Cobbs Creek Dam and Reservoir, Cumberland County, Virginia</i> Project Manager for this new offline storage reservoir from the James River in Cumberland County, Virginia. The owner is Henrico County. The high hazard dam is planned to be approximately 4,800 feet long and 165 feet high, includes approximately 3,200,000 CY of zoned earth fill, 165-foot high reinforced concrete inlet/outlet tower and two saddle dikes for the 1,100-acre reservoir. The intake will have a capacity of 150 MGD, one of the largest in the country. This reservoir will be filled from pumping from the James River during high flows and released during low flows as a river flow augmentation during drought or low flow conditions for water supply for several counties surrounding Henrico County. The design is approximately 50% complete. Construction on the proposed earth dam is planned to commence in 2015 with a completion date in 2018. It is expected to take up to two years to fill the reservoir. Our dam design team has performed all geotechnical, geological, and geophysical investigations; is preparing design drawings; will oversee construction; and will monitor during filling and post filling. We also performed the geotechnical investigations for the pump station located adjacent to the James River, the intake in the James River, and pipeline conveyances to the reservoir. Company: <i>Schnabel Engineering, Inc.</i> Dates: <i>March 2011–Ongoing</i></p> <p><i>Ragged Mountain Dam, Albemarle County, Virginia</i> Senior Technical Reviewer for the design of the proposed earthen replacement high hazard dam for the Lower Ragged Mountain Dam. The proposed 140-foot high replacement dam will be a water supply structure for Charlottesville and Albemarle County. A rock-cut auxiliary spillway is planned for the right abutment. A new intake tower is also planned for the reservoir for pump discharge for filling and water supply. Mr. Landis provided senior technical review during the investigation and design, and continues to provide geotechnical consultation during construction. The dam construction is anticipated to be complete in the spring of 2014. Company: <i>Schnabel Engineering, Inc.</i> Dates: <i>September 2010–Ongoing</i></p> |

Rocky Pen Run Dam, Stafford County, Virginia

Project Manager for Schnabel's Technical Review Committee of a proposed off-line storage reservoir to augment water supply needs in northern Virginia. The proposed high hazard dam is a 120-foot high, 1,400-foot long earth dam with a reinforced concrete, labyrinth spillway on the left abutment. Duties include coordination and management of all review capacities of the Schnabel committee with the dam design engineer and owner. The dam is currently under construction, and Mr. Landis is providing the lead CQA geotechnical consultation for the owner during construction and construction management of the CQA field staff. He has participated in the three phases of construction beginning with foundation excavation, followed by grout curtain installation, and the current main dam, out works conduit and tower, five-cycle labyrinth spillway, and 300-foot long concrete chute and stilling basin with 100-foot deep rock cuts.

Company: *Schnabel Engineering, Inc.*

Dates: *September 2004–Ongoing*

Linville Land Harbor Lake Dam, Linville, North Carolina

Project Manager for the rehabilitation of an earthen high hazard dam with five Tainter gates, ASR concrete, and eroded auxiliary spillway. Provided two conceptual design alternatives (RCC and labyrinth) and associated cost estimates. Subsequently provided a geotechnical subsurface investigation that included borings in the gate bays, on top of the earth dam, and from a barge to evaluate the subsurface conditions in front of the old Tainter gates. Based on the geotechnical investigation, the old river channel was estimated to be adjacent to the existing gates. Excavation for an RCC dam would have been too extensive and subsequently, the labyrinth spillway was selected. Mr. Landis was the Engineer of Record for the design of the labyrinth spillway in the footprint of the old Tainter gated structure. Also provided an interim Emergency Action Plan with inundation map for 13 river miles with crossings. The contractor for the dam has finished construction. Mr. Landis provided construction management with his site staff providing Construction Quality Assurance and site inspections.

Company: *Schnabel Engineering, Inc.*

Dates: *May 2007–June 2010*

Lake Townsend Dam, Greensboro, North Carolina

Senior Technical Consultant that provided geotechnical consultation during the evaluation of spillway options and construction sequencing for the replacement high hazard dam. Provided senior consultation for the geotechnical evaluation for the selected alternative, and served as Senior Reviewer for all construction drawings and specifications. The dam serves as the primary water supply for the City of Greensboro. The replacement dam is over 50 feet high, 1,200 feet long, and impounds over 1,500 acres at full pool. The design considered construction for the replacement dam immediately downstream of the existing dam while under normal pool head conditions. Mr. Landis provided construction management of the personnel for this project.

