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Statement of Qualifications



A Design-Build Project

Replacement of I-81 Bridges  
over Rte. 11,  
Norfolk Southern Railway &  
Middle Fork Holston River,  
Smyth County, Virginia

July 12, 2018

State Project No.: 0081-086-818;  
0081-086-742

Federal Project No.: BR-081-1 (336)

Contract ID Number: C0097555DB102

*Submitted By:*



*in conjunction with*



Subconsultants:



## 3.2

# LETTER OF SUBMITTAL

**3.2 - LETTER OF SUBMITTAL**

**July 12, 2018**

Mr. Suril R. Shah, P.E.  
Alternate Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219

RE: Replacement of I-81 Bridges over Rte. 11, Norfolk  
Southern Railway & Middle Fork Holston River  
Smyth County, Virginia  
Contract ID Number: C0097555DB102

Dear Mr. Shah:

Orders Construction Company, Inc. (Orders), as the Offeror, is pleased to submit to the Virginia Department of Transportation (VDOT) our Statement of Qualifications (SOQ) in response to your Request for Qualifications (RFQ) for Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway & Middle Fork Holston River. We are confident our SOQ presents a Team of superior experience and proven record in the design and construction of similar bridge replacement projects along the I-81 corridor. Orders and Whitman, Requardt & Associates, LLP (WRA) have worked together on several notable and successful projects, including the award winning I-81 Bridge Replacement over the Maury River and the I-81 Bridge Replacement over Halls Bottom Road Design-Build Project. Both have similar complexities in maintenance of traffic, bridge design and geotechnical engineering in karst geology to this Design-Build project.

- 3.2.1 Offeror** - The full legal name and address of the Offeror is: Orders Construction Company, Inc., 501 Sixth Avenue, Saint Albans, WV 25177.
- 3.2.2 Point of Contact:** Charlie Stokes, Vice President  
605 Lithia Road, Wytheville, VA 24382  
276.227.0378 (P), 276.223.0134 (F)  
cstokes@ordersconstruction.com
- 3.2.3 Principal Officer:** Nathaniel R. Orders, President  
501 Sixth Avenue, Saint Albans, WV 25177  
304.722.4237 (P), 304.722.4230 (F)  
nate@ordersconstruction.com
- 3.2.4 Corporate Structure** - Orders is structured as a corporation. Orders will undertake full financial responsibilities for the project and accept the risks and liabilities for the performance of the work.
- 3.2.5 Lead Contractor and Lead Designer** - The Lead Contractor for this project will be Orders Construction Company, Inc., and the Lead Designer will be Whitman, Requardt & Associates, LLP.
- 3.2.6 Affiliated and/or Subsidiary Companies** - The full legal names and addresses of all affiliated and/or subsidiary companies of the Offeror are provided in Attachment 3.2.6 in the Appendix.
- 3.2.7 Certification Regarding Debarment** - Attachments 3.2.7(a) and 3.2.7(b) are included in the Appendix.
- 3.2.8 VDOT Prequalification** - Orders' prequalification number is O017 and current VDOT prequalification status is active. Evidence of our prequalification is included in the Appendix.
- 3.2.9 Bonding Capacity** - Attachment 3.2.9 in the Appendix is a letter from our surety that provides evidence of our performance and payment bonding capacity for the estimated contract value of this project.
- 3.2.10 SCC and DPOR Registration Requirements** - SCC and DPOR registration information for all business entities on the Offeror's team are included in Attachment 3.2.10. Evidence of registrations and licenses are provided in the Appendix.
- 3.2.11 DBE Participation Goal** - Orders is committed to achieving or exceeding the four percent (4%) DBE participation goal for the entire value of the contract.

Sincerely,



Nathaniel R. Orders  
President

## 3.3

# OFFEROR'S TEAM STRUCTURE

### 3.3 Offeror’s Team Structure

Orders Construction Company, Inc. (Orders) will be responsible for managing the project in its entirety, supervising the design and construction as well as performing major elements of the construction work. Whitman, Requardt & Associates, LLP (WRA) will lead all aspects of project design, and Construction QC Inspection for Orders. The Orders Team synergizes highly qualified team members with previous working relationships who bring specific expertise to enhance the team and ensure a quality project for VDOT.



**Orders Construction Company, Inc. (Orders) - Offeror, Legal Entity, Lead Contractor**

Orders is a family-owned business now being managed by third and fourth-generation highway contractors and Registered Professional Engineers. Orders was founded in 1964 as a general contractor specializing in bridge construction and has grown to become a widely diversified supplier of construction services to a broad range of clients throughout the Mid-Atlantic and Midwest. Orders has recently completed six bridge projects in the Bristol District and is currently finalizing the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build Project in Washington County.

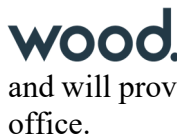


**Whitman, Requardt & Associates, LLP (WRA) – Lead Designer and Quality Control Inspection**

WRA is a full service engineering firm that was founded over 100 years ago primarily serving state and local governments in the Mid-Atlantic region of the United States. WRA has been performing work for state and local governments in Virginia for over 65 years. WRA is very familiar with this section of I-81 with offices located in nearby Bristol and Blacksburg. WRA has unparalleled experience with bridge replacement projects on the I-81 corridor including the I-81 Bridge Replacement over Halls Bottom Road.



**A. Morton Thomas & Associates, Inc. (AMT)** will provide Quality Assurance Management and Inspection for the Orders Team, as they are currently providing on two on-going Design-Build Projects in Virginia, including the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek in the Bristol District. For nearly 60 years, AMT has been a respected provider of transportation design and construction phase expertise in Virginia, including VDOT Design-Build projects.



**The Wood Group (Wood)** has recently acquired the 170 year old firm AMEC Foster Wheeler and will provide an AASHTO accredited Quality Assurance Lab for the project from their Abingdon, Virginia office.



**GEOServices, LLC (GEOS)** will provide an AASHTO and USACOE accredited Quality Control Lab for the Orders Team. GEOS was founded in 2006 and has rapidly grown their material testing services for the region.



**Mattern & Craig (M&C)** will provide survey services to support the final design of the project. M&C was founded in Roanoke, Virginia in February 1978 to offer comprehensive surveying and civil engineering services to public and private entities, including VDOT.



**Bowman Consulting (Bowman)** will provide right-of-way acquisition services for the project under the leadership of Richard Bennett, former State Right-of-Way and Utility Manager for VDOT. Bowman has extensive experience performing these services on both VDOT Design-Build and Design-Bid-Build projects. Appraisal Review Services (ARS) will assist Bowman as a subconsultant.

### 3.3.1 KEY PERSONNEL

Key Personnel Resume Forms are included in Attachment 3.3.1 located in Appendix C. A brief summary of key personnel follows, and more detailed project experience for each are listed on the Resume Forms. The symbol **DB** indicates personnel with Design-Build project experience.

#### **Design-Build Project Manager (DBPM) – Charlie Stokes (Orders – 48 years of experience)**

**DB** Charlie Stokes (DBPM) will serve as the project's DBPM and will have *ultimate responsibility for the project delivery including design, design QA/QC, construction, and construction QA/QC*. As Vice President of Orders, he controls all corporate resources in VA, NC and TN. He has been constructing VDOT roads and bridges continuously for 48 years, and has served as **DBPM** on *12 Design-Build* projects, 3 of which were for VDOT. Notable projects include the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek the Route 60 Main Street Bridge Replacement in Clifton Forge; the Route 11 project over Norfolk Southern Railway in Smyth County, and the Avens Bridge Project over the South Holston Lake in Washington County. Throughout his career Charlie has built a reputation for completing transportation projects on-time and within budget - ranging from major projects on the Capital Beltway to numerous rural secondary bridge replacements.

#### **Quality Assurance Manager (QAM) – Chad McMurray, PE, PMP, CCM, DBIA (AMT - 25 years exp.)**

**DB** Chad McMurray, PE, PMP, CCM, DBIA (QAM) will report directly to the DBPM and will have direct, independent access to VDOT. Chad has performed this role previously on the \$90 million Route 460 Connector Phase I Design-Build and the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek (for Orders), both in the Bristol District. He is also serving in the role of QAM for Orders on a Locally Administrated Design-Build in Luray and has worked with Orders on previous VDOT projects including the Avens Bridge and Route 501 Bridge over the James River and CSX Railroad. As the QAM, Chad will be responsible for the Quality Assurance program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA testing firm, Wood (formerly AMEC). He will ensure conformance with the Contract Documents including the Approved for Construction plans and specifications and continually maintain the project's Materials Notebook. Chad will have overall responsibility for conformance to the Design-Build QA/QC Plan including coordination with the Design QA/QC Manager, Mark Vasco, PE. *Chad will function independently from the Construction QC Manager*, auditing and monitoring Orders Construction Quality Control Program. He will have the authority to stop construction to ensure compliance with the specifications and issue Non-Compliance Reports (NCRs).

#### **Design Manager (DM)– Mike Russell, PE, DBIA (WRA – 29 years of experience)**

**DB** Mike Russell, PE, DBIA (DM) Mike has 29 years of experience designing and managing major transportation projects and programs for VDOT. He will report directly to the DBPM with whom he has enjoyed building and strengthening a strong working relationship since 2003. He is Design Manager of the Orders Team for the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project in the Bristol District which has nearly identical MOT and geological conditions on the project. He will be responsible for providing quality plans, meeting design milestones, Design-Build Team coordination, and ensuring the Design QA/QC Manager's involvement throughout the design phase. He will manage all aspects of design and will coordinate them with the Environmental Permitting Coordinator, Taylor Sprenkle, to ensure all environmental commitments are fulfilled.

#### **Construction Manager (CM)– Earl Adwell (Orders – 46 years of experience)**

**DB** Earl Adwell (CM) will report to the DBPM and be responsible for the project site during construction. Earl has 46 years of experience and has been employed with Orders for 40 years. He will be responsible for managing the overall construction process, including construction and *quality control*. Earl served as Construction Manager on VDOT's I-81 Maury River Bridge Replacement in Rockbridge County (designed by WRA) and Construction Manager on the Avens Bridge over South Holston Lake in Washington County,

VA. Earl is currently the Construction Manager on the Main Street Bridge Replacement in Luray, Virginia – a Locally Administered Design-Build Project.

### 3.3.2 ORGANIZATIONAL CHART

The Orders Design-Build Team Organizational Chart on Page 7 identifies key personnel members and the reporting structure of the Team. Solid lines identify the direct lines of reporting relationships of our team members from the DBPM to the Design, Construction and QA team. Dashed lines represent indirect reporting relationships and obligations to the DBPM and the team members. The reporting structure for the Quality Assurance shows a clear separation between the Construction Quality Control Inspection and field/laboratory testing.

As an enhancement, Orders is proposing certain “*Value-Added*” positions that exceed the RFQ requirements. Another “*Value-Added*” feature of our structure is the addition of an *MOT Task Force* that will be responsible for assessment of the work zone’s operational characteristics and will adjust the MOT/TMP plan as needed.

As a continuation of the functional relationships for Key Personnel described in Section 3.3.1, the following narrative further defines the roles and functional relationships of the team members. These team members were carefully chosen based on their experience and well-established working relationships.

#### Assistant Design-Build Project Manager

**DB Assistant DBPM/Design-Construction Coordinator/Construction Environmental Manager: Joshua Sproles, PE** will “shadow” the DBPM and assist with project delivery as a “*Value-Added*” team member. He will provide support with Design-Build contract management and coordinating project reviews during design and RFIs during construction. His previous 4 projects working directly with the CM has forged a strong working relationship that will be leveraged on this project. Josh will assist the DBPM with the initial schedule development and ongoing updates as he is currently doing on VDOT’s I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County. Josh will conduct regular QA/QC meetings with the QAM and inspection staff to ensure all contract QA/QC documentation is complete and accurate. He will also serve as the Construction Environmental Manager (CEM) and will coordinate closely with the E&S Control Reviewer, Glen Wilson.

#### Safety Manager

**DB Safety Manager: Josh Legg, CSP** will report to the DBPM and serve as the Company Safety Director for Orders Construction. Josh will ensure that this project is continually operating safely and in accordance with OSHA regulations. Josh is a Certified Safety Professional and has been working with Orders Construction for 6 years. Josh will be responsible for the safety training of all Orders employees and ensuring they have all the required personal protective equipment. Josh is also in charge of all pre-employment training and certifications, and compliance with all job-specific safety plans for Orders Construction. This additional responsibility ensures that all training remains current with all state and federal requirements.

#### Right-of-Way Manager

**DB Right-of-Way Manager: Richard Bennett** has 50+ years of experience in the right-of-way and utilities sector, including serving as the State Right-of-Way Manager for VDOT. He will report directly to the DBPM and will manage all aspects of right-of-way acquisition.

#### Utility Manager

**DB Utility Manager: Paul Martin** has 28 years of experience in highway and bridge construction, including 12 years specializing in utility relocations for VDOT. Paul has served as WRA’s Design-Build lead for utility relocation and coordination on such projects as the I-95 Safety Improvements at Route 3 Design-Build, the

I-95 Express Lanes Southern Terminus Extension Design-Build Project, and the I-64 Widening from MP 200-205 Design-Build Project. Paul will report to the DBPM and will interact closely with the DM and CM.

## Design

**DB Structural/Bridge Engineer: *Jeremy Schlussel, PE*** reports to the DM and will oversee structural engineering for the project. Jeremy has over 21 years of experience designing bridges for VDOT including the I-81 Bridge Replacements over the New River in the Salem District, I-64 Bridge Rehabilitation over Maury River (Constructed by Orders with Charlie Stokes as the PM), the I-81 Bridge Replacements over Buffalo Creek and Maury River, and most recently the VDOT's I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build. Jeremy serves as Structures Lead for all WRA's VDOT Design-Build projects and has managed over 200 bridge improvement tasks for VDOT's Structure and Bridge Division under On-Call contracts. Jeremy will also review shop drawings and assist the DBPM, CM and DM during construction.

**DB Roadway Engineer: *Brad Stipes, PE*** has 30 years of highway design experience and will report to the DM and lead the roadway design efforts for the project as well. He served as the lead designer on the I-81 Bridge Replacements over the New River, a \$88 million project (\$48M for the NB bridge currently under construction, and \$40M for the planned SB replacement) in the Salem District. He has extensive working relationships with the L&D Staff in the Bristol District having worked on numerous District projects.

**DB Geotechnical Engineer: *Jeff Basford, PE*** has 17 years of experience in subsurface explorations, geotechnical analysis, design of pavement sections and shallow and deep foundations, slope stability analysis, concrete and geosynthetic reinforced earth retaining structures, and in-situ testing and verification during construction. Jeff served as the Lead Geotechnical Engineer on the I-81 Bridge Replacements over the New River project in the Salem District, and is the Lead Geotechnical Engineer on the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project in the Bristol District. Jeff will report to the DM and collaborate routinely with the Structural Design Engineer and CM.