Company: *Schnabel Engineering, Inc.*

Dates: *July 2006–December 2011*

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | WARREN (JAKE) HENSLEY / AREA SUPERINTENDENT AND MANAGER |
| b. Project Assignment: | 3.3.1.6 DAM CONSTRUCTION SPECIALIST |
| c. Name of Firm with which you are now associated: | BRANCH HIGHWAYS, INC.  |
| d. Years experience: With this Firm <u>20</u> Years With Other Firms <u>15</u> Years Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.): | <i>Branch Highways, Inc. [General Superintendent, January 1998–Present].</i> Responsible for managing the labor and equipment resources for multiple projects along with coordinating subcontractors’ forces. Projects ranged in size from \$1 million to \$25 million. Responsibilities included oversight of project superintendents and general foremen to ensure work in place met quality and contractual requirements. |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | N/A |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2001 / Virginia Department of Conservation and Recreation (DCR)—Responsible Land Disturber (RLD) / #17095 2003 / VDOT Erosion & Sediment Control Contractor Certification (ESCCC) / #4485C |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. Note your specific responsibilities and authorities for each assignment, not those of the firm. 2. Note whether experience is with current firm or with other firm. 3. Provide beginning and end dates for each assignment. (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) | <p>Smith Dam Superintendent with responsibilities for overall construction activities. These included job-site coordination, employee development and on-going project scheduling. Responsible for reviewing operations and helping to overcome the projects challenges due to weather and outstanding circumstances. This project was finished ahead of schedule and within budget. Company: <i>Branch Highways, Inc.</i> Dates: <i>August 1996–October 1997</i></p> <p>Port Republic Road, Harrisonburg, VDOT Staunton District General superintendent with oversight of multiple project superintendents and all construction activities, including job-site coordination, employee training and development and on-going project scheduling. Reviewed processing schedules and production orders to make decisions concerning inventory requirements, staffing requirements, work procedures and duty assignments, considering budgetary limitations and time constraints. Company: <i>Branch Highways, Inc.</i> Dates: <i>December 2009–September 2011</i></p> <p>Spriggs Road Improvements, Phase II, Prince William County, VA Superintendent with responsibilities for specific project duties such as job-site coordination, employee training and development and on-going project scheduling. Reviewed processing schedules and production orders to make decisions concerning inventory requirements, staffing requirements, work procedures and assignments, considering budgetary limitations and time constraints. Company: <i>Branch Highways, Inc.</i> Dates: <i>November 2005–October 2007</i></p> <p>Route 123 and Hoes Road Fairfax County, VA, VDOT Superintendent with responsibilities for employee training and development and on-going project scheduling for the overall construction site. Also responsible for reviewing operations and conferring with technical or administrative staff to resolve projection or processing problems. Ensured public satisfaction by addressing residents’ questions and complaints. Company: <i>Branch Highways, Inc.</i> Dates: <i>July 2004–May 2006</i></p> <p>Route 460 Interchange, Blacksburg, VA Superintendent for this project with responsibilities for overall construction site. Assisted with the interviewing, selecting and training of foreman, crew leaders and supervisory personnel. Additional duties included project schedule coordination with included multiple retaining walls and 12 bridges. Company: <i>Branch Highways, Inc.</i> Dates: <i>February 1999–April 2003</i></p> |

Attachment 3.4.1(a): Work History Forms—LEAD CONTRACTOR

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime design consulting firm responsible for the overall project design. | c. Contact information of the Client or Owner and their Project Manager who Can verify Firm's responsibilities. | d. Contract Completion Date (Original) | e. Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands) |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| | | | | | Original Contract Value | Final or Estimated Contract Value | |
| Name: JAMES MADISON HIGHWAY (ROUTE 15) PPTA/DESIGN-BUILD Location: Prince William County, VA | Name: RINKER DESIGN ASSOCIATES, P.C. | Name of Client: Prince William County DOT Phone: (703) 792-6825 Project Manager: Mr. Thomas Blaser Phone: (703) 792-6825 Email: tblaser@pwcgov.org | December 2009 | December 2009 | \$52,139 | \$54,126 | \$54,126 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

Branch Highways was the Design-Build Contractor providing design, construction, right of way, utility relocation for Route 15 (James Madison Highway) Improvements under the authority of the Virginia Public-Private Transportation Act of 1995 for Prince William County (PWC). Similar to the proposed Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening Project, the northern segment of Route 15 was constructed as a four-lane divided open section with a 60 mph design. The project consisted of improvements to Route 15 beginning north of the I-66 interchange and extending to the existing four-lane section by the Dominion Valley Subdivision and then starting at the intersection of Dominion Valley Drive/Graduation Drive and extending north beyond the intersection with Sudley Road/Route 234. The Project also consisted of improvements to portions of Waterfall Road, Sudley Road (Route 234), Shelter Land and Old Carolina Road along with a new section of Heathcote Boulevard between Old Carolina Road and Route 15. The project included nearly 22 lane-miles of construction along with five new bridge structures and a major box culvert.

Demonstrating a well-integrated organization [cooperation among the parts] with proven cooperative work history:
Branch and RDA organized a project team that was successful through the entire process of this project, from the initial procurement, design and permitting, construction and inspection, and through the final acceptance of the project by both PWC and VDOT. We also were successful in integrating the organizations and personnel of VDOT, PWC, affected utility owners, regulatory/permitting agencies, first responders, developers, farms, home owners' associations, business owners, and individual property owners into the overall design and coordination of the construction of the project. Traffic and development along this corridor were and still are very heavy, presenting the team with a very demanding environment in which to work requiring our team to combine our skills effectively.

Branch and RDA faced the following challenges, demonstrating our teaming experience and complementary skills and experiences:

- **Alignment selection:** The possible alignments available to us were somewhat restricted by the surrounding properties and adjacent utilities. Also, the project had a high level of (political) visibility for the County. Branch and RDA jointly selected an alignment that met not only competing design criteria (such as minimizing ROW impacts, environmental impacts, traffic disturbances, roadway design requirement) but one that was constructable in a schedule compliant and cost-saving manner. RDA's input to Branch for these critical decisions enabled Branch to reduce the amount of earthwork and minimized potential delays to the schedule from impacts due to overhead utility conflicts.
- **Minimizing underground drainage piping:** Branch and RDA were able to use their combined experience to maximize substituting above ground storm water conveyance systems (ditches and gutters) in lieu of underground storm drainage systems, reducing the number of impacts to existing underground utilities and drainage systems.
- **Optimizing project phasing:** Branch aided RDA in minimizing the number of traffic switches beyond what may have immediately been apparently needed. This increased safety to the public, the quality of asphalt paving, the quality of bridge construction, and reduced the amount of work that had to be performed immediately adjacent to live traffic.
- **Optimizing pavement design:** Branch was able to provide cost feedback to RDA that enabled RDA to provide a cost-effective pavement design.
- **Early construction commencement:** RDA provided Branch with a design and design review sequence that enabled Branch to begin construction sooner than we would have otherwise.
- **Squeaky wheels:** At PWC's request, Branch and RDA developed alternative alignments for a portion of the project that eliminated some potentially adversarial circumstances between PWC and an adjacent developer. We were able to make these adjustments without incurring additional costs for either Branch or PWC.

Relevant and verifiable evidence of good performance:

Branch received the 2010 "Outstanding Contractor Award" from Prince William County, which, to the best of our knowledge, was the only such award they had ever given. This simply would not have been possible without our partner RDA. The project was finished on time and within the County's budget constraints. Our relationship with PWC, VDOT, and ALL of the other stakeholders IMPROVED over the course of the project. We enjoyed outstanding relationships with VDOT personnel Susan Shaw, Art Klos, and Helen Cuervo. We continue to have positive relationships with PWC's Department of Transportation officials, Tom Blaser, Khattab Shammout, and Mohammad Ayyoubi.

Branch incorporated excess earthen materials from the project into the James Long Park, significantly improving their equestrian facilities. We also furnished and installed, at our own expense, a 36" encasement pipe across Route 15 for the Park's future utility needs. We also provided other miscellaneous site improvements to the Park.

Branch received several letters from adjacent property owners expressing their gratitude for efforts by Branch personnel to coordinate and accommodate when possible the ongoing activities of the project in such a manner to meet various needs of these properties.



Lead Contractor qualifications to successfully construct this Project:
This relevant project clearly demonstrates that Branch is fully qualified to be the lead contractor for the construction of the Route 606 Reconstruction and Widening project. The project is equal in complexity and possesses similar roadway characteristics. Branch, in partnership with RDA, completed the Route 15 project to the broad satisfaction of all stakeholders.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime design consulting firm responsible for the overall project design. | c. Contact information of the Client or Owner and their Project Manager who Can verify Firm's responsibilities. | d. Contract Completion Date (Original) | e. Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands) |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| | | | | | Original Contract Value | Final or Estimated Contract Value | |
| Name: ROUTE 58 CORRIDOR IMPROVEMENTS Location: Meadows of Dan and Hillsville, VA | Name: HNTB CORPORATION | Name of Client: VDOT Phone: (540) 387-5345 Project Manager: Mr. Robert Williams Phone: (540) 387-5345 Email: robbie.williams@vdot.virginia.org | Phase 1: December 2005 Phase 2: November 2011 | Phase 1: December 2005 Phase 2: November 2011 | Phase 1: \$19,972 Phase 2: \$83,000 | Phase 1: \$19,972 Phase 2: \$83,195 | Phase 1: \$19,972 Phase 2: \$83,195 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

Branch Highways is the Design-Build Contractor providing design, construction, right of way acquisition, utility relocation, permitting and wetlands/environmental mitigation for the development, design and construction of the Route 58 Corridor from Hillsville to Stuart under the authority of the Virginia Public-Private Transportation Act of 1995 for Virginia Department of Transportation. The Project begins at a point just west of Little Reed Island Creek on the southwest side of the Town of Hillsville and continues generally east, through Carroll, Floyd and Patrick Counties, to approximately one mile west of the town limits of Stuart, at which point the project ties into four lanes of existing Route 58. The Project will be designed and constructed in phases.

- **Phase 1: Blue Ridge Parkway Crossing at Meadows of Dan (Department Project 0058-070-E02)**. The western terminus of Phase 1 is approximately 0.3 miles west of the existing intersection of Route 58 and Route 600. The alignment is approximately three miles long and the eastern terminus is less than 0.1 miles east of the existing intersection of Route 58 and Route 795. Phase 1 of the Project will be a four-lane, divided highway. It consists of two lanes in each direction separated by a median. This Project Phase value was \$19,971,672 with a completion date of December 15, 2005. The Phase was completed ahead of schedule and on budget (zero change requests/orders).
- **Phase 2: Hillsville Bypass (Department Project 0058-017-E13)**. The western terminus of the Hillsville Bypass of Phase 2 is approximately 0.1 miles east of Route 714. The alignment is approximately 5.2 miles long and the eastern terminus is approximately 0.1 miles west of Route 820. The Hillsville Bypass will be a four-lane, divided highway. It consists of two lanes in each direction separated by a median. This Project Phase volume is \$83,000,000 with a completion date of November 2011.