**DB MOT/Traffic Engineer: *Dana Trone, PE, PTOE*** has 21 years of experience in traffic engineering including development of complex transportation management plans (TMP); MOT design; lighting; signing; ITS; and pavement marking plans. She is extensively familiar with the Traffic Engineering Handbook; MUTCD; Highway Safety Design Manual; and the Virginia Work Area Protection Manual. Dana will report to the DM and collaborate directly with the Lead Roadway Designer and the Construction MOT Manager.

**DB Drainage/Hydraulics Engineer: *David Dehoff, PE*** will report to the DM and lead the design efforts for drainage and SWM. David has 24 years of experience in roadway drainage design and stormwater management, and has designed numerous projects for VDOT utilizing the new Virginia Stormwater Regulations that took effect in July 2014. David has worked on VDOT projects as the Lead Drainage/Hydraulics Engineer for the last 8 years. He most recently served as Lead Drainage/Hydraulics Engineer for the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project.

**DB Environmental Permitting: *Taylor Sprenkle, PWD*** will report to the DM and secure all environmental permits needed for the project. Taylor has 17 years of experience with environmental reviews and permitting on major transportation projects, including the I-81 Truck Climbing Lanes Design-Build in Montgomery County and the 17-mile Route 460 project in the City of Suffolk and Isle of Wight County. He also led the environmental permitting efforts for the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build and other VDOT Design-Build projects along I-95 and I-64. Taylor will work closely with the CEM, Josh Sproles, to ensure all permit requirements are fulfilled.

**Railroad Coordinator: *Robert Jackson*** has 45 years of railroad design and coordination experience and will lead the railroad coordination efforts as a "Value-Added" position. Bob is also a member of the American



Railway Engineering and Maintenance of Way Association (AREMA). He is certified to provide the FRA-required 49CFR Part 214 railroad roadway worker On-Track Safety Training for the Team.

### Design QA/QC

**DB Design QA/QC Manager: Mark Vasco, PE** will report to the DM and will coordinate with the QAM to integrate the Design QA/QC plan into the Design-Build Project QA/QC plan to ensure that all design quality control procedures are completed in accordance with that plan. He will verify that QC and interdisciplinary reviews, including comment resolution, are made prior to submissions. Mark has 35 years of experience in the design of transportation projects and has extensive experience with VDOT Design Manuals; IIMs; design standards; and VDOT/AASHTO criteria.

### Construction QC

**DB Construction QC Manager (CQC): Steve Short** has 23 years of experience managing QC activities on VDOT projects including the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project, and the Route 35 Bridge Replacement Design-Build project, and provided QA services for VDOT’s Route 61 Bridge over the New River Design-Build project in Narrows. He will serve in the “*Value-Added*” role of Construction QC Manager and will report directly to the CM.

### Construction

**DB Project Controls/DBE Compliance: Cheri George** will report to the DBPM and currently serves as the Office Manager for the Virginia office of Orders Construction. Cheri oversees day-to-day project controls and DBE compliance for all projects in Virginia. Cheri has served in this capacity for 27 years.

**DB Superintendent: Dave George** will report to the CM and will be the Orders field leader for all phases of construction, including personnel supervision, job site safety, and subcontractor management. Dave is currently the Construction Manager for VDOT’s I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build Project and was the Superintendent for VDOT’s “Avens” Bridge Replacement over South Holston Lake as well as the Route 501 Bridge Replacement over James River projects.

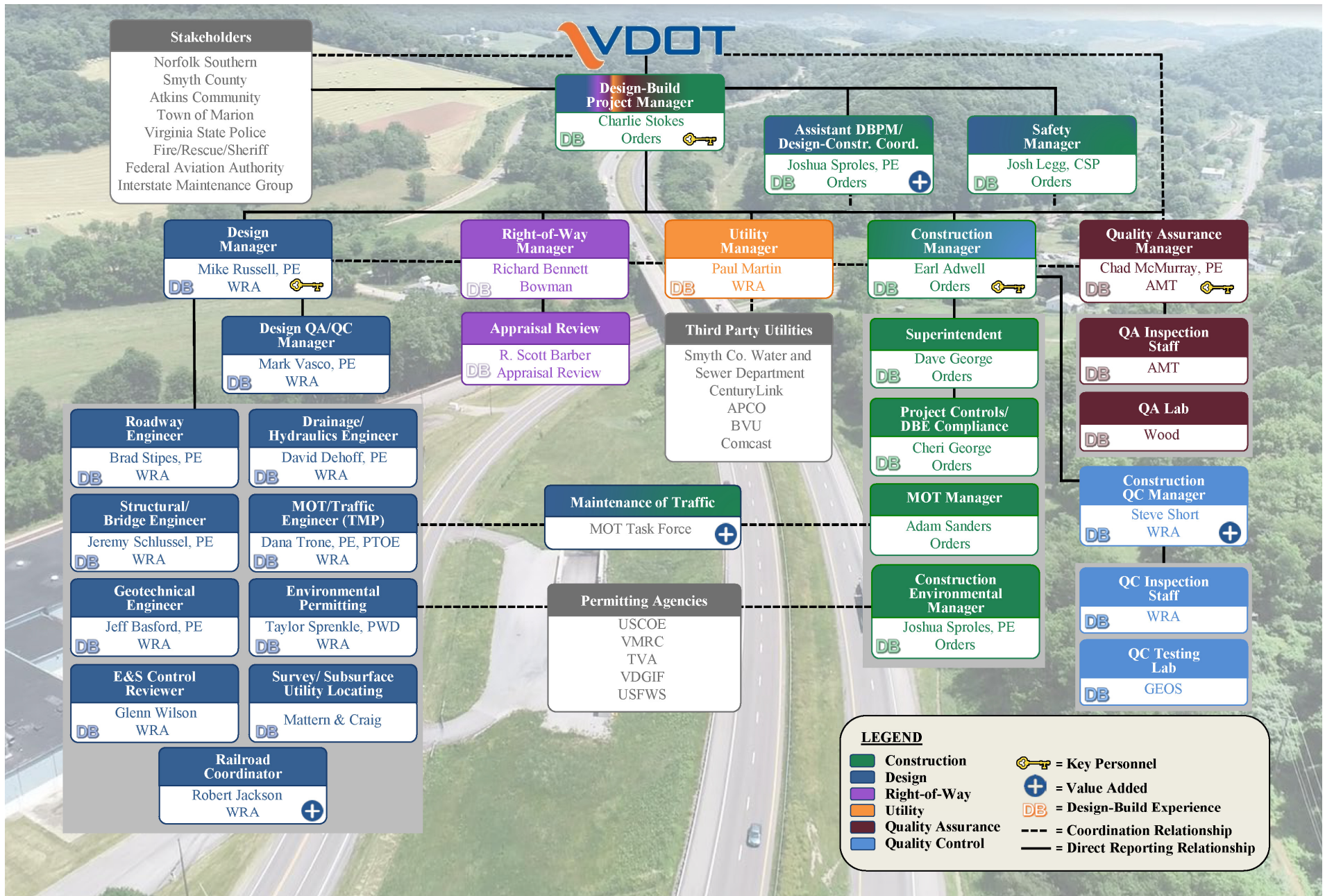
**Maintenance of Traffic Task Force:** A Task Force dedicated to traffic management will be an effective method to manage the risks associated with the safety of the travelling public and the on-site construction workers. As a “*Value-Added*” component of our Team structure, this group will consist of Orders and WRA project staff, VDOT, and Third-Party Stakeholders. The Task Force will meet monthly and as needed to review the current MOT plan to determine if any changes are needed to address current concerns or upcoming activities.

**Summary:** The Orders Team was assembled based on each firm’s intimate knowledge of the site, existing working relationships internally and with VDOT, and their specific expertise to manage the project risks. The WRA design team has worked together extensively on major I-81 bridge replacement projects successfully managing very similar risks to those on this project including extensive MOT, environmental, and geotechnical constraints. At the top of this Team is the close, trust-based professional relationship forged between Charlie Stokes (DBPM) and Mike Russell (DM) that dates back to 2003. The Orders Team fully embraces VDOT’s Design-Build program and is a proven leader in this arena.



*Charlie Stokes & Dave George  
Mock Concrete Closure Pour*

### 3.3.2 ORGANIZATIONAL CHART



## 3.4

# EXPERIENCE OF OFFEROR'S TEAM

### 3.4 EXPERIENCE OF THE OFFEROR’S TEAM

The Orders Team has successfully delivered VDOT projects on schedule and within budget. Our personnel know what needs to be done, with whom we need to coordinate, and how to complete tasks and projects proactively. We bring this experience together to provide VDOT with a premier Team for this project.

#### Orders/WRA Design-Build Team:

Orders and WRA have most recently teamed on VDOT’s I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project which is very similar to the I-81 Bridge Replacement Project at Atkins. Our Team developed a very strong working relationship years ago on VDOT’s I-81 Maury River Bridge Replacement Project and on the I-64 Maury River Bridge Rehabilitation project. The Maury River project was the first to utilize the now standard “Virginia Abutment” design. This new design feature combined with complex MOT and geotechnical constraints pulled all parties together in a partnering atmosphere to deliver this award-winning project on time and within budget. The I-64 Maury River project introduced a new set of constraints including the unique “Delta-Frame” structure and how the frames deflect during deck removal and replacement. The combination of Orders’ extensive contracting experience and WRA’s bridge and roadway design experience presents a Team to VDOT that is ideally suited for this project.

#### 3.4.1 Lead Contractor and Lead Designer

##### Lead Contractor – Orders Construction Company, Inc.:

Orders is a family-owned business, currently managed by third and fourth-generation highway contractors and Registered Professional Engineers. With the Orders name and reputation on the line, the commitment to delivering unmatched workmanship begins at the top of the organization and carries through the entire rank and file of our company. This dedication to quality has made Orders the contractor of choice for many public and private owners. This project is “in the wheelhouse” of the type and size of project Orders’ employees deliver every day. Further details are included in the Appendix on each of the following VDOT projects:



- I-81 Bridge Replacement over Maury River in Rockbridge County
- Route 60 Main Street Bridge Replacement Design-Build in Clifton Forge
- Route 501 Road Improvements and Bridge Replacement over James River in Bedford & Amherst County

Orders has additional extensive experience with roadway and bridge work, including the following projects as examples:

**I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek in Washington County** – Work on this Design-Build project to replace both bridges carrying I-81 over Halls Bottom Road is in the final phase of construction with work scheduled to be completed in September of this year. This Design-Build project is very similar to the proposed I-81 Bridge Replacement at Atkins and includes the same Construction, Design, Quality Control, and Quality Assurance team members that are being proposed for this project.

**Route 11 over the Norfolk Southern Railway in Smyth County**– This VDOT bridge project is located only a few miles from the proposed I-81 Bridge Replacement at Atkins. It included raising Route 11 approximately 5 feet over the Norfolk Southern Railway and utilized both drilled shafts and driven piles to support the structure. Close coordination with the Railway personnel and consultants helped to develop professional relationships that were key to the successful delivery of the project.

**Thomas B. Pugh Memorial Bridge in Prince, WV** – As seen in the photo to the right, Construction access was limited, making the site tightly constrained and congested, adding to the complexity of crossing the New River. Construction access and causeway were complex to meet the environmental restrictions of the project. Steel erection involved hanging 50 girders with minimal access for cranes, which resulted in false work to support girders in some cases that weighed over 60,000 LBS.



*Thomas B. Pugh Memorial Bridge Construction*

Orders has been awarded contracts on more than 50% of the Design-Build projects it has pursued, a much higher success rate than traditional low-bid work. Orders excels at building and inspecting its projects with minimal owner oversight and its commitment to quality is the single most important reason Orders is the preferred Design-Build Contractor for many clients.

**Lead Designer – Whitman, Requardt & Associates, LLP:**

WRA has provided transportation design services to VDOT for over 65 years and engineering, planning and construction management services in the Mid-Atlantic region for over 100 years. WRA is currently ranked #107 on *Engineering News Record's Top 500 Design Firms* and has one of the largest roadway and bridge design groups in Virginia and the region.



*I-81 over Halls Bottom Road*

WRA has completed numerous projects similar in size and scope to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway & Middle Fork Holston River project. Further details are included in the Appendix on each of the following VDOT projects:

- I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County (photo to the left)
- I-81 Bridge Replacements over Buffalo Creek in Rockbridge County
- I-81 Bridge Replacement over the New River in Montgomery and Pulaski Counties

WRA Engineers have worked on numerous projects requiring coordination with NS including relocating NS tracks, new railroad bridges, new overhead highway bridge structures to replace structurally deficient bridge structures, and major rehabilitations that require access to NS right-of-way for execution of the project. One example is Rte. 49 over NSRR in Nottoway County where WRA was tasked with superstructure replacement and substructure modifications to replace the existing structurally deficient bridge. On this project, WRA modified the vertical alignment to increase the sub-standard vertical clearance but minimized the approach impacts.

## 3.5

# PROJECT RISKS

### 3.5 PROJECT RISKS

The Orders Team has carefully reviewed the various documents included in the RFQ Informational Package and performed thorough field investigations to assess the critical risks on the project. The Orders Team has identified the most significant risks to the project as 1) Railroad Coordination (as required by the RFQ); 2) Operational and Construction Safety; and 3) Environmental – Section 7 ESA Coordination.

#### RISK #1: RAILROAD COORDINATION

##### A. Define the Risk and Why it is Critical

Lack of extensive coordination/cooperation with the railroad is a major risk which can result in significant delays either through extended submittal review times or by delays to work at the project site. Extended review times can be caused by unfamiliarity with the railroad’s submittal review process, operating requirements, or engineering standards. Delays to work at the project site can be caused by absence of the watchman-lookout, train traffic, or by safety violations.



*Route 11 over NS Rail in Smyth Co.*

##### B. Impacts the Risk Will Have on the Project

Extended submittal review times can delay access to the site, procurement of long lead time items critical to the design, or the need to redesign portions of the work. Delays to work at the project site caused by absence of the watchman-lookout can impact project schedules and escalate costs considerably. Delays due to train traffic are typically short but can cause significant work stoppages if not properly accounted for in the schedule. Delays due to safety violations are serious matters that can result in a contractor being fined, removed from a project for significant periods of time and/or face operational restrictions.

##### C. Mitigation Strategies

Orders and WRA have built an excellent working relationship with Norfolk Southern Railway on several major highway projects. Therefore, we are very familiar with the NS personnel and processes that are necessary to mitigate the risks that can accompany a project like this. Our strategy to address these issues is as follows:

- NS receives applications for agreements, property access, utility crossings, etc, daily and they have developed a processing system to streamline their review. We have experience with the NS submittal review process that will allow us to recognize what successful applications need to include.
- The safety, security and conduct of railroad’s operations is of the utmost importance to Norfolk Southern. In accordance with Section 49 of the Code of Federal Regulations, Part 214, all personnel will be trained annually in the NS Roadway Worker Protection program. We have personnel certified to provide this training at any time so that there will be no delays to work. On-site job briefings will be conducted daily and as otherwise required by conditions, with the NS Roadway Worker In Charge to insure that there is constant railroad/contractor coordination.
- Our Team will include NS on all schedule updates so they are aware of our planned work activities and can provide any related input to the upcoming work.
- Delays due to train traffic are a routine, are generally short, and are based on the anticipated number of trains per day. The project is not near a yard or facility that requires switching services, so work delays affecting the span over the track are anticipated to be short but must be accommodated in the schedule.
- Norfolk Southern has engineering standards that must be adhered to on their property. For example, no additional drainage can be directed onto railroad property and stormwater management designs must acknowledge this requirement. Clearances, both horizontal and vertical, are always critical. Our design will provide the necessary clearances and will also address removal of the portion of the existing Span 4 by a method that is acceptable to NS.