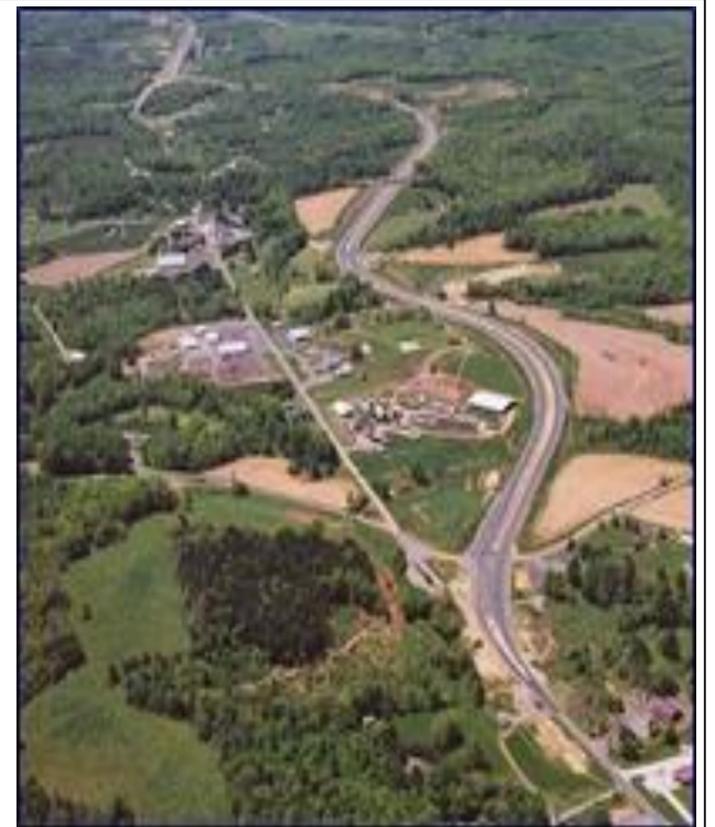
Demonstrating a well-integrated organization [cooperation among the parts] with proven cooperative work history:
Branch had many partners on both the Meadows of Dan and Hillsville Bypass Projects. Each partner had specific needs and expectations that evolved as the process of designing and delivering these projects evolved. Entities as diverse as local governmental agencies, politicians, farmers, business owners, the US Department of the Interior, VDOT, residents, and a host of professional service providers were given voice. The successful completion of these projects is a testament to Branch's ability to bring together an integrated Project Team that was capable of balancing the project needs with those of the numerous Stakeholders.

Branch, VDOT, and the Project Team faced and overcame the following challenges, demonstrating teaming experience and complementary skills and experiences:

- Post-award additions of environmental surveys by the FHWA threatened to delay the Hillsville Bypass project by a full construction season. Working together, VDOT, FHWA, Branch, and our Design Partner, HNTB, revised the design and construction schedules to mitigate these impacts resulting in no additional costs to VDOT (besides the actual surveys) and no delay to the project.
- VDOT received multiple requests by local elected officials for changes to the lighting at the interchanges. The Project Team, including VDOT, BHI, HNTB, and the local officials found common ground through frank and open discussions. While Branch had to perform additional work under previously unnecessary traffic conditions, the overall schedule was maintained and no extra costs were incurred by VDOT, despite the late-date changes.

Relevant and verifiable evidence of good performance:

- *Branch was able to construct both of these Projects ahead of schedule.* Besides the known complexities of the D-B/PPTA process in terms of design, various reviews and comment periods, utility relocations, environmental accommodations, and general disruptions in those processes, the additional input from all the stakeholders affected the eventual construction processes. Successful completion in terms of time was a challenge met.
- *Branch completed these projects within the originally agreed pricing.* Good performance measured by cost control is predicated on identifying risks and managing those risks. While surprises did surface, as they do on all projects, Branch was able to adroitly adjust to those situations with the support of the Project Team and avoid cost escalations.
- *No change orders were requested on either project by the Branch Team.* Branch was focused on finding solutions, and not finding ways to add scope that could lead to increased costs. Good contractors who conduct themselves in this manner, and have evidence that they've "walked the walk", like Branch Highways, are good performers.



Lead Contractor qualifications to successfully construct this Project:
As one of the first contractors to engage the Department in the PPTA/D-B arena, Branch has shown that we have the experience to successfully navigate the perils involved in the design build. Our proven track record, as exemplified in the two Route 58 Projects discussed herein, among others, is a clear indication that the Department should have full confidence in our ability to be an ideal design builder for the Route 606 Project under consideration.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime design consulting firm responsible for the overall project design. | c. Contact information of the Client or Owner and their Project Manager who Can verify Firm's responsibilities. | d. Contract Completion Date (Original) | e. Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands) |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| | | | | | Original Contract Value | Final or Estimated Contract Value | |
| Name: SMITH LAKE RESERVOIR AND DAM Location: Stafford County, VA | Name: SCHNABEL ENGINEERING | Name of Client: Stafford County Phone: (540) 658-4541 Project Manager: Mr. Keith Dayton Phone: (540) 658-4541 Email: KDayton@staffordcountyva.gov | August 1997 | October 1997 | \$6,966 | \$7,067 | \$7,067 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

The expansion of the Smith Lake Reservoir and Aquia Dam was an interesting and challenging blend of civil construction. To increase the water capacity of the reservoir, the existing earthen dam elevation had to be raised and reinforced, with appropriate safety enhancements incorporated. A new spillway, slurry curtain wall cut-off trench, and overtopping armorment were constructed features of the dam modification, as well as major alterations to the water supply and control structures. One of the most innovative techniques was the use of roller compacted concrete (RCC) for the overtopping armorment and slope protection. RCC overlays provide earthen dams the safety and reliability of conventional-slump concrete, but at a considerably reduced cost.

During construction, environmental and public safety issues had to be addressed. The reservoir provides water to a lot of people in the area, making it essential to maintain an adequate and uncontaminated supply. Erosion and sediment control were also vital, as well as protecting the downstream flow so that the existing ecosystem was not damaged.