- Orders has proven to NS that we are committed to rail-track protection including strategies such as 150% crane capacities, heavy lift plans, daily crane and rigging inspections and the use of certified riggers.

**D. VDOT’s Role in Mitigating Risk**

VDOT has already been proactive in engaging the railroad and addressing the issue of horizontal and vertical clearances during preliminary engineering. The Orders/WRA Design-Build Team will be responsible for all other mitigation matters related to construction. If permanent easements or crossing agreements are required, VDOT will be advised and requested to review and approve these measures prior to anything being presented to the railroad. Following VDOT approval, the appropriate applications will be completed and presented to NS for approval, and the final agreements will be forwarded to VDOT for final signatures. If any revisions need to be made to the existing agreement between VDOT and NS for the I-81 highway crossing, VDOT will also be required to approve and execute the revised document.

**RISK #2: OPERATIONAL AND CONSTRUCTION SAFETY**

**A. Why the Risk is Critical**

Operational and Construction Safety is an obvious risk for this project. Several operational and construction safety aspects must be fully evaluated and addressed during detailed project design, and closely followed during construction to ensure *safety of the travelling public and construction staff*. The Operational and Construction Safety Risk is comprised of the following aspects:

- **Major Construction on an Interstate with High-Volume, High-Speed Traffic**

This project requires ongoing heavy construction activities to be performed adjacent to high-volume/speed traffic. Safety risks increase as the space between *construction spaces* and *traffic spaces* decreases. Driver inattention combined with varied speeds through the work zone increase the potential for accidents.

- **Constrained Construction Access**

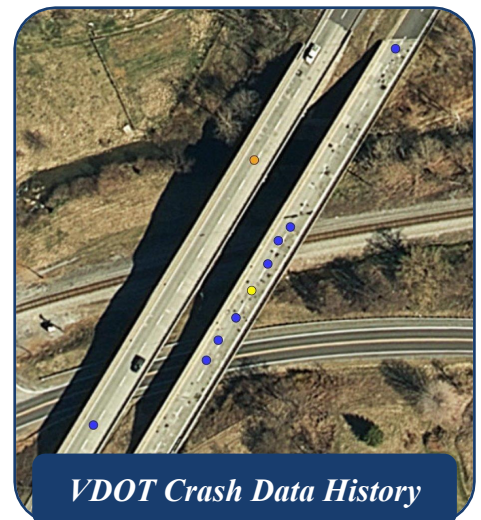
The RFQ indicates that the proposed bridge replacement will be contained within existing right of way. The RFQ Conceptual Plans propose a single bridge to be constructed and centered on the existing median. Access to the median and particularly to the NE quadrant of the northern abutment is a definite concern. Specifically, the work zone is constrained by the following:

- ✓ Close proximity of the existing bridges to each other
- ✓ Relatively short spans on the existing bridges with multiple piers
- ✓ Middle Fork of the Holston River
- ✓ Route 11
- ✓ Norfolk Southern Railway

These constraints severely impact the ability to assemble and maneuver cranes to the locations necessary to construct the initial Phase 1 bridge in the median. Additionally, the RFQ Conceptual Plans require construction in the median in the first and final phases of the construction (at a minimum). Even under ideal circumstances the delivery of workers, materials, and equipment presents unique challenges. These issues will result in situations where construction equipment interacts with traffic much more closely and frequently than would normally be anticipated.

**Existing Accident “Hot Spot”**

As indicated in the graphic to the right, the existing NB bridge appears to have a higher concentration of accidents than the adjacent sections of I-81 in either direction. A review of the accident data





reveals that the accident causes are not tied to any single issue, but clearly there is an increase in the accident rate at this location that can't be overlooked. It is also noted that at least one accident is due to standing water on or near the bridge and another due to a hole in the bridge deck.

**B. Impacts the Risk Will Have on the Project**

**Safety – Simply stated for emphasis, the impact of the risk is the potential for injury, death, and property damage of the travelling public and the construction workers** – Every year there are thousands of injuries and multiple fatalities in Virginia's work zones. The extremely constrained work area increases this concern significantly.

**C. Mitigation Strategies**

All construction access and traffic maintenance strategies must provide for adequate room for construction workers to safely prosecute their work, and provide the travelling public with clear, logical directions to navigate the work zone. The project design must account for Incident Management scenarios, including accident access, vehicle maneuvering and storage, and traffic restoration strategies. Mitigation strategies for the defined risk are as follows:

- **Developing and Monitoring an Effective MOT Plan:** Our Team will develop the MOT plan by reviewing the identified MOT/public safety challenges and then determining how the project can be constructed to reduce or minimize these challenges. We will prepare a detailed Transportation Management Plan that will include a Temporary Traffic Control Plan, an Incident Management Plan, a Public Communications Plan, and a Transportation Operations Plan. The existing horizontal alignment of I-81 includes broken-back reverse curves that present unique issues related to driver awareness and expectation. Our recent experience with the I-81 Bridge Replacement over Sinking Creek and Halls Bottom Road will be leveraged with lessons learned from that virtually identical project. The project must have a solid Maintenance of Traffic plan that:

- ✓ Is logical from a driver expectancy standpoint
- ✓ Provides for as much separation as possible between construction spaces and traffic spaces
- ✓ Factors in uncontrollable risk elements such as weather and distracted driving
- ✓ Factors in adjacent ongoing projects (I-81 over Mulberry Lane Bridge Replacement).
- ✓ Acknowledges the condition of the existing bridges and any potential maintenance repairs
- ✓ Is continually monitored and adjusted as necessary

- **Traffic Management Task Force:** Representatives from Orders, WRA, VDOT and affected Third-Party Stakeholders will be invited to attend monthly meetings, and as needed, to review the current functioning of MOT on the project. The Orders Team will consider input from all parties and incorporate any necessary changes into the MOT plan.

- **Phased Construction and Adequate Separation Between Traveling Public and Construction:** We will develop a phased Traffic Control Plan and an Incident Management Plan to construct the improvements. During our constructability reviews we will pay special attention to access of construction equipment and limiting the number of traffic shifts required to construct the project. Additionally, certain work activities such as delivering material to the median will be scheduled to be performed only during off peak hours.



*I-81 over Halls Bottom Rd*

- **Initial Bridge Inspection:** Several accidents on the NB bridge appear to be related to the condition of the existing structure. Our first-hand experience on our current Design-Build project on I-81 in the Bristol District shows that evaluation (field and structural design), monitoring, preventive maintenance and rapid off-hour repairs are the best methods to keeping traffic moving. Immediately upon Notice to Proceed, an inspection of the existing deck, bearings, girders and sub-structure will be performed by our Lead Structural Engineer, Jeremy Schlüssel and an experienced deck repair supervisor Dave George. This team will visually determine:
  - ✓ If immediate action is necessary
  - ✓ If sounding of the deck is required
  - ✓ If a shield is needed between any girders over Route 11
  - ✓ If the existing deck drains are functioning adequately

We recognize the substandard condition of the existing bridge decks (especially the I-81 NB structure) further contributes to this safety risk, as a result we expect to perform maintenance activities on one or both bridges during the construction of this project.

- **Public Awareness:** In addition to the Communication Plan required by the TMP, Our team will also develop Public Awareness Plan that communicates project work zone information, updates on construction sequencing, construction activities that may impact traffic interruptions. This plan may incorporate *active* Driver Awareness measures approaching, and within, the work zone and may include the following:

- ✓ Rumble Strips
- ✓ Portable Changeable Message Signs (PCMS)
- ✓ Radar Speed Signs
- ✓ Law Enforcement Presence (*very* effective)



With our extensive experience designing, constructing, and maintaining VDOT’s highways, we have the staff and experience to accurately assess how this project will be constructed, and to design safe and efficient MOT plans that support the necessary construction activities.

**D. Role of VDOT or Other Agencies**

Our Team will work closely with VDOT to address concerns through coordination meetings and reviews. We anticipate VDOT will play an active partnership role with our Team in communicating progress and real-time travel information that affect motorists and other stakeholders during construction.

**RISK #3: ENVIRONMENTAL - SECTION 7 ESA COORDINATION**

**A. Why the Risk is Critical**

The Categorical Exclusion (CE) prepared by VDOT lists the presence of multiple threatened and endangered (T&E) species including bats and mussels. In the CE, most of the species have either been cleared as “no effect” or are “survey pending”. The commitments in the CE include time-of-year-restrictions as follows:

- April 15 to Sept. 15 to protect bats
- April 15 to June 15 and Aug. 15 to Sept. 30 to protect mussels

Our Team conducted queries of T&E databases on May 15, 2018. The queries identified *resources that were not addressed in the CE* including the spotfin chub (FESE) and *designated critical habitat for*



*T&E* mussels (slabside pearlymussel and fluted kidneyshell) within the portion of Middle Fork Holston River. The Endangered Species Act defines a “species take” as “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Furthermore, “Harm” includes significant habitat alteration that would kill or injure a species through impairing essential behavior such as breeding, feeding, or sheltering. Activities which may significantly alter habitat for fluted kidneyshell and slabside pearlymussel are enumerated in the federal regulations (50 CFR Part 17, Vol. 78, No. 187, pages 59555-59620 effective October 28, 2013) and include physical alteration (rip rap, etc.), chemical alteration (increased nutrient loads or stormwater input), or increased sediment input. Any construction activity that would significantly alter critical habitat, would be deemed to “harm” the species and would require the applicant to obtain an **Incidental Take Permit** and a Biological Opinion from the USFWS.

Potential significant alteration to critical habitat that may result from the project must be coordinated with the U.S. Fish and Wildlife Service (USFWS). If USFWS determines that critical habitat will be significantly altered, then the DB would have to apply for an **Incidental Take Permit**. The applicant would submit a permit application which would include a **Habitat Conservation Plan (HCP)**, an Implementation Agreement and a draft NEPA analysis. A complete **HCP** must:

- **Meet the permit issuance criteria of section 10(a)(2)(B) of the ESA**
  - ✓ taking will be incidental;
  - ✓ applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the taking;
  - ✓ applicant will ensure that adequate funding for the plan will be provided;
  - ✓ taking will not reduce the likelihood of the survival and recovery of the species in the wild; and
  - ✓ other measures, as required by the Secretary, will be met.
- **Include the Following Components**
  - ✓ an assessment of impacts likely to result from the proposed taking of one or more federally listed species.
  - ✓ measures that the permit applicant will undertake to monitor, minimize, and mitigate for such impacts, the funding available to implement such measures, and the procedures to deal with unforeseen or extraordinary circumstances.
  - ✓ alternative actions to the taking that the applicant analyzed, and the reasons why the applicant did not adopt such alternatives.
  - ✓ additional measures that the Fish and Wildlife Service may require.
- **Comply with the Five Points Policy by Including**
  - ✓ biological goals and objectives, which define the expected biological outcome for each species covered by the HCP;
  - ✓ adaptive management, which includes methods for addressing uncertainty and also monitoring and feedback to biological goals and objectives;
  - ✓ monitoring for compliance, effectiveness, and effects;
  - ✓ permit duration which is determined by the time-span of the project and designed to provide the time needed to achieve biological goals and address biological uncertainty; and
  - ✓ public participation according to the National Environmental Policy Act.

**B. Impacts the Risk Will Have on the Project**

- **Schedule** – The USFWS review process and issuance of Biological Opinion, Public Comment along with the NEPA re-coordination will all have a tremendous impact on the schedule if an HCP is required.
- **Cost** – The efforts associated with the preparation of the HCP; conservation measures; monitoring; corrective actions are unknown and must be included in the bid as a high risk item.

- **Continued liability beyond expiration of warranty period** – The elements of an HCP, in combination with the incidental take permit, are legally binding. While incidental take permits have expiration dates, the identified mitigation measures may last in perpetuity.

### C. Mitigation Strategies

The DBPM for this project is very well versed with the nature of the Middle Fork of the Holston having worked around and over it many times in the past. Mitigation strategies for the defined risk will focus on implementing design measures intended to assure the USFWS that the project will ***not*** result in significant alteration of critical habitat and thereby ***avoid the need for an incidental take permit***. Working closely with WRA’s Environmental staff, the following mitigation strategies have been developed:

- **Overdesigning Erosion and Sediment and Stormwater Controls:** Our Team plans to design erosion and sediment (E&S) and stormwater controls to exceed the minimum requirements. For example, where room will allow, E&S will be designed to handle greater intensity storm rather than the standard 2-year storm. Super siltfence with chainlink reinforcement may be standard across the entire site as an example.
- **Strict Containment of Construction Debris from Bridge:** Our plan is that no materials released during bridge demolition and construction will be allowed to fall into the Middle Fork Holston River. This will potentially be accomplished using full containment system spanning the river enclosing the workspace to contain dust and debris, capturing any saw cuttings/fluid, etc. This system may utilize steel girders and with tongue and groove plywood and an impervious material covering the entire surface area of the river. Additional construction features will be added to direct any contaminants away from the river.
- **Design Permanent BMPs to Treat Quality as Well as Quantity:** The minimal requirements for this project would be to treat quantity and to purchase nutrient credits to offset impacts to quality. To avoid chemical alterations to critical habitat within the project area, BMPs may be included and designed to treat quality in addition to quantity. While purchase of nutrient credits can offset water quality impacts to the watershed, the benefit may or may not apply to critical habitat for the mussels. Treating water quality specifically at the project site, will ensure that water quality/chemistry is at a minimum not degraded, and in fact, may be improved in a specific area that directly affects critical habitat.
- **Reduce Anticipated Ground Disturbance:** The RFQ plans depict lowering the vertical alignment of Route 11 in combination with raising the vertical alignment of the new bridge to meet vertical clearance requirements creating a significant disturbed area. As we develop our conceptual design every effort will be made to limit the footprint of the project and subsequently will further minimize the risk of illicit discharges into the River during construction.
- **Provide Enhanced Construction education and Oversight resources:** Our Team plans an enhanced environmental training session for construction field staff to assure that the importance of protecting the critical habit is understood by everyone working on the project. At the DBPM’s personal direction, all staff will be charged with being a “Critical Habitat Monitor” and make it a routine practice to examine work area for potential issues. This will be in addition to the E&S/Stormwater Inspector’s routine and frequent inspections of the site.