- Earthwork**
- Raised 700 LF section of dam by 12 vertical feet
 - 1,000 LF balance of the length of dam will be raised 6.5 vertical feet with earth zones
 - 1,000 LF section of dam is for emergency overtopping and is fully protected with roller compacted concrete
 - 39,000 SF of soil-bentonite slurry wall (3 feet) installed in core of the dam
 - 30,000 CY of soil movement required to complete dam zones
- Water Diversion and Control**
- Provided passage of a 10-year storm during construction
 - Surface drainage was provided and was in accordance with the erosion and sediment control permit
- New Principal Spillway**
- Dam's existing concrete spillway was demolished and replaced
 - Approximately 160 feet wide and 350 feet long
 - 3,500 CY concrete used in new spillway slab, walls, crest and stilling sections
 - Spillway foundation secured with rock anchor
- New RCC Emergency Spillway**
- Roller compacted concrete
 - 25,300 CY required
 - Runout apron is 39 feet wide and 3 feet thick
 - Contraction joints designed for 200-foot intervals through the roller compacted concrete and adjacent structures

- Outlet Tower and Raw Water Intake**
- Modified outlet works by extending 60" outlet pipe and installed a 24" X 48" hydraulically operated sluice gate for underwater control of future drawdown and water level adjustment
 - Water intake tower
 - Access bridge
 - New pumps and equipment were constructed and installed
 - New raw water intake line connected to the treatment place adjacent to the reservoir
- Other**
- Care exercised with erosion and sediment controls
 - Piesometers and movement monitors installed
 - Underdrains, yard piping, riprap, parapet and weir walls, paving, fencing and closure of borrow areas are other items of work done to complete project



So, how did we do? Keith Dayton, Capital Improvements Program Manager for the Stafford County Utilities Administration, had this to say:

"The expansion of the dam at Smith Lake was confronted with more than the fair share of challenges, including record snowfalls and the remnants of three hurricanes. The fact that the job was completed on time and within budget speaks volumes about the initiative and "can do" attitude of Branch Highways, Inc."

Attachment 3.4.1(b): Work History Forms—LEAD DESIGNER

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime/general contractor responsible for overall construction of the project. | c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities. | d. Construction Contract Completion Date (Original) | e. Construction Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands) |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| | | | | | Construction Contract Value (Original) | Construction Contract Value (Actual or Estimated) | |
| Name: SUDLEY MANOR DRIVE PPTA/DESIGN-BUILD Location: Prince William County, VA | Name: THE LANE CONSTRUCTION CORPORATION & CH2M HILL | Name of Client: Prince William County DPW Phone: (703) 792-6826 Project Manager: Mr. Khattab Shammout, PE Phone: (703) 792-6826 Email: kshammout@pwcgov.org | September 2006 | September 2006 | \$30,000 | \$30,000 | \$2,000 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

*Design Work Performed by **RINKER DESIGN ASSOCIATES, P.C. (MANASSAS, VA)** as **PRIME DESIGNER***

*Delivery Method: **DESIGN-BUILD***

*Category of Work: **Roadway Design, Hydraulic Design, Grade-Separated Railroad Crossing, Public Involvement, Environmental Permitting***

PROJECT SCOPE: Four-Lane Divided Highway, Urban Typical Section with Curb and Gutter, and Raised Median; 10,000 linear feet, Urban Minor Arterial

PROJECT DESCRIPTION: Sudley Manor Drive was prepared for Prince William County on an accelerated schedule in accordance with the Public-Private Transportation Act of 1995 (PPTA). The project provides a direct connection from Linton Hall Road to the Prince William Parkway and Sudley Road area, as called for in the Prince William County Comprehensive Plan. In addition to the 10,000' extension of Sudley Manor Drive (a four-lane urban minor arterial designed to accommodate future expansion to six lanes), the project included Linton Hall Road Improvements from Devlin Road to Broad Run. The project required close coordination with VDOT to meet the accelerated schedule for plan design, utility relocation, right-of-way acquisition, and construction. This project has been constructed and placed under traffic.

Sudley Manor Drive's typical section was carefully developed to accommodate a future widening to the inside, similar to the proposed Route 606 improvements identified in this RFQ. In conformance with the Comprehensive Plan, the typical consisted of a four-lane roadway built on six-lane right of way with curb and gutter, depressed median, sidewalk and a 10' wide shared use path to accommodate both pedestrians and bicyclists in the corridor. MS-2s and MS-1s were utilized at major intersection to enhance traffic channelization and to improve roadway drainage. The design adhered to VDOT standards and policies throughout, incorporating standard pavement, incidentals, drainage, and stormwater management design. The drainage design (including 5 stormwater management facilities and storm sewer networks) were thoroughly developed to accommodate the ultimate six-lane facility in accordance to the hydrologic and hydraulic requirements applicable at the time of construction.

The Sudley Manor Drive project provided many challenges for the project team. The accelerated schedule required RDA to assemble construction plans within 7 months of project kickoff while incorporating directives from the Contractor, VDOT and Prince William County into the design. Design issues that needed special consideration included: a bridge with MSE walls over a railroad; coordination of the project with several large fuel pipelines, the construction and access requirements of a new firehouse, and several site developments; floodplain analysis and environmental considerations related to major stream crossings; and a traffic analysis and design. The project team also worked closely with VDOT to ensure a seamless transition between this PPTA project and the adjoining VDOT-administered construction project on Linton Hall Road.

As part of this contract, RDA also provided survey services including complete boundary and topographic surveys, in addition to plat preparation for more than 50 properties. The major roadway features associated with Sudley Manor Drive are nearly identical to the prescribed elements for the Route 606 Old Ox Road from Route 621 Evergreen Mills Road to Route 267 Dulles Greenway.