### D. Role of VDOT or Other Agencies

Our Team will work closely with VDOT and the regulatory agencies to address concerns through coordination meetings and reviews. The Orders Design-Build Team has established relationships with the Bristol District Environmental staff and will work closely with them much like was done on the Avens Bridge project over the South Holston Lake to protect the environmentally sensitive area. We anticipate VDOT and the regulatory agencies will play an active partnership role with our Team in developing a plan that will ensure that there will be no impacts to this significant environmental resource.

## APPENDICES AND ATTACHMENTS

## 3.1.2

# SOQ CHECKLIST

**ATTACHMENT 3.1.2**

**Project: 0081-086-818; 0081-086-742**

**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.

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

**ATTACHMENT 3.1.2**

**Project: 0081-086-818; 0081-086-742**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	Appx. 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appx. 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appx. 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appx. 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appx. 3.2.10
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 1
<b>Offeror's Team Structure</b>				Pages 2-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 3-4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appx. 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appx. 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appx. 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appx. 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 7
Organizational chart narrative	NA	Section 3.3.2	yes	Page 4



**ATTACHMENT 3.1.2**

**Project: 0081-086-818; 0081-086-742**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>Experience of Offeror's Team</b>				Pages 8-9
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appx. 3.4.1
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appx. 3.4.1
<b>Project Risk</b>				Pages 10-15
Provide a narrative for Project Risk 1	NA	Section 3.5.1	yes	Pages 10-11
Identify and discuss two additional <b>unique</b> risks that are critical for the Project	NA	Section 3.5.1	yes	Pages 11-15

## 2.10

### FORM C-78-RFQ

**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**


RFQ NO. C0097555DB102  
PROJECT NO.: 0081-086-818; 0081-086-742

**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 – June 1, 2018  
(Date)
2. Cover letter of \_\_\_\_\_  
(Date)
3. Cover letter of \_\_\_\_\_  
(Date)

 _____ SIGNATURE	<u>07-12-18</u> _____ DATE
<u>NATHANIEL R. ORDERS</u> _____ PRINTED NAME	<u>PRESIDENT</u> _____ TITLE

## 3.2.6

# AFFILIATED/SUBSIDIARY COMPANIES

## ATTACHMENT 3.2.6

**State Project No. 0081-086-818; 0081-086-742**

### **Affiliated and Subsidiary Companies of the Offeror**

Offerors shall complete the table and include the addresses of affiliates or subsidiary companies as applicable. By completing this table, Offerors certify that all affiliated and subsidiary companies of the Offeror are listed.

<input type="checkbox"/> <b>The Offeror does not have any affiliated or subsidiary companies.</b>
<input checked="" type="checkbox"/> <b>Affiliated and/ or subsidiary companies of the Offeror are listed below.</b>

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
Affiliate	Paramount Builders, LLC.	505 Sixth Avenue, St. Albans, WV 25177
Affiliate	Central Contracting, Inc.	515 Sixth Avenue, St. Albans, WV 25177
Affiliate	Underground Contractors, Inc.	501 Sixth Avenue, St. Albans, WV 25177
Subsidiary	Summit Corporation	501 Sixth Avenue, St. Albans, WV 25177
Subsidiary	Middle Ridge Properties, LLC.	501 Sixth Avenue, St. Albans, WV 25177

## 3.2.7 (a) & (b)

# PRIMARY & LOWER TIER DEBARMENT FORMS

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS

**Project No.: 0081-086-818; 0081-086-742**

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 proposal.

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.

	07-12-18	PRESIDENT
Signature	Date	Title

ORDERS CONSTRUCTION COMPANY, INC.  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0081-086-818; 0081-086-742**

- 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 proposal.

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

July 5, 2018  
\_\_\_\_\_  
Date

Vice President  
\_\_\_\_\_  
Title

Whitman, Requardt & Associates, LLP  
\_\_\_\_\_  
Name of Firm



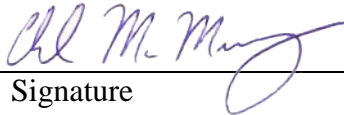
**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0081-086-818; 0081-086-742**

- 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 proposal.

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

6/11/2018  
\_\_\_\_\_

Date

Associate  
\_\_\_\_\_

Title

A. Morton Thomas and Associates, Inc.

\_\_\_\_\_  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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\_\_\_\_\_  
Signature

06/11/2018  
\_\_\_\_\_  
Date

Chief Legal Officer  
\_\_\_\_\_  
Title

Bowman Consulting Group, Ltd.  
\_\_\_\_\_  
Name of Firm

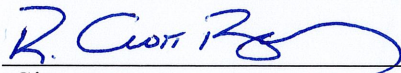
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CERTIFICATION REGARDING DEBARMENT  
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**Project No.: 0081-086-818; 0081-086-742**

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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.



Signature

06/19/2018

Date

Managing Partner

Title

Appraisal Review Specialists, LLC

Name of Firm

**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0081-086-818; 0081-086-742**

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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.

<u>Nathan Turner</u>	<u>7-5-18</u>	<u>Office Manager</u>
Signature	Date	Title

GEO Services, LLC  
Name of Firm

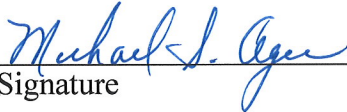
**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0081-086-818; 0081-086-742**

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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.

  
\_\_\_\_\_  
Signature

**6/25/18**  
\_\_\_\_\_  
Date

**P.E., V.P., Principal**  
\_\_\_\_\_  
Title

**Mattern & Craig, Inc.**  
\_\_\_\_\_  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0081-086-818; 0081-086-742**

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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.

  
\_\_\_\_\_  
Signature

7/3/2018  
\_\_\_\_\_  
Date

Branch Manager  
\_\_\_\_\_  
Title

Wood Environment & Infrastructure Solutions, Inc.  
\_\_\_\_\_  
Name of Firm

## 3.2.8

# VDOT PREQUALIFICATION EVIDENCE



Department's List of Prequalified Vendors  
Includes All Qualified Levels As Of 6/28/2018

- O -

**Vendor ID:** O017  
**Vendor Name:** ORDERS CONSTRUCTION COMPANY, INC.  
**Prequal Level:** Prequalified  
**Prequal Exp:** 07/31/2018

**-- PREQ Address --**

501 6TH AVENUE  
ST. ALBANS, WV 25177-0000  
Phone: (304)722-4237  
Fax: (304)722-4230

**Work Classes (Listed But Not Limited To)**

- 002 - GRADING
- 003 - MAJOR STRUCTURES
- 007 - MINOR STRUCTURES
- 019 - ERECT FABRICATED STRUCTURAL MATERIAL
- 055 - BRIDGE REPAIRS

**Bus. Contact:** CARR, STEVEN MICHAEL  
**Email:** STEVENC@ORDERSCONSTRUCTION.COM

**-- DBE Information --**

**DBE Type:** N/A  
**DBE Contact:** N/A

**Vendor ID:** O062  
**Vendor Name:** ORION ASSOCIATES, INC.  
**Prequal Level:** Prequalified (Currently Inactive)  
**Prequal Exp:** 08/31/2018

**-- PREQ Address --**

1317 CAVALIER BLVD.  
CHESAPEAKE, VA 23323-1501  
Phone: (757)558-6400  
Fax: (757)558-1009

**Work Classes (Listed But Not Limited To)**

- 005 - DRAINAGE STRUCTURES
- 011 - CLEARING AND GRUBBING
- 033 - ROADSIDE DEVELOPMENT
- 045 - UNDERGROUND UTILITIES
- 101 - EXCAVATING

**Bus. Contact:** HEBENSTREIT, JEFFREY RICHARD  
**Email:** ORIONEMAIL@AOL.COM

**-- DBE Information --**

**DBE Type:** N/A  
**DBE Contact:** N/A



## 3.2.9

# SURETY LETTER



UNDERSTAND. SERVICE. INNOVATE.

USI Insurance Services LLC  
1 Hillcrest Drive East  
Charleston, WV 25311  
www.usi.biz  
304-347-0611

June 25, 2018

Suril R. Shah, P. E.  
Alternate Project Delivery Division  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

**Re: Orders Construction Company, Inc.  
St. Albans, WV**

**Project: Replacement of I-81 Bridges over Rt 11, Norfolk Southern Railway &  
Middle Fork Holston River  
A Design-Build Project  
Smyth County/City of Atkins, Virginia  
State Project No.: 0081-086-818; 0081-086-742  
Federal Project No.: BR-081-1(336)  
Contract ID Number: C0097555DB102**

Dear Mr. Shah:

Orders Construction Company has made us aware of their desire to become prequalified and to bid on the subject project in January, 2019. It is our understanding that the estimate on the project is \$21,000,000. Orders Construction is capable of obtaining a bond for a project of this magnitude. If Orders Construction is the successful bidder and enters in to a contract to construct this project, we will, according to the terms and conditions of the required bid bond, issue the 100% performance and 100% labor and material payment bonds to warrant the integrity of this design-build project including the warranty period.

Orders Construction's surety credit is underwritten by Zurich Surety. Zurich has an A.M. Best rating of A+(-), Size Category XV (\$2B+), their Federal T-Listing limit is in excess of \$700,000,000, and they are authorized to do business in Commonwealth of Virginia. We have previously issued bonds on Orders' behalf in the \$200,000,000 range. And, there is currently plenty of capacity in Orders' work program to accommodate this work.

This letter is intended for reference purposes and any formal and specific bond approvals will be based on current and pertinent underwriting factors at the time of the request.

If you have questions concerning this matter, please call me at 304-347-0666. Thank you for your consideration.

Sincerely,

Douglas P. Taylor  
Sr. Vice President

## 3.2.10

# SCC AND DPOR INFORMATION

## ATTACHMENT 3.2.10

### State Project No. 0081-086-818; 0081-086-742

#### 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.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Orders Construction Company, Inc. (Orders)	F0268500	Foreign Corporation	Active	501 6 <sup>th</sup> Avenue St Albans, WV 25177	Class A Contractor, H/H	2701032711	08/31/2018
Whitman, Requardt & Associates, LLP (WRA)	K000382-4	Limited Liability Partnership	Active	801 South Caroline St Baltimore, MD 21231	Business Entity, ENG, LS, LA, ARC	0407001676	12/31/2019
				1700 Kraft Dr, Suite 1200, Blacksburg, VA 24060	Business Entity Branch Office, ENG	0411000608	02/29/2020
				9030 Stony Point Parkway, Suite 220 Richmond, VA 23235	Business Entity Branch Office, ENG	0411000133	02/29/2020
				1705 Enterprise Dr., Suite 100 Lynchburg, VA 24502	Business Entity Branch Office, ENG	0411000774	02/29/2020
				100 5 <sup>th</sup> Street, Suite L2000, Bristol, TN 37620	Business Entity Branch Office, ENG	0411001228	02/29/2020
A. Morton Thomas & Associates, Inc. (AMT)	F0494312	Foreign Corporation	Active	125 Deadmore St SE Abingdon, VA 24210	Business Entity Branch Office, ENG	0411001044	02/29/2020

**ATTACHMENT 3.2.10**

**State Project No. 0081-086-818; 0081-086-742**

**SCC and DPOR Information**

Bowman Consulting Group, LTD	04481982	Corporation	Active	650A Nelms Circle Fredericksburg, VA 22406	Business Entity Branch Office, LS, ENG	0411000421	02/29/2020
				3951 Westerre Parkway, Suite 150 Richmond, VA 23233	Business Entity Branch Office, LS, ENG	0411000610	02/29/2020
				650A Nelms Circle Fredericksburg, VA 22406	Appraisal Business	4008001873	03/31/2020
Appraisal Review Specialists, LLC	T0490682	Foreign Limited Liability Company	Pending	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25523	Appraisal Business	4008001735	04/30/2020
GEOServices, LLC	T0373441	Foreign Limited Liability Company	Active	2561 Willow Point Way, Knoxville, TN 37931	Business Entity, ENG	0407005219	12/31/2019
Mattern & Craig, Inc.	02313781	Corporation	Active	701 First St SW Roanoke, VA 24016	Business Entity, LS, ENG	0407003038	12/31/2019
Wood Environmental & Infrastructure Solutions, Inc.	F1441981	Foreign Corporation	Active	2020 Winston Park, Ste 700, Oakville ON I6h 6x7	Business Entity, ENG, ARC	0407004079	12/31/2019
				1070 W. Main St Suite 5, Abingdon, VA 24210	Business Entity Branch Office, ENG	0411000912	02/29/2020
				14424 Albemarle Point Place, Ste 115 Chantilly, VA 20151	Business Entity Branch Office, ENG	0411000911	02/29/2020

## ATTACHMENT 3.2.10

State Project No. 0081-086-818; 0081-086-742

### SCC and DPOR Information

<b>DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)</b>						
<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Whitman, Requardt & Associates, LLP (WRA)	Michael A. Russell	100 5 <sup>th</sup> Street, Suite L2000, Bristol, TN 37620	17282 Cleveland Rd Abingdon, VA 24211	ENG	0402024814	02/29/2020
A. Morton Thomas & Associates, Inc. (AMT)	Chadwick Ryan McMurray	125 Deadmore St SE Abingdon, VA 24210	644 Saint Andrews Dr, Kingsport, TN 37664	ENG	0402039985	01/31/2020
Whitman, Requardt & Associates, LLP (WRA)	Taylor Sigmund Sprenkle	9030 Stony Point Parkway, Suite 220 Richmond, VA 23235	1233 Windsor Avenue, Richmond, VA 23227	Professional Wetland Delineator	3402000097	09/30/2018
Bowman Consulting Group, LTD	Richard Stuchell	650A Nelms Circle Fredericksburg, VA 22406	10012 Shadowridge Ct Fredericksburg, VA 22407	General Real Estate Appraiser	4001011856	11/30/2018
Appraisal Review Specialists, LLC	Rayman Scott Barber	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25523	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25526	General Real Estate Appraiser	4001012258	03/31/2019

## 3.2.10

# SCC AND DPOR INFORMATION

### SCC INFORMATION (3.2.10.1)

- Orders Construction Company, Inc. (OCC)
- Whitman, Requardt & Associates, LLP (WRA)
- A. Morton Thomas & Associates, Inc. (AMT)
- Bowman Consulting Group, LTD (Bowman)
- Appraisal Review Specialists, LLC (ARS)
- GEOServices, LLC (GEOS)
- Mattern & Craig, Inc. (M&G)
- Wood Environmental & Infrastructure Solutions, Inc. (WOOD)

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#### General

SCC ID: F0268500  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: WV  
 Date of Formation/Registration: 7/5/1973  
 Status: Active  
 Shares Authorized: 50000

#### 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](#)
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#### Principal Office

PO BOX 1448  
 501 6TH AVE  
 ST ALBANS WV25177

#### Registered Agent/Registered Office

CHARLIE STOKES  
 ORDERS CONSTRUCTION COMPANY INC  
 605 LITHIA RD  
 WYTHEVILLE VA 24382  
 WYTHE COUNTY 198  
 Status: Active  
 Effective Date: 7/8/2015

Screen ID: e1000

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# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That ORDERS CONSTRUCTION COMPANY, INC., a corporation incorporated under the law of West Virginia, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on July 5, 1973; and

That the corporation is in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*June 25, 2013*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

# Commonwealth of Virginia



## State Corporation Commission

### CERTIFICATE OF FACT

*I Certify the Following from the Records of the Commission:*

On August 10, 2000, a statement of registration as a foreign registered limited liability partnership was filed in the Clerk's Office of the Commission by WHITMAN, REQUARDT & ASSOCIATES, LLP, a Maryland partnership.