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime/general contractor responsible for overall construction of the project. | c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities. | d. Construction Contract Completion Date (Original) | e. Construction Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands) |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| | | | | | Construction Contract Value (Original) | Construction Contract Value (Actual or Estimated) | |
| Name: STRINGFELLOW ROAD (ROUTE 645) WIDENING Location: Fairfax County, VA | Name: FORT MYER CONSTRUCTION | Name of Client: VDOT NOVA District Phone: (703) 259-1794 Project Manager: Mr. Zamir Mirza Phone: (703) 259-1794 Email: Zamir.Mirza@vdot.virginia.gov | Fall 2015 | Fall 2015 (est.) | \$22,320 | \$22,320 | \$2,300 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

*Design Work Performed by **RINKER DESIGN ASSOCIATES, P.C. (MANASSAS, VA)** as **PRIME DESIGNER***

*Delivery Method: **DESIGN-BID-BUILD***

*Category of Work: **Roadway Widening, Traffic Management Plans, Hydraulic Design, Public Involvement, Traffic Engineering***

PROJECT SCOPE: This project involves the widening of the existing two-lane roadway (2 miles) to a four-lane divided urban minor arterial facility with sidewalks and trails, curb and gutter and a raised median from Route 50 to Route 7735 (Fair Lakes Boulevard) involving extensive utility coordination. The magnitude of this project including utilities, right of way, and construction is valued at nearly \$50 million.

PROJECT DESCRIPTION: VDOT selected RDA to provide engineering services for this 2.02-mile project for right of way and construction plans including roadway design, hydraulic design, traffic engineering design (including traffic data collection and analysis), sign, signal, pavement marking, lighting plans and ITS, retaining wall design, permit sketches, coordination of utility design and supplemental survey data with roadway design and construction coordination and support. The project consists of widening the existing 2-lane roadway to a 4-lane divided roadway with on-road bicycle lanes, sidewalks and trails, curb and gutter, and a raised median for the length of 2.02 miles from route 7735 Fair Lakes Boulevard to Route 50. The project passes through a densely populated residential corridor with several public facilities including a library, schools and parks, as well as several stream crossings. In addition, the corridor has major utilities including a newly installed 24-inch water main, several large aviation fuel serve Dulles International Airport's fuel farm, as well as the other standard overhead and underground utilities. Roadway design tasks include horizontal and vertical geometrics, pedestrian facility design, on-road bicycle lanes, detailed Traffic Management Plan (TMP) design, signal design, and signage and marking plan design. Drainage design tasks include storm water management facility design, major culvert design, H&H analyses, closed system roadway drainage design, and erosion/sediment control plans. During the preliminary design phase, RDA developed and evaluated multiple roadway alignments in coordination with VDOT, Fairfax County, and other stakeholders including homeowners' associations and public school representatives for the selection of the preferred roadway alignment. In addition to roadway design tasks, RDA has assisted VDOT with the coordination of the relocation of underground and above ground utilities by developing detailed utility relocation information plans depicted as-built information for each relocated utility.

RDA has received significant positive feedback on this project through VDOT's Consultant Performance Reports. VDOT's Project Manager (from Northern Virginia District Location and Design Division) noted that:

- "Rinker staff has been very cooperative in addressing the needs/requirements of the Department."
- "Rinker has worked very well with other agencies particularly Fairfax County" and "exceeded expectations on many tasks."
- "Rinker staff work diligently to prosecute the work thoroughly and efficiently" and "Rinker's response to review comments is exemplary." (Utility relocation are near complete and the project was awarded in Dec. 2012 for construction)



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime/general contractor responsible for overall construction of the project. | c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities. | d. Construction Contract Completion Date (Original) | e. Construction Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands) |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| | | | | | Construction Contract Value (Original) | Construction Contract Value (Actual or Estimated) | |
| Name: GEORGE MASON UNIVERSITY—CAMPUS DRIVE Location: Fairfax County, VA | Name: BRANCH HIGHWAYS, INC. | Name of Client: George Mason University Phone: (703) 993-2512 Project Manager: Mr. Brad Glatfelter Phone: (703) 993-4051 Email: BGlatfel@GMU.edu | January 2014 | January 2014 | \$15,000 | \$15,000 | \$1,215 |