As of the date below, this statement of registration is in effect.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:  
August 4, 2017*



*Joel H. Peck*  
\_\_\_\_\_  
Joel H. Peck, Clerk of the Commission



COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

Office of the Clerk

1706060645

June 19, 2017

LINDSAY MAHONEY  
CSC WILMINGTON  
2711 CENTERVILLE RD STE 400  
WILMINGTON, DE 19808

RECEIPT

RE: WHITMAN, REQUARDT & ASSOCIATES, LLP

ID: K000382 - 4

DCN: 17-06-19-0583

Dear Customer:

This is your receipt for \$50.00 to cover the fee for filing the annual continuation report for the above-referenced registered limited liability partnership.

The annual continuation report was filed on June 19, 2017.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

Joel H. Peck  
Clerk of the Commission

GPACCEPT  
CISKMP



UPA-134-GP  
(04/13)

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION  
VIRGINIA OR FOREIGN  
REGISTERED LIMITED LIABILITY PARTNERSHIP  
2017 ANNUAL CONTINUATION REPORT

Filing Due Date:

July 01, 2017

Filing Fee: \$50

1706060645

The undersigned, on behalf of the partnership set forth below, pursuant to Title 50, Chapter 2.2, Article 9.1 of the Code of Virginia, states as follows:

1. The name of the partnership, which is registered as a registered limited liability partnership in Virginia, is:

WHITMAN, REQUARDT & ASSOCIATES, LLP

170619 0583

2. The partnership's SCC ID number is K000382 - 4.  
3. The jurisdiction in which the partnership is registered as a registered limited liability partnership is MARYLAND.  
4. The principal office address of the partnership according to the records of the Commission is:

801 S CAROLINE ST  
BALTIMORE, MD 21231

(Mark the appropriate box.)

- The address listed above is the current address of the partnership's principal office.  
 The address listed above is not the current address of the partnership's principal office. The current address, including the street and number, if one is associated with the location, is:

2017 JUN 19 AM 10:10  
SCC-CLERK'S OFFICE  
OPERATIONS

\_\_\_\_\_  
(number/street) (a post office box is not acceptable - see instructions)  
\_\_\_\_\_  
(city or town) (state) (zip)

Signed on behalf of the partnership by the following partner, receiver or trustee:

\_\_\_\_\_  
(signature) 6-15-17  
Joseph S. Makar (date)  
\_\_\_\_\_  
(printed name) (telephone number (optional))  
Partner  
\_\_\_\_\_  
(title)

Personal Information, such as a social security number, should NOT be included in a business entity document submitted to the Office of the Clerk for filing with the Commission. For more information, see Notice Regarding Personal Identifiable Information at [www.scc.virginia.gov/clk/index.aspx](http://www.scc.virginia.gov/clk/index.aspx).

SEE INSTRUCTIONS ON THE REVERSE

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#### A. MORTON THOMAS & ASSOCIATES, INC.

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#### General

SCC ID: F0494312  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: MD  
 Date of Formation/Registration: 11/26/1997  
 Status: Active  
 Shares Authorized: 52000

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
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#### Principal Office

800 KING FARM BOULEVARD 4TH FL  
 ROCKVILLE MD20850

#### Registered Agent/Registered Office

COGENCY GLOBAL INC.  
 250 BROWNS HILL COURT  
 MIDLOTHIAN VA 23114  
 CHESTERFIELD COUNTY 120  
 Status: Active  
 Effective Date: 6/2/2017

Screen ID: e1000

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# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That A. MORTON THOMAS & ASSOCIATES, INC., a corporation incorporated under the law of Maryland, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on November 26, 1997; and

That the corporation is in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*September 26, 2013*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

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#### BOWMAN CONSULTING GROUP, LTD.

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#### General

SCC ID: 04481982  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 6/7/1995  
 Status: Active  
 Shares Authorized: 360000

#### 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](#)
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#### Principal Office

3863 CENTERVIEW DRIVE  
 SUITE 300  
 CHANTILLY VA20151

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#### Registered Agent/Registered Office

CORPORATION SERVICE COMPANY  
 100 SHOCKOE SLIP  
 2ND FLOOR  
 RICHMOND VA 23219  
 RICHMOND CITY 216  
 Status: Active  
 Effective Date: 1/1/2018

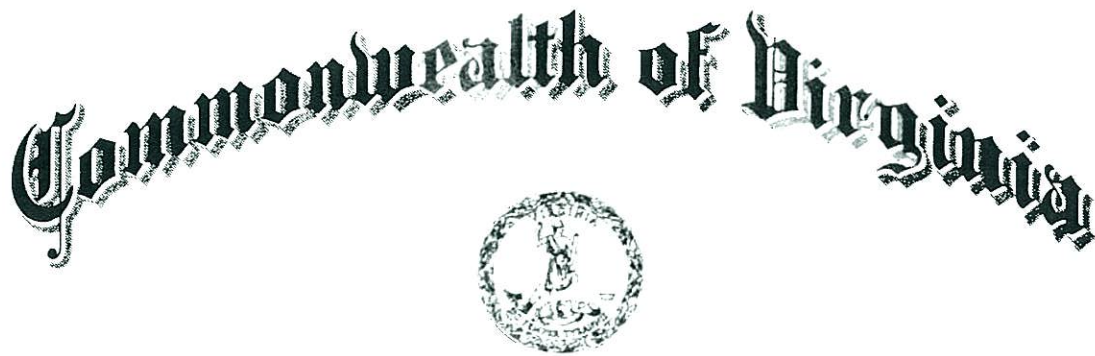
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STATE CORPORATION COMMISSION

*Richmond,* June 7, 1995

*This is to Certify that the certificate of incorporation of*

*Bowman Consulting Group, P.C.*

*was this day issued and admitted to record in this office  
and that the said corporation is authorized to transact its business  
subject to all Virginia laws applicable to the corporation and its  
business. Effective date:*

June 7, 1995



*State Corporation Commission*

*William J. Bridg*  
Clerk of the Commission



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#### Appraisal Review Specialists, LLC

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**General**

SCC ID: T0490682  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: WV  
 Date of Formation/Registration: 2/3/2012  
 Status: Canceled

- Select an action**
- [File a registered agent change](#)
  - [File a registered office address change](#)
  - [Resign as registered agent](#)
  - [File a principal office address change](#)
  - [Pay annual registration fee](#)
  - [Order a certificate of fact of registration in Virginia](#)
  - [View eFile transaction history](#)
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**Principal Office**

3058 MOUNT VERNON RD  
 HURRICANE WV25526

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**Registered Agent/Registered Office**

INCORP SERVICES INC  
 7288 HANOVER GREEN DR  
 MECHANICSVILLE VA 23111  
 HANOVER COUNTY 142  
 Status: Active  
 Effective Date: 2/3/2012

**Renewal Pending -  
 See Payment Receipt on  
 Following Page**

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**Virginia State Corporation Commission (SCC)**



**VA SCC Clerks Office**

**Confirmation Number:** 148412  
**Payment Date:** Tuesday, July 10, 2018  
**Payment Time:** 06:43AM PT

**Payer Information**

**Name:** Rayman S Barber  
**Street Address:** 3058 Mount Vernon Road  
Suite 12  
Hurricane, WV 25526-9458  
United States  
**Daytime Phone Number:** (304) 760 - 2156  
**E-mail Address:** appraisalreview@frontier.com  
**Transaction Type:** Annual Registration Fee  
**Name of Filer:** Rayman Barber  
**Name of Entity:** Appraisal Review Specialists, LLC  
**SCC ID:** T0490682

**Card Information**

**Card Type:** American Express  
**Card Number:** \*\*\*\*\*1007

**Payment Information**

**Payment Type:** VA SCC Clerks Office  
**Payment Amount:** \$75.00

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# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF FACT*

*I Certify the Following from the Records of the Commission:*

That Appraisal Review Specialists, LLC, a limited liability company organized under the law of West Virginia, obtained a certificate of registration to transact business in Virginia from the Commission on February 3, 2012; and

That it is registered to transact business in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:*

*June 24, 2013*

A handwritten signature in black ink that reads "Joel H. Peck".

*Joel H. Peck, Clerk of the Commission*



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#### GEOS, LLC (USED IN VA BY: GEOServices, LLC)

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#### General

SCC ID: T0373441  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: TN  
 Date of Formation/Registration: 4/8/2008  
 Status: Active

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File a principal office address change](#)
- [Pay annual registration fee](#)
- [Order a certificate of fact of registration in Virginia](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
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#### Principal Office

2561 WILLOW POINT WAY  
 KNOXVILLE TN37931

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#### Registered Agent/Registered Office

CAPITOL CORPORATE SERVICES, INC.  
 10 S JEFFERSON ST STE 1400  
 ROANOKE VA 24011  
 ROANOKE CITY 217  
 Status: Active  
 Effective Date: 4/8/2008

Screen ID: e1000

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# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, April 8, 2008*

*This certificate of registration to transact business in Virginia is this day issued for*

**GEOServices, LLC (USED IN VA BY: GEOS, LLC)**

*a limited liability company organized under the laws of TENNESSEE and the said company is authorized to transact business in Virginia, subject to all Virginia laws applicable to the company and its business.*



*State Corporation Commission*

*Attest:*

*Joel H. Peck*  
Clerk of the Commission

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#### MATTERN & CRAIG, INC.

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#### General

SCC ID: 02313781  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 7/1/1982  
 Status: Active  
 Shares Authorized: 10000

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
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#### Principal Office

701 FIRST ST SW  
 ROANOKE VA24016

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#### Registered Agent/Registered Office

STEVEN A CAMPBELL  
 701 FIRST ST SW  
 ROANOKE VA 24016  
 ROANOKE CITY 217  
 Status: Active  
 Effective Date: 7/25/2005

Screen ID: e1000

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[Adobe Acrobat PDF Reader](#) [Microsoft Office Online Applications](#): (Excel, PowerPoint, Word)

Build #: 1.0.0.31267

# Commonwealth of Virginia



## State Corporation Commission

I Certify the Following from the Records of the Commission:

MATTERN & CRAIG, INC. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is July 01, 1982.

Nothing more is hereby certified.

STATE RECEIVED  
STATE OF VIRGINIA  
92 FEB 26 PM 2:20  
BRYANT W. S. STINE  
SECRETARY OF STATE



Signed and Sealed at Richmond  
on this Date: February 20, 1992

*William J. Bridge*

William J. Bridge, Clerk of the Commission

Alert to business entities regarding mailings from VIRGINIA COUNCIL FOR CORPORATIONS or U.S. BUSINESS SERVICES is available from the Bulletin Archive link of th Clerk's Office website.

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SCC eFile > Entity Search > Entity Details

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### SCC eFile Business Entity Details

[? Help](#)

#### Wood Environment & Infrastructure Solutions, 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: F1441981  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: NV  
 Date of Formation/Registration: 9/20/2000  
 Status: Active  
 Shares Authorized: 990000

#### Select an action

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#### Principal Office

1105 LAKEWOOD PARKWAY  
 STE 300  
 ALPHARETTA GA30009

#### Registered Agent/Registered Office

UNITED AGENT GROUP INC.  
 6802 PARAGON PLACE #410  
 RICHMOND VA 23230  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 2/22/2018

Screen ID: e1000

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[Adobe Acrobat PDF Reader](#) [Microsoft Office Online Applications](#): (Excel, PowerPoint, Word)

Build #: 1.0.0.31267



# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, May 14, 2018*

*This is to certify that a certificate of authority to transact business in Virginia was issued and admitted to record in this office for*

**Wood Environment & Infrastructure Solutions, Inc.**

**Formerly known as: Amec Foster Wheeler Environment & Infrastructure, Inc.**

*a corporation organized under the laws of NEVADA and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business. Date of qualification: September 20, 2000*



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

## 3.2.10

### SCC AND DPOR INFORMATION

#### DPOR INFORMATION (3.2.10.2)

- Orders Construction Company, Inc. (OCC)
- Whitman, Requardt & Associates, LLP (WRA)
- A. Morton Thomas & Associates, Inc. (AMT)
- Bowman Consulting Group, LTD (Bowman)
- Appraisal Review Specialists, LLC (ARS)
- GEOServices, LLC (GEOS)
- Mattern & Craig, Inc. (M&G)
- Wood Environmental & Infrastructure Solutions, Inc. (WOOD)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

08-31-2018

NUMBER

2701032711

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



ORDERS CONSTRUCTION COMPANY INC  
501 6TH AVENUE  
ST ALBANS, WV 25177-1448



*Jay W. DeBoer*  
Jay W. DeBoer Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS  
CONTRACTOR

\*CLASSIFICATIONS\* H/H

NUMBER: 2701032711 EXPIRES: 08-31-2018

ORDERS CONSTRUCTION COMPANY INC  
501 6TH AVENUE  
ST ALBANS, WV 25177-1448



(FOLD)

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407001676

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

PROFESSIONS: ENG, LS, LA, ARC



WHITMAN, REQUARDT AND ASSOCIATES LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MD 21231



*Jay W. DeBoer*  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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**DPOOR** COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407001676 EXPIRES: 12-31-2019  
PROFESSIONS: ENG, LS, LA, ARC  
WHITMAN, REQUARDT AND ASSOCIATES LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MD 21231



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DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000608

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

BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG



WHITMAN REQUARDT & ASSOCIATES LLP  
1700 KRAFT DRIVE  
SUITE 1200  
BLACKSBURG, VA 24060



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*Jan W. DeBoer*  
Jan W. DeBoer, Director

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DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
02-29-2020

NUMBER  
0411000133

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

BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG



WHITMAN REQUARDT AND ASSOCIATES  
9030 STONY POINT PKWY STE 220  
RICHMOND, VA 23235



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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Department of Professional and Occupational Regulation

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000133 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
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9030 STONY POINT PKWY STE 220  
RICHMOND, VA 23235



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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000774

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

PROFESSIONS: ENG



WHITMAN REQUARDT AND ASSOCIATES LLP  
1705 ENTERPRISE DR STE 100  
LYNCHBURG, VA 24502



*Jan W. DeBoer*  
Jan W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

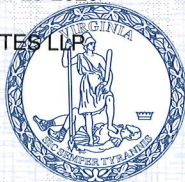
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BOARD FOR APPLSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000774 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
WHITMAN REQUARDT AND ASSOCIATES LLP  
1705 ENTERPRISE DR STE 100  
LYNCHBURG, VA 24502



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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411001228

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

PROFESSIONS: ENG



WHITMAN, REQUARDT AND ASSOCIATES LLP  
100 5TH ST STE L2000  
BRISTOL, TN 37620



*Jan W. DeBoer*  
Jan W. DeBoer, Director

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BOARD FOR APELSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411001228 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
WHITMAN, REQUARDT AND ASSOCIATES LLP  
100 5TH ST STE L2000  
BRISTOL, TN 37620



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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411001044

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

PROFESSIONS: ENG



A MORTON THOMAS AND ASSOCIATES INC  
125 DEADMORE ST SE  
ABINGDON, VA 24210



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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PROFESSIONS: ENG  
A MORTON THOMAS AND ASSOCIATES INC  
125 DEADMORE ST SE  
ABINGDON, VA 24210



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Department of Professional and Occupational Regulation

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Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000421

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

PROFESSIONS: LS, ENG



BOWMAN CONSULTING GROUP LTD  
650A NELMS CIRCLE  
FREDERICKSBURG, VA 22406



Status can be verified at <http://www.dpor.virginia.gov>

*July W. DeBorja*  
July W. DeBorja, Director

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Department of Professional and Occupational Regulation

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PROFESSIONS: LS, ENG  
BOWMAN CONSULTING GROUP LTD  
650A NELMS CIRCLE  
FREDERICKSBURG, VA 22406



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EXPIRES ON

02-29-2020

NUMBER

0411000610

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

PROFESSIONS: ENG, LS



BOWMAN CONSULTING GROUP LTD  
3951 WESTERRE PKWY  
SUITE 150  
RICHMOND, VA 23233



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000610 EXPIRES: 02-29-2020  
PROFESSIONS: ENG, LS  
BOWMAN CONSULTING GROUP LTD  
3951 WESTERRE PKWY  
SUITE 150  
RICHMOND, VA 23233



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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

03-31-2020

NUMBER

4008001873

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION



BOWMAN CONSULTING GROUP LTD  
650 A NELMS CIRCLE  
FREDERICKSBURG, VA 22406



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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Department of Professional and Occupational Regulation

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION  
NUMBER: 4008001873 EXPIRES: 03-31-2020

BOWMAN CONSULTING GROUP LTD  
650 A NELMS CIRCLE  
FREDERICKSBURG, VA 22406



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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

04-30-2020

NUMBER

4008001735

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION



APPRAISAL REVIEW SPECIALISTS LLC  
3058 MOUNT VERNON ROAD  
SUITE 12  
HURRICANE, WV 25523



*Jay W. DeBoer*  
Jay W. DeBoer Director

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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407005219

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

PROFESSIONS: ENG



GEOSERVICES LLC  
GEOS, LLC  
2561 WILLOW POINT WAY  
KNOXVILLE, TN 37931



*Jan W. DeBoer*  
Jan W. DeBoer, Director

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COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407005219 EXPIRES: 12-31-2019  
PROFESSIONS: ENG  
GEOSERVICES LLC  
GEOS, LLC  
2561 WILLOW POINT WAY  
KNOXVILLE, TN 37931



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DPOR-PC (02/2017)

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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2019

NUMBER

0407003038

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

PROFESSIONS: ENG, LS



MATTERN & CRAIG, INC.  
701 FIRST STREET SW  
ROANOKE, VA 24016



Status can be verified at <http://www.dpor.virginia.gov>

*Jay W. DeBoer*  
Jay W. DeBoer, Director

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DPOR-LIC (02/2017)

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COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407003038 EXPIRES: 12-31-2019  
PROFESSIONS: ENG, LS  
MATTERN & CRAIG, INC.  
701 FIRST STREET SW  
ROANOKE, VA 24016



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DPOR-PC (02/2017)

# DPOR License Lookup

## License Number 0407004079

### License Details

<b>Name</b>	WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
<b>License Number</b>	0407004079
<b>License Description</b>	Business Entity Registration
<b>Firm Type</b>	Corporation
<b>Rank</b>	Business Entity
<b>Address</b>	2020 WINSTON PARK DR STE 700, OAKVILLE, ON L6h 6x7
<b>Initial Certification Date</b>	2001-02-27
<b>Expiration Date</b>	2019-12-31

### Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402054084	RUHL, CEDRIC HUNTER	Professional Engineer License	Engineering	2018-09-30
0402041116	BIGGS, MATTHEW TROY	Professional Engineer License	Engineering	2020-06-30
0402039444	CLEVENGER, TUCKER WADE	Professional Engineer License	Engineering	2020-06-30
0401010430	MYERS, JOSEPH D	Architect License	Architecture	2020-06-30
0402024297	MOWERY, LYNNE D	Professional Engineer License	Engineering	2019-07-31

Showing 1 to 5 of 5 entries

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# DPOR License Lookup License Number

0411000912

## License Details

<b>Name</b>	WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
<b>License Number</b>	0411000912
<b>License Description</b>	Business Entity Branch Office Registration
<b>Business Type</b>	Corporation
<b>Rank</b>	Business Entity Branch Office
<b>Address</b>	1070 W. MAIN STREET SUTE 5, ABINGDON, VA 24210
<b>Initial Certification Date</b>	2012-03-08
<b>Expiration Date</b>	2020-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402049295	MCDANIEL, JONATHAN THOMAS	Professional Engineer License	Engineering	2018-12-31

Showing 1 to 1 of 1 entries

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# DPOR License Lookup License Number

0411000911

## License Details

<b>Name</b>	WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
<b>License Number</b>	0411000911
<b>License Description</b>	Business Entity Branch Office Registration
<b>Business Type</b>	Corporation
<b>Rank</b>	Business Entity Branch Office
<b>Address</b>	14424 ALBEMARLE POINT PLACE SUITE 115, CHANTILLY, VA 20151
<b>Initial Certification Date</b>	2012-03-08
<b>Expiration Date</b>	2020-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402049074	ANGARA, RAO V	Professional Engineer License	Engineering	2019-05-31

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## 3.2.10

### SCC AND DPOR INFORMATION

#### DPOR INFORMATION FOR INDIVIDUALS (3.2.10.3 and 3.2.10.4)

- Michael Russell (WRA)
- Chad McMurray (AMT)
- Taylor Sprenkle (WRA)
- Richard Stuchell (Bowman)
- Rayman Scott Barber (ARS)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0402024814

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



MICHAEL A RUSSELL  
17282 CLEVELAND RD  
ABINGDON, VA 24211



Status can be verified at <http://www.dpor.virginia.gov>

*July W. DeBoer*  
July W. DeBoer, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2020

NUMBER

0402039985

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



CHADWICK RYAN MCMURRAY  
644 SAINT ANDREWS DR  
KINGSPORT, TN 37664



Status can be verified at <http://www.dpor.virginia.gov>

*July W. DeBoer*  
July W. DeBoer, Director

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DPOR-LIC (02/2017)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
09-30-2018

NUMBER  
3402000097

BOARD FOR PROFESSIONAL SOIL SCIENTISTS, WETLAND PROFESSIONALS & GEOLOGISTS  
PROFESSIONAL WETLAND DELINEATOR CERTIFICATION



TAYLOR SIGMUND SPRENKLE  
\* EEE CONSULTING INC.  
1233 WINDSOR AVENUE  
RICHMOND, VA 23227



*Jay W. DeBoer*  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)  
(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR PROFESSIONAL SOIL SCIENTISTS, WETLAND  
PROFESSIONALS & GEOLOGISTS  
PROFESSIONAL WETLAND DELINEATOR CERTIFICATION  
NUMBER: 3402000097 EXPIRES: 09-30-2018

TAYLOR SIGMUND SPRENKLE  
EEE CONSULTING INC.  
1233 WINDSOR AVENUE  
RICHMOND, VA 23227



(FOLD)

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-PC (05/2015)

\*Mr. Sprenkle is no longer with EEE - current DPOR records reflect this and screen capture of the updated records follow on the next page.

# DPOR License Lookup License Number

## 3402000097

### License Details

<b>Name</b>	SPRENKLE, TAYLOR SIGMUND
<b>License Number</b>	3402000097
<b>License Description</b>	Professional Wetland Delineator Certification
<b>Rank</b>	Professional Wetland Delineator
<b>Address</b>	RICHMOND, VA 23227
<b>Initial Certification Date</b>	2008-09-05
<b>Expiration Date</b>	2018-09-30

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**EXPIRES ON**

**11-30-2018**

**NUMBER**

**4001011856**

**REAL ESTATE APPRAISER BOARD**

**CERTIFIED GENERAL REAL ESTATE APPRAISER**



**RICHARD DAVID STUCHELL  
10012 SHADOWRIDGE COURT  
FREDERICKSBURG, VA 22407**



*James W. DeBoer*  
James W. DeBoer Director

Status can be verified at <http://www.dpor.virginia.gov>

SEE REVERSE SIDE FOR DRINK EGGS AND INSTRUCTIONS

DPOOR-1 IC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
03-31-2019

NUMBER  
4001012258

REAL ESTATE APPRAISER BOARD

CERTIFIED GENERAL REAL ESTATE APPRAISER



RAYMAN SCOTT BARBER  
3058 MOUNT VERNON RD  
HURRICANE, WV 25526



*Jay W. DeBoer*  
Jay W. DeBoer Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (02/2017)

(DETACH HERE)

 COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

REAL ESTATE APPRAISER BOARD  
CERTIFIED GENERAL REAL ESTATE APPRAISER  
NUMBER: 4001012258 EXPIRES: 03-31-2019

RAYMAN SCOTT BARBER  
3058 MOUNT VERNON RD  
HURRICANE, WV 25526



(FOLD)

Status can be verified at <http://www.dpor.virginia.gov>


DPOR-PC (02/2017)

### 3.3.1

## KEY PERSONNEL RESUMES

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Charlie Stokes, Vice President</b>
b. Project Assignment:	<b>Design-Build Project Manager (DBPM)</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>Orders Construction Company, Inc. (Full-Time)</b> 
d. Employment History: With this Firm <u>8</u> Years With Other Firms <u>41</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<p><b>Orders Construction Company, Inc. – Vice President, 2010 – Present</b> General responsibilities include overseeing the Virginia Division Operations, all aspects of Bid-Build and Design-Build processes from procurement to project completion. Charlie manages and controls all disciplines of the Design-Build process including: contract administration, design, right-of-way, environmental permitting, utilities, construction, and quality control (QC) and quality assurance (QA) inspection. Charlie also manages the procurement of all materials, equipment, services and labor required for the projects. Additionally, he coordinates with third parties; maintains project budgets and schedules; prepares and leads various project meetings for both project staff and the public; and facilitates project dispute resolution and avoidance. Charlie is currently serving as Design-Build Project Manager on his second VDOT Design-Build project with Orders.</p> <p><b>Corte Construction Company – President, 1992 – 2010</b> General responsibilities included project procurement of public and private bid-build and Design-Build projects; project management of grading, bridge, and tunneling projects; daily operations management; resource allocation; scheduling; OSHA compliance; and project quality. Served as Design-Build Project Manager for <b>nine</b> Design-Build projects in the Mid-Atlantic region, one of which was for VDOT.</p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>University of Pittsburgh, Pittsburgh, PA / NA / NA / NA</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>N/A</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, 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 project; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>	<p><b>I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek, Washington County, VA – VDOT – Design-Build Project Manager</b> This Design-Build project consists of replacing both NB and SB structures on Interstate 81 near the City of Bristol and Town of Abingdon in the Bristol District. The project includes Design, Quality Assurance, Quality Control, and Construction of two ~140’ single span bridges with “true MSE abutments”, MSE retaining walls, phased construction including significant MOT elements and mainline roadway shifts, permanent roadway improvements, traffic control, paving and phased demolition of the existing structures. Mr. Stokes serves as the Design-Build Project Manager and is responsible for all elements of the project noted above as well as public relations and coordination with the owner to ensure all issues are resolved in an efficient manner. The highly qualified team assembled and led by Mr. Stokes has ensured the project is a success for all parties involved. This project is scheduled for completion in September 2018.</p> <p><b>Relevance to the I-81 Atkins DB project:</b> VDOT Design-Build Project, interstate bridge construction, interstate roadway construction, difficult bridge access and complex MOT, water crossing, and public outreach <b>Firm:</b> Orders</p>

Construction Company, Inc. | **Date:** March 2016 – September 2018 (scheduled completion date) | **With Current Firm?** Yes

**Route 501 Bridge Replacement over James River and CSX Railroad, Bedford/Amherst Counties, VA – VDOT – Project Manager**

This project included construction of a 926' long 5-span bridge over the James River with three of the four piers in the James River. Tie-back shoring was required at the crossing of the CSX Railroad to ensure protection of the rail system. The bridge included 2M lbs of structural steel, drilled shafts, MSE retaining walls and Mass Concrete construction. The roadway work included rock scaling, relocation of Route 501 and Route 130, improved drainage, asphalt paving, and traffic control. Total demolition of the existing structures over the James was also required. This fast paced, environmentally sensitive project was completed ahead of schedule and under budget. Charlie was responsible for all facets of the work including setup of the mass concrete plan and operations, coordination with the CSX railway, manpower staffing, safety, subcontractor and material procurement, and owner coordination.

**Relevance to the I-81 Atkins DB project:** VDOT Project, bridge construction, roadway construction, water crossing, and railroad coordination **Firm:** Orders Construction Company, Inc. | **Date:** October 2014 – April 2017 | **With Current Firm?** Yes

**Route 60 Main Street Bridge Replacement, Clifton Forge, VA – VDOT – Design-Build Project Manager**

This Design-Build project was to replace the Route 60 bridge in downtown Clifton Forge, VA. This project involved replacing a bridge, which abuts commercial buildings on both sides, on Route 60 Westbound over Smith Creek in downtown Clifton Forge, and rebuilding Main Street from Commercial Avenue to Ridgeway Street. The project also involved transforming Route 60 Business from a one-way (Eastbound only) to a two-way road and removing a traffic island that separated Route 60 Business East and Route 60 West (Main Street). Additionally, traffic signals were added at the intersection of Route 60 and Commercial Avenue. Mr. Stokes was responsible for overall management of all facets of the project, including, design, environmental permitting and compliance, utility relocation and coordination, daily construction operations and scheduling; resource and manpower allocation, contract administration, safety, project quality and quality management, traffic control, and communications with the public/public outreach. Charlie also managed the procurement of all materials, equipment, services and labor required for the project.