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

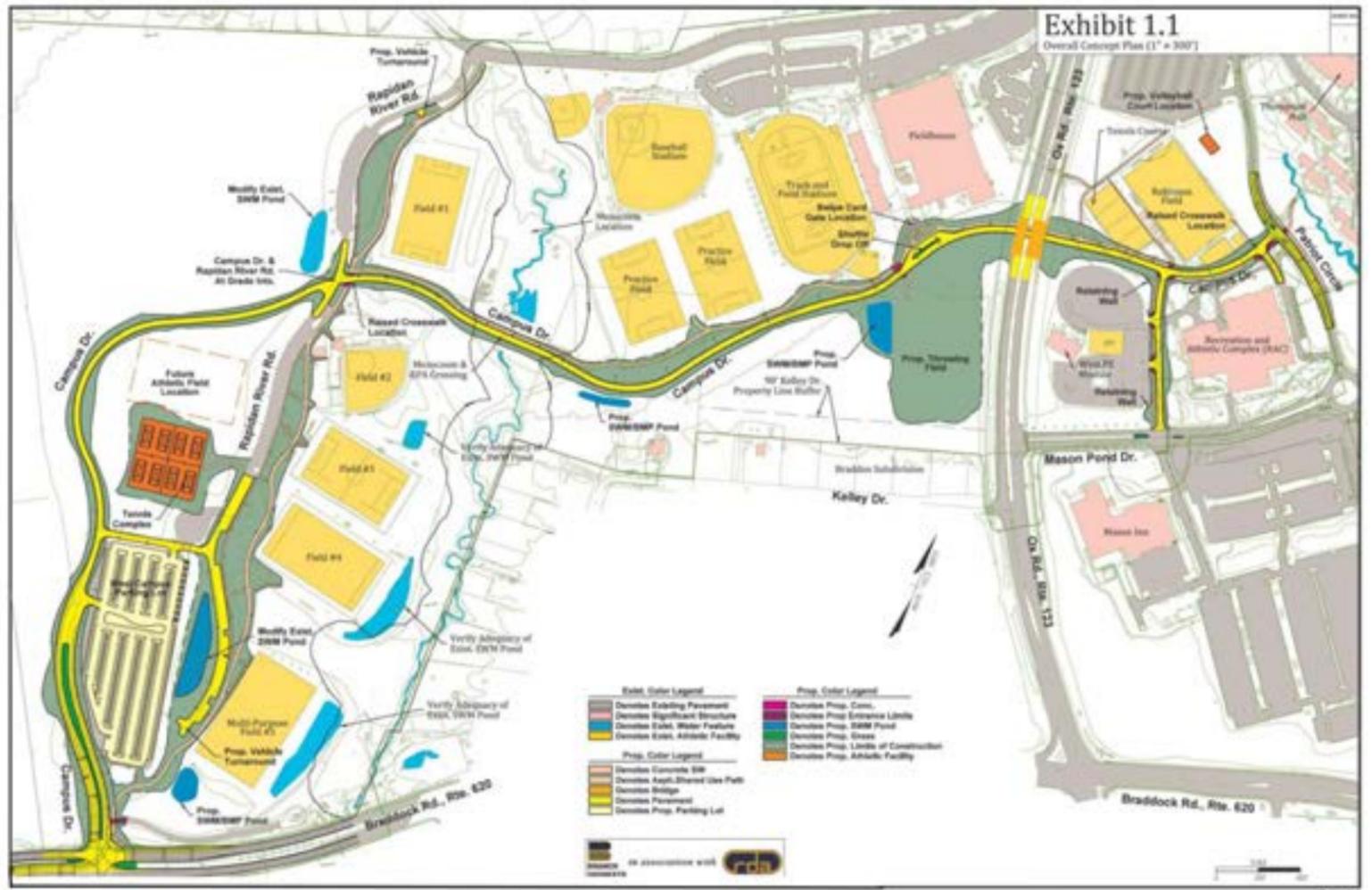
*Design Work Performed by **RINKER DESIGN ASSOCIATES, P.C. (MANASSAS, VA)** as **PRIME DESIGNER***
*Delivery Method: **DESIGN-BUILD***

*Category of Work: **Roadway Design, Structural Design, Traffic Management Plans, Traffic Engineering, Public Involvement, Hydrologic & Hydraulic Design, Construction Management***

PROJECT SCOPE: The proposed development scope of Campus Drive begins on George Mason University's Fairfax West Campus off of Braddock Road, at the existing intersection of Prestwick Drive located west of Route 123. Campus Drive will traverse the West Campus heading north from Braddock Road and west of the existing parking lot while intersecting with existing Rapidan River Road, directly south of Field 1. The proposed road continues east along the existing Regional Stormwater Management Facility dam embankment and south of the existing Field House. Continuing eastward, it will cross underneath a new Route 123 bridge where the proposed grade separated road crossing occurs. After entering the East Campus under Route 123, Campus Drive will intersect with existing Patriot Circle, just north of the existing RAC Facility. In addition to the proposed road design on-campus, road frontage improvements to existing Braddock Road and the bridge design on Route 123 are required offsite road improvements, subject to VDOT review and approval. Proposed Civil Design Plans for this project include the onsite design of Campus Drive, the road frontage improvement plans for Braddock Road, and the bridge design plans for Route 123, lighting and landscape design, water quality and quantity facility design, athletic throwing fields design, Tennis courts and promenade design, environmental impacts, and utility coordination and design, all necessary for successful completion of this project. These improvements will provide a "loop" for the University while improving access by connecting East and West Campus locations.

Total Length of Work—3.5 Miles of Design and 4.7 Miles of CEI).

PROJECT DESCRIPTION: RDA served as the Lead Designer providing engineering design services, environmental permitting, and construction management services for the Campus Drive portion of the project at the GMU Campus in Fairfax County, Virginia. The project consists of complete roadway construction for 1.2 miles of Campus Drive. The project also includes construction of an additional 0.3 miles of Braddock Road widening, and Route 123 Bridge design with detour plans by a subconsultant. Project limits are from the Braddock Road/Campus Drive interchange on the southern portion of the West Campus to Patriot Circle on the East Campus, including construction of bridge structure at Route 123. RDA served as the Prime Engineering Consultant to Branch Highways, Inc., the Lead Contractor/Project Constructor responsible for development and construction. The project was performed as a Design-Build venture under the Virginia PPTA Act of 1995.



Attachment 3.4.1(c): Work History Forms—DAM CONSTRUCTION

ATTACHMENT 3.4.1(c)

DAM CONSTRUCTION - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime design consulting firm responsible for the overall project design. | c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities. | d. Contract Completion Date (Original) | e. Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Dollar Value of Work Performed by the Firm identified as the Dam Construction Specialist for this procurement.(in thousands) |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------|----------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| | | | | | Original Contract Value | Final or Estimated Contract Value | |
| Name: CENTRAL VIRGINIA WATER STORAGE CORP. Location: Buckingham County, VA | Name: KNIGHT PIESOLD CONSULTING | Name of Client: Tenaska, Inc. Phone: (402) 691-9500 Project Manager: Mr. Andy Jones Phone: (402) 691-9500 Email: Price_rf@vdot.state.va.us | September 2002 | October 2003 | \$6,990 | \$6,626 | \$6,626 |

h. Narrative describing the Work Performed by the Firm identified as the contractor for Dam Construction for this Project.