**Relevance to the I-81 Atkins DB project:** VDOT Design-Build Project, bridge construction, difficult bridge access, and public outreach **Firm:** Orders Construction Company, Inc. | **Date:** March 2011 – January 2013 | **With Current Firm?** Yes

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not Applicable**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title: <b>Chad McMurray, PE, PMP, CCM, DBIA, Associate</b>	
b. Project Assignment: <b>Quality Assurance Manager (QAM)</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : <b>A. Morton Thomas and Associates, Inc. (Full Time)</b>	
d. Employment History: With this Firm <u>6</u> Years With Other Firms <u>19</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):  <b>A. Morton Thomas and Associates, Inc – Associate, 2011 – Present</b> <b>General Responsibilities:</b> Responsible Charge Engineer for Abingdon Office with direct control and supervision of all engineering services provided out of this office of 40 employees. General duties include management of contracts, supervision of project staff, performance of contract duties including acting as the owner’s representative on projects, providing QA/QC services on Design Build and Design Bid Build projects, development of project reports, and meeting client and company performance requirements.  <b>AMEC E&amp;I, Inc. (formerly MACTEC) – Senior Principal Engineer, 2008 – 2011</b> <b>General Responsibilities:</b> QA/QC duties included documentation including RFI’s, NCR’s, DWR’s, schedule review and monitoring, providing/overseeing QA/QC testing and inspecting, oversight of QA/QC inspection/testing staff. Duties included management of contracts, supervision of project staff, performance of contract duties including acting as the owner’s representative on projects, providing QA/QC services on Design Build and Design Bid Build projects development of project reports, and meeting client and company performance requirements.  <b>Virginia Department of Transportation – Area Construction Engineer, 2004 – 2008</b> <b>General Responsibilities:</b> Coordinate and supervise field inspection staff responsible for construction oversight and QA/QC on VDOT projects in the Bristol District. Responsible for ensuring the Department met on-time, on-budget, quality, and environmental compliance goals for assigned geographic area. Assign QA Inspection staff and oversee inspection and testing program in area.  <b>Avisco, Inc – Project Manager, 2000 – 2004</b> <b>General Responsibilities:</b> Responsible for supervision and coordination of all field activities from start to completion of complex civil construction projects and assistance with managing overall Oak Ridge Operations. Responsible for project Quality Control testing and inspection.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>University of Tennessee, Knoxville / BS / 1993 / Civil Engineering</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2004 / Professional Engineer / #39985 Certified Construction Manager (CCM) # A2397 Project Management Professional (PMP) # 1405995 Design-Build Professional (DBIA), SMW and ESC Certification, Intermediate Work Zone Traffic Control Certification Workzone Training for Law Enforcement Officers (LEO)	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, 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 project; projects older than fifteen (15) years will not be</i>	



*considered for evaluation.*

**(List only three (3) relevant projects\* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)**

**I-81 Halls Bottom Road Bridge Replacement Design Build, Washington County, VA – VDOT – Quality Assurance Manager**

**Responsibility/Specific Job Duties:** **Quality Assurance Manager** for this Design-Build highway/bridge project in Washington County designed by WRA and constructed by Orders Construction. His responsibilities include the development, updating, and implementing of a project specific QA/QC plan. The design-build project includes replacement of two bridges on Interstate 81. Mr. McMurray's responsibilities also include coordination of QA/QC testing of embankment, drainage structures, subgrade, asphalt and incidental items. As the QAM, he is responsible for the acceptance testing and documentation of all materials used on the Contract as well as the generation of the VDOT Materials Book and constructability reviews. He verifies that the QC staff is following the QC Materials Testing Requirements in the approved QA/QC Plan for this Contract. He is also responsible for ensuring environmental compliance and performing environmental reviews on the project. Duties include oversight of all construction activities ensure conformance as well as providing oversight and management of inspection and testing staff.

**Relevance to I-81 Atkins Design-Build:** VDOT Design-Build with nearly identical: roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; construction engineering and inspection; project management. **Client:** Orders Construction Company, Inc. | **Date:** 2016 –2018 | **With Current Firm?** Yes

**Military Highway Design Build, Norfolk, VA – VDOT – Responsible Charge Engineer**

**Responsibility/Specific Job Duties:** **Responsible Charge Engineer** duties and document management services for this intersection and capacity improvement Design Build project on US 13 in Norfolk Virginia. He reviews changes, coordinates with FHWA for concurrence and participation in changes, also reviews project correspondence, design submittals, RFI's, Schedule submittals, and VDOT reviews and comments, coordinating reviews and comments of submittals, and communication with Design-Build through CADAC and guiding the Construction Manager, Inspection, and Engineering Support staff to effectively administer goals for safety, quality, schedule, and budget while overseeing construction activities. He attends regular project meetings and holds weekly teleconferences to review the status of outstanding submittals, RFI's, and deadlines for comments/responses.

**Relevance to I-81 Atkins Design-Build:** VDOT Design-Build with: roadway; survey; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; construction engineering and inspection; project management. **Client:** VDOT | **Date:** 2016 – 2018 | **With Current Firm?** Yes

**U.S. Route 460 Connector Phase I Design Build, Breaks, VA – VDOT – Quality Assurance Manager**

**Responsibility/Specific Job Duties:** **Quality Assurance Manager and QA Geotechnical Engineer** for this \$113M Design-Build highway/bridge project in Buchanan County. His responsibilities included the development, updating, and implementing of a QA/QC plan, review of geotechnical design and issues. Responsible for coordination of QA/QC testing of embankment, structures, subgrade, asphalt and incidental items. As the QAM, he was responsible for the acceptance testing and documentation of all materials used on the Contract as well as the generation of the VDOT Materials Book. He verified that the QC staff followed the QC Inspection Plan/Materials Testing Requirements in the approved QA/QC Plan for this Contract. He was also responsible for ensuring environmental compliance and performing environmental reviews on the project. Duties included oversight of all construction activities and analysis and interpretation of project plans and specifications as well as providing oversight and management of inspection and testing staff.


**Relevance to I-81 Atkins Design-Build:** VDOT Design-Build with: roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; construction engineering and inspection; project management. **Client:** Bizzack Construction, LLC. | **Date:** 2011-2015 | **With Current Firm?** Yes

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction and for QAM, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not applicable.**

## ATTACHMENT 3.3.1


### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title: <b>Mike Russell, PE, DBIA, Vice President</b>	
b. Project Assignment: <b>Design Manager (DM)</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	
<b>Whitman, Requardt &amp; Associates, LLP (Full Time)</b>	
d. Employment History: With this Firm <u>3.5</u> Years With Other Firms <u>26</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	
<b>Whitman, Requardt &amp; Associates, LLP – Vice President, December 2014 – Present</b> <b>General Responsibilities:</b> Mr. Russell is currently a Vice-President with Whitman, Requardt & Associates, LLP where he is primarily responsible for managing transportation projects in Central and Western Virginia. He serves as Design Manager on Design-Build projects and Project Manager on interstate and other transportation projects in the region.	
<b>Virginia Department of Transportation – District Administrator, January 2011 – December 2014</b> <b>General Responsibilities:</b> Mr. Russell became the Bristol District Administrator in 2011 and provided executive leadership and direction to the Department’s 623 employees in the 12 county Bristol District including 87 miles of I-81. He served as an extension of the Commissioner’s Office with direct oversight of a Six-Year construction program valued at over \$500M and an annual maintenance and operation budget averaging \$170M per year. He maintained a high level of involvement in the oversight and design of key projects in the District providing design guidance and construction claim resolution. He worked proactively with staff to resolve design and construction issues to ensure the advancement of the District’s program. The major highlights of the construction program were the \$2.8B Coalfields Expressway and Corridor Q programs.	
<b>Virginia Department of Transportation – PE Manager/PIM, December 2007 – January 2011</b> <b>General Responsibilities:</b> Mr. Russell became the Salem District Assistant District Administrator for Preliminary Engineering, Planning, and Investment Management in 2008 and led the District's Preliminary Engineering staff including Location & Design, Environmental, and Right-of-Way sections. He was responsible for all engineering functions to ensure compliance with all state and federal transportation and environmental standards and policies and led several projects on I-81 during this timeframe. In addition to the P.E. Manager role, he led the District's Planning & Investment Management staff including Land Use, Land Development, Planning, and Programming.	
<b>Virginia Department of Transportation – Location &amp; Design Engineer, November 2004 – December 2007</b> <b>General Responsibilities:</b> Mr. Russell became the Salem District Location & Design Engineer in 2005 and subsequently led and managed design staff responsible for the preparation of highway, right-of-way and construction plans, including survey, roadway and hydraulic design. He coordinated with right-of-way, environmental, bridge, traffic, and materials sections to ensure a cohesive and collaborative design for all projects. He provided engineering oversight to ensure projects were developed in accordance with applicable state and federal standards. As District L&D Engineer he was responsible for the design of multiple projects, from small projects costing less than \$1 million to very complex projects costing \$100 million including multiple projects on the I-81 corridor. His collaborative and hands-on approach to project management and design guided the design teams to significantly improve the on-time and on-budget performance of the District’s projects performance measures while maintaining a problem-solving mindset of the team.	
<b>Virginia Department of Transportation – Resident Engineer, November 2003 – November 2004</b> <b>General Responsibilities:</b> Mr. Russell became the Wytheville Resident Engineer in 2003. He was responsible for all construction and maintenance activities in Wythe and Grayson Counties. In addition to having geographic responsibility for all VDOT activities in Wythe and Grayson counties, he served as the Department’s Responsible Charge Engineer for construction activities and ensured compliance with plans, specifications, environmental requirements and contract documents. He reviewed and accepted independent work order estimates and analysis while focusing on successful field resolution of disputes by providing technical analyses of issues and negotiating and implementing partnering with contractors to settle conflicts.	
<b>Virginia Department of Transportation – Transportation Engineer, Sr., July 2000 – November 2003</b> <b>General Responsibilities:</b> Mr. Russell joined VDOT in 2000 as a Transportation Engineer, SR where he served as project manager for a number of major projects in the Salem District.	

<p>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:  <b>Virginia Polytechnic Institute and State University, Virginia/B.S./1989/Civil Engineering</b></p>
<p>f. <b>Active Registration: Year First Registered/ Discipline/VA Registration #:</b>  <b>1994 / Professional Engineer / #0402024814</b>  <b>2016/Design-Build Professional (DBIA)/175396</b></p>
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b></p> <p><b>I-81 Halls Bottom Road Bridge Replacement Design Build, Washington County, VA – VDOT – Design Manager Responsibility/Specific Job Duties:</b> As <b>Design Manager, Mr. Russell</b> is responsible for all design elements of the replacement of two bridges on I-81 over Halls Bottom Road in Washington County, Virginia. He is responsible for roadway design, coordinating all individual design elements, ensuring that the design conforms with contract requirements and delivering the project in accordance with the project’s QA/QC plan. With design complete, the project is currently under construction within an existing right-of-way requiring a complex MOT plan utilizing the existing median to temporarily carry north and southbound traffic while the existing bridges are replaced. The efficient design replaces the twin 4-span 220’ long bridges with 140’ single span structures utilizing a “true MSE” abutment design. Mr. Russell managed an aggressive design schedule allowing construction to begin only 3.5 months after NTP.</p> <p><b>Relevance to I-81 Atkins Design-Build:</b> VDOT Design-Build with identical: interstate roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; construction engineering and inspection; project management. <b>Client:</b> Orders Construction Company, Inc.   <b>Date:</b> March 2016 – September 2018   <b>With Current Firm?</b> Yes</p> <p><b>Route 29 Solutions Design Build – Berkmar Avenue Extension, Albemarle County, VA – VDOT – Project Manager/ Element Design Lead</b></p> <p><b>Responsibility/Specific Job Duties:</b> As <b>Project Manager and Element Design Lead, Mr. Russell</b> was responsible for coordinating all design elements of the Berkmar Avenue Extension portion of the Route 29 Solutions Design-Build Project. His role on the project was Design Element Lead responsible for the design of the 2.5-mile Urban Connector roadway including a 716’ long bridge over the South Fork of the Rivanna River. The Design-Build project was delivered on an accelerated schedule with right-of-way plans completed in just six months. Mr. Russell accelerated design efforts needed to advanced right-of-way approvals and VSMP permits to allow clearing activities to occur before the time of year restrictions of the Northern Long-Eared Bat, which was listed as endangered after the award of the contract. All design activities were delivered in accordance with the project’s QA/QC plan and Construction Engineering support included review of all shop drawings. The Route 29 Solutions project was the 2017 Overall Winner of the VTCA Transportation Engineering Awards.</p> <p><b>Relevance to I-81 Atkins Design-Build:</b> VDOT Design-Build; roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; project management. <b>Client:</b> Rummel Klepper &amp; Kahl, LLP   <b>Date:</b> Dec. 2014 – Oct. 2017   <b>With Current Firm?</b> Yes</p> <p><b>I-64 Widening – MP 200 to 205 Henrico and New Kent Counties, VA – VDOT – Design Manager</b></p> <p><b>Responsibility/Specific Job Duties:</b> As <b>Design Manager, Mr. Russell</b> was responsible for the roadway design and coordination of all design disciplines for the project, which includes 4.5 miles of improvements to the existing I-64, Widening and rehabilitation of the existing two-lane bridges over the Chickahominy River with three-lane bridges in each direction. The I-64 bridges are approximately 263 feet long utilizing concrete beams and are supported by concrete piles. I-64 is being widened to provide additional capacity from I-295 to the Bottoms Bridge exit. A very detailed MOT plan and TMP were required as part of the project and were delivered as an advanced work package to facilitate the initial construction operations and advance the schedule for the project. Mr. Russell is continuing to provide oversight and coordination for all design elements and management of subconsultants while the project is under construction.</p> <p><b>Relevance to the I-81 Atkins Design-Build:</b> VDOT Design-Build project, interstate roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; ROW; utilities; public involvement/relations; QA/QC; project management. <b>Client:</b> Corman/Branch Joint Venture   <b>Date:</b> August 2017 – August 2019   <b>With Current Firm?</b> Yes</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p> <p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. <b>Not applicable.</b></p>

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Earl Adwell, Construction Manager</b>
b. Project Assignment:	<b>Construction Manager (CM)</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>Orders Construction Company, Inc. (Full-Time)</b> 
d. Employment History: With this Firm <b>41</b> Years With Other Firms <b>5</b> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<b>Orders Construction Company, Inc. – Construction Manager/ Project Superintendent, 1977 – Present</b> General responsibilities include coordination with the design team, constructability reviews of design drawings, on-site management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Ronceverte High School, Ronceverte, WV / High School Diploma / 1965 / NA</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2017/Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification/RLD08960</b> <b>Earl will obtain the VDOT Erosion and Sediment Control Contractor Certification (ESCCC) prior to the commencement of the project.</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, 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 project; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>	<b>I-81 over Maury River, Rockbridge County, VA – VDOT – Construction Manager</b> This award-winning project which won the VDOT Staunton District's 2006 Award for Excellence in Construction replaced twin bridges and widened I-81 through the Maury River segment of Rockbridge County. With the high traffic volume of I-81 and the near proximity to Lexington, VMI and Washington and Lee University, traffic control and public outreach were paramount to the success. The Maury River project had twin bridges that included more than 100,000 SF of deck surface, Virginia Style Abutments, and major excavation to widen I-81. This project was performed at the same time as a similar project to the south over Buffalo Creek which made coordination of construction and traffic control a constant endeavor. A full-time safety patrol service was utilized and the project met or exceeded all expectations. Earl worked closely with the WRA design staff during construction of the project. As Construction Manager, Earl was responsible management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance.  <b>Relevance to the I-81 Atkins DB project:</b> Complex Transportation Management Plan, structure construction done in phases, other nearby major project coordination. In addition Earl and his team, met and exceeded VDOT'S expectations for major structure work and realignments on a heavily traveled I-81, managed risks and beat an aggressive construction schedule. <b>Firm:</b> Orders Construction Company, Inc.   <b>Date:</b> March 2004 – December 2006   <b>With Current Firm?</b> Yes

**WV Route 5 Annamoriah Bridge Design-Build, Calhoun County, WV – WVDOT – Construction Manager**

Earl served as Construction Manager for this unique Fast Track Design-Build project. The tight confines of the work area to permit two-way traffic on Rte. 5 to remain, made access to abutment on pile construction and the 2 piers on 78” diameter drilled shafts in cofferdams challenging. To construct this structure adjacent to the existing required a radial structure with large embankments utilizing borrow excavation. As Construction Manager, Earl was responsible for coordination with the design team, constructability reviews of design drawings, on-site management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance. The project was completed on-time and within budget.

**Relevance to the I-81 Atkins DB project:** Design-Build, tight access, pre-bored pile, environmentally sensitive area, existing structure maintenance, and an accelerated project schedule. **Firm:** Orders Construction Company, Inc. | **Date:** April 2011 – April 2013 | **With Current Firm?** Yes

**Route 501 Bridge Replacement over James River and CSX Railroad, Bedford/Amherst Co., VA – VDOT – Construction Manager**

Earl managed the construction of this 926 linear foot bridge over the James River and CSX railroad. This project had abutments and piers found on both spread footers and drilled shafts. Nearly 6,000 SF of MSE wall was constructed for the Route 501 and Route 130 roadway re-alignment. Earl managed all construction activities as well as the difficult task of keeping the public moving. Additionally, he was responsible for ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance.

**Relevance to the I-81 Atkins DB project:** Earthwork, bridge construction, and difficult bridge access and railroad crossing. **Firm:** Orders Construction Company, Inc. | **Date:** December 2014 – March 2017 | **With Current Firm?** Yes

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

**Earl is currently serving as Construction Manager over one active Locally Administered Design-Build project:**

1. Town of Luray, West Main Street Design-Build Bridge Replacement. This project is scheduled for completion in late 2018 well in advance of the anticipated NTP for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway & Middle Fork Holston River.

## 3.4.1

# LEAD CONTRACTOR WORK HISTORY FORMS

**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: <b>I-81 Bridge Replacement Over Maury River</b> Location: <b>Rockbridge County, VA</b>	Name: <b>Whitman, Requardt &amp; Associates, LLP</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>(540) 332-9074</b> Project Manager: <b>Randy Kiser</b> Phone: <b>(540) 332-9075</b> Email: <b>randy.kiser@vdot.virginia.gov</b>	<b>12/2006</b>	<b>12/2006</b>	<b>\$17,736</b>	<b>\$18,991 (including incentive payment)</b>	<b>\$18,991</b>

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 Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

***Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project***

- ✓ Interstate Roadway
- ✓ Bridge Replacement
- ✓ River Crossing
- ✓ Geotechnical
- ✓ Karst Topography
- ✓ Environmental
- ✓ MOT & TMP
- ✓ Public Outreach

**PROJECT DESCRIPTION**

Orders served as general contractor on this project for the replacement and widening of twin bridges over the Maury River on a heavily traveled section of I-81 in Rockbridge County, VA. This project included significant roadway work, including approach roadways being widened to accommodate maintenance of traffic and future widening of I-81. Multiple traffic shifts were required to adjust the approach alignment to accommodate the wider bridges. The 800' long bridge structures totaled more than 100,000 square feet of deck area and included innovative and complex expansion devices at each end known as the Virginia Abutment, designed by Whitman Requardt & Associates, LLP (WRA). Other facets were significant rock excavation, roadway drainage, asphalt paving, signing, guardrail, and a new traffic management system. Additionally, a full-time "Safety Service Patrol" was used due to the high traffic volumes. This relatively simple accommodation reduced incident clearance times significantly during the construction duration.

**Evidence of good performance** – Orders partnered with VDOT and strived continually to improve upon the aggressive construction schedule and earned an early completion incentive of more than

\$400,000. This project also won the 2006 *Award for Excellence in Construction* from VDOT.

**LESSONS LEARNED** include the unique goals and priorities toward which VDOT strives on major bridge projects, and how to meet and exceed VDOT's standards. In addition, Orders gained valuable experience working in and adjacent to a heavily traveled road and development of TMP for the safety of their workers and the traveling public. This experience with traffic control and MOT will carry over to the I-81 Atkins project. Partnering was significant to this project because everyone understood the value of finishing on time. Orders partnered with VDOT and WRA to compress the project schedule and to resolve design/construction issues quickly. This experience will apply as Orders keeps the project at hand on schedule. Orders was attentive to environmental concerns related to the installation of cofferdams for bridge piers. Regulators were pleased the river was spanned with a temporary bridge. Orders will continue this practice of partnering and being attentive to the risks at the I-81 Atkins project. Additionally, while working with WRA on the construction of piers and abutments foundations, Orders learned much about the karst substrata in the area and how to mitigate design and construction issues. Many key staff from Orders including Charlie Stokes and Earl Adwell will apply these lessons learned to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project.



**Orders Team Advantage**

***Orders is proposing the same Construction Manager and Roadway, Bridge, Geotechnical and Hydraulics Design Team for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.***

**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: <b>Route 60 Main Street Bridge Replacement</b>  Location: <b>Town of Clifton Forge, Alleghany County, VA</b>	Name: <b>Clark Nexsen, Inc.</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>(800) 367-7623</b> Project Manager: <b>George Bezold</b> Phone: <b>(540) 462-6990</b> Email: <b>george.bezold@vdot.virginia.gov</b>	<b>12/2012</b>	<b>10/2012</b>	<b>\$3,488</b>	<b>\$3,488</b>	<b>\$3,488</b>

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 Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

- Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project***
- ✓ *Design-Build*
  - ✓ *Roadway*
  - ✓ *Bridge Replacement*
  - ✓ *Water Crossing*
  - ✓ *Geotechnical*
  - ✓ *Karst Topography*
  - ✓ *Hydraulics & SWM*
  - ✓ *MOT & TMP*
  - ✓ *Public Outreach*

**PROJECT DESCRIPTION**  
Orders was general contractor on this Design-Build project to replace the Main Street Bridge in downtown Clifton Forge. The greatest challenge was to build the bridge which directly abuts old historical and commercial buildings on both sides and also provide public access to these buildings throughout construction. The contract also included the reconstruction of Main Street, reconfiguration of two-way traffic flow on Ridgeway Street, and the addition of traffic signals at the intersection of Route 60 and Commercial Avenue. Orders worked closely with the entire Design-Build Team, the Town of Clifton Forge, and VDOT and resolved several unforeseen issues during construction without a single change order to the project and still completed the project **two months ahead of schedule.**

**Evidence of good performance** – The project was completed ahead of schedule, quality was in the forefront; and there were no deficiencies. Through careful management of public relations with affected businesses and city officials, all stakeholders remain supportive of the project, in spite of its effect on the downtown area.

consideration in Orders' demolition and erection plans, and construction impacts were tracked through the installation of vibration monitors on the structure. The construction phase of this project was much more streamlined and coherent than traditional Design-Bid-Build.

**PROJECT ACCOLADES**  
The Route 60 Design-Build project received the **2014 ACEC Engineering Excellence Honor Award**; was presented as the **Small Transportation Project of the Year** at the San Jose, CA DBIA conference in 2014; and the **APWA Mid-Atlantic Public Works Project of the Year.**

**LESSONS LEARNED**  
Truck traffic was one of the big concerns at Clifton Forge, and the project had tight constraints on the Route 60 detour. Auto Turn was used to ensure that large trucks could navigate the roadway. While the westbound Route 60 bridge was being replaced, Orders constructed a two-way traffic system on Clifton Forge's Ridgeway Street by widening turns and reconfiguring parking arrangements to allow truck and bus traffic to navigate the town. Elevated temporary walkways were also designed and implemented to allow pedestrian traffic to access local businesses on Main Street while the bridge structure was being replaced. Also, well-planned signage and pavement markings prevented traffic accidents on the detour. This experience will apply at the Atkins project as the risks of traffic control and MOT are handled. Additionally, the Clifton Forge project was constrained by limited right-of-way needed to accomplish widening. At Clifton Forge there were also unique requirements of working in a historic district. Downtown Clifton Forge is on the National Register of Historic Places, and the historic Masonic Theater was one of the structures touching the bridge to be replaced. The theater merited special



***Orders Team Advantage***  
***Orders is proposing the same Design-Build Project Manager and Assistant Project Manager for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.***



**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: <b>Route 501 Road Improvements and Bridge Replacement over the James River &amp; the CSX RR</b> Location: <b>Bedford &amp; Amherst County, VA</b>	Name: <b>AECOM</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>(434) 946-0548</b> Project Manager: <b>Larry Nash</b> Phone: <b>(434) 942-9256</b> Email: <b>larry.nash@vdot.virginia.gov</b>	<b>04/2017</b>	<b>03/2017</b>	<b>\$16,829</b>	<b>\$16,862</b>	<b>\$16,862</b>

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 Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

***Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project***

- ✓ Roadway
- ✓ Bridge Replacement
- ✓ Railroad Crossing
- ✓ River Crossing
- ✓ MOT
- ✓ Geotechnical
- ✓ Environmental
- ✓ Public Outreach
- ✓ Key Stakeholders

**PROJECT DESCRIPTION**

Orders served as general contractor for this 926-foot long bridge over the CSX Railroad and the James River. This project had one abutment founded on rock and one on drilled shafts. One of the four piers was founded on drilled shafts and the other three were on rock. A tie-back wall was used to support the live CSX Railroad during Pier 1 excavation and drilled shaft construction. Four cofferdams were required and all substructure concrete was designed using "mass concrete". The span of 163 feet from Abutment A to Pier 1 was over the CSX Railroad. The elevation difference from Abutment A bearing to top of Pier 1 footing was nearly 72 feet, necessitating very tall piers over the river. Nearly 2 million pounds of structural steel and 750,000 pounds of reinforcing steel went into this structure. The structure had a curved radius that required both crown and super elevated deck construction. MSE Walls were used to support Route 501 re-alignment. Both Route 501 and Route 130 were re-aligned and widened in phases to keep traffic moving during the nearly 40,000 cubic yards of excavation and rock scaling of Route 130. Orders opted to incorporate barges and floating crane platforms in lieu of 2 causeways in the river.

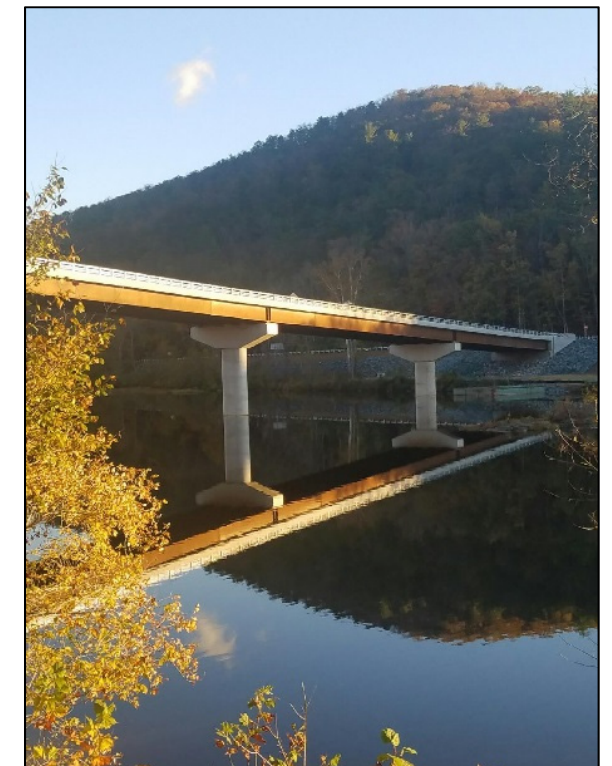
**LESSONS LEARNED**

Orders gained valuable experience through working close with VDOT to make this a successful project. Orders took the lead on sharing information and working with CSX Railroad and their consultant, the Alfred Benesch & Company to expedite work and maintain flow for the railroad. Working closely with VDOT ensured that the project had no impacts to the Hydro-Power Plants, one located ½ mile upstream and one located ½ mile downstream of the project. Working with VDOT Traffic Staff ensured that truck traffic to the massive Big Island Georgia Pacific Plant would flow uninterrupted. Building sound working relationships with the inspection staff and Lynchburg District Representatives made problem solving much simpler and avoided issue escalation. The staff of this project, Charlie Stokes, Joshua Sproles, and Earl Adwell will carry these lessons to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project.

**Evidence of good performance** – This project completed ahead of schedule and under budget. Acclaimed "Mass Concrete" operations which led to various "how to" seminars and the project was presented at the 2015 ACI Conference Board Meeting in Chicago, Illinois. Working relationships and excellent communication with the VDOT Lynchburg District Staff led to the determination that no formal partnering follow-up meetings would be required, as partnering was an everyday occurrence on this project.

**Orders Team Advantage**

***Orders is proposing the same Construction Manager, Project Manager, and Assistant Project Manager for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project. These relationships will carry over to the project, which will allow the Lessons Learned to be applied directly to the project.***



## 3.4.2

# LEAD DESIGNER WORK HISTORY FORMS

**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 Start Date	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: <b>I-81 Bridge Replacement over Halls Bottom Road Sinking Creek Design Build</b> Location: <b>Bristol, Virginia</b>	Name: <b>Orders Construction Company, Inc.</b>	Name of Client: <b>Orders Construction Company, Inc.</b> Phone: <b>(276)-227-0378</b> Project Manager: <b>Charlie Stokes</b> Phone: <b>(276) 227-0378</b> Email: <b>cstokes@ordersconstruction.com</b>	<b>04/2016</b>	<b>09/2018</b>	<b>\$11,284</b>	<b>\$11,354 (with owner approved change orders)</b>	<b>\$850</b>

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

***Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project***

- ✓ *Design-Build*
- ✓ *Interstate Roadway*
- ✓ *Interstate Bridge Replacement*
- ✓ *Water crossing*
- ✓ *Environmental Permits*
- ✓ *Hydraulics and SWM*
- ✓ *Future I-81 Widening*
- ✓ *Geotechnical*
- ✓ *MOT & TMP*
- ✓ *Public Involvement*
- ✓ *Design QA/QC*
- ✓ *Construction Engineering*
- ✓ *Project Management*

WRA's Bristol, TN, Richmond, VA, and Blacksburg, VA design groups prepared roadway and bridge construction improvements designs including twin 140-foot long bridges to carry I-81 over Halls Bottom Road and Sinking Creek as part of a Design-Build project led by VDOT's Bristol District. The Design Build project was managed from our nearby