PROJECT SCOPE: Construction of a 30-acre, 650-acre-foot drought storage reservoir in northern Buckingham County, Virginia. The purpose of which was to provide up to 640 acre-feet of backup raw water supply to delivery to a proposed power plant located in adjacent Fluvanna County, Virginia. Work consisted of excavating and grading for an earthen embankment dam with a clay core and chimney drain; rip rap armoring; a concrete spill way with articulated concrete mat energy dissipation system; a steel epoxy-coated sheeting retaining wall with Dywidag-deadman tieback system with cathodic protection; wetland protection; and intake screen and tower.



- Total Earthwork: 450,000 CY of excavation and embankment
- Total Rip Rap: 50,000 tons
- Total Drainage Sand: 25,000 tons
- Total Articulated Concrete Mats: 29,000 SF
- Total Epoxy-coated Sheet Piling: 3,700 LF
- Total Geotextiles: 87,000 SY
- Total Concrete Spillway: 300 CY
- Total Seeding: 30 Acres
- Piesometers: 25 EA

Tenaska USA, operating as a Central Virginia Water Storage Corporation needed this water storage reservoir to be operational before the associated power plant would be allowed to become operational because of limitations set by the regulatory agencies regarding how much water could be removed directly from the James River. The Fall of 2002 experienced record breaking rainfall during which major grading operations were being conducted on the reservoir project. Branch, mitigated these delays and delivered the project to the client within the allotted time at a reduced cost.

All materials for the project were delivered through a single-access residential community. There were nearly 6,000 individual truck deliveries for the various materials. Branch, worked with the residents, emergency services, the various vendors, and the client to successfully minimize the impact to the community.

Attachment 3.4.1(d): Work History Forms—DAM DESIGN

ATTACHMENT 3.4.1(d)
DAM DESIGN - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime/general contractor responsible for overall construction of the project. | c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities. | d. Construction Contract Completion Date (Original) | e. Construction Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Design Fee for the Work Performed by the Firm identified as the Dam Design Specialist for this procurement.(in thousands) |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|----------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| | | | | | Construction Contract Value (Original) | Construction Contract Value (Actual or Estimated) | |
| Name: LAKE CAROLINE WEIR REHABILITATION Location: Caroline County, VA | Name: COLLINS CONTRACTING | Name of Client: Lake Caroline POA Phone: (804) 448-3400 Project Manager: Pete Davis/Tracy Clay Phone: (804) 994-3045 Email: pd9491@yahoo.com | November 2012 | November 2012 | \$299 | \$299 | \$58 |

h. Narrative describing the Work Performed by the Firm identified as the designer of the Dam for this Project. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

Design Work Performed by RINKER DESIGN ASSOCIATES, P.C. (FREDERICKSBURG, VA) as PRIME DESIGNER

Delivery Method: DESIGN-BID-BUILD

Category of Work: Roadway Design, Traffic Management Plans, Public Involvement, Hydrologic & Hydraulic Design

PROJECT SCOPE: RDA was responsible for preparing all the necessary studies and paperwork required to bring this 1968 dam into current DCR compliance. This work included revising the dam and raising the roadway to reduce potential future failures. An Emergency Action Plans (EAP) for dam failure was developed in conjunction with the Virginia Department of Conservation and Recreation requirements. This also included a Dam Failure Inundation Study. This study reflects the potential for water overtopping Route 1 as well as I-95 which are both downstream and within the inundation zone.

The Lake Caroline Dam is considered a High Hazard Dam due to potential impacts on US-1 and I-95 immediately downstream. The EAP and supporting Hydraulic and Hydrologic Analysis (H&HA) computations were developed according to Virginia Impounding Structure Regulations, dated Dec. 22, 2010. The dam itself is 2,000 feet long and stands 30 feet tall. The recreational lake behind it is significantly larger than the Horsepen dam and has a surface area of 277 acres, holds 3,094 acre-feet in volume, and has a contributing watershed of 9.6 square miles. However, the Lake Caroline Dam parallels the DCR requirements that will governed the Horsepen Dam associated with the Route 606 Dulles Loop improvements. The inundation zone study determined the area impacted and the depth for: a 'Sunny Day' dam failure, a Probable Maximum Flooding (PMF) rainfall event, and a dam failure with the PMF for Lake Caroline. The EAP and inundation map provide warning levels and response conditions for those at the HOA and state/local Emergency Response Departments.

RDA developed construction plans for the alteration of the emergency spillway of Lake Caroline Dam. Similar to the proposed Horsepen Dam, the dam itself encompasses a roadway that serves as a primary road for the Lake Caroline development. The roadway system provides a loop within the single access point to the residents, it is critical to the area. The dam alteration addressed issues with seepage through the antiquated concrete spillway weir wall and corrected a failing section of roadway. The alterations include: raising Lake Caroline Drive to within 6" of the weir wall, installation of a waterproof bituthene layer on the upstream side of the weir wall, and the addition of a maintenance pad with wire guardrail on the Lake side. The completed project is well received by the community.

Close work with the Geotechnical Engineer and the POA was imperative to coordinate the work that needed to be completed. Time was critical to the client since the lake needed to be lowered during this construction. As the development uses this lake for recreation it was critical that this work be completed as quickly as possible to allow enough time for the water level to return to normal levels for the following boating season. DCR granted a Regular Operation and Maintenance Certificate once the EAP and roadway construction were reviewed and approved.

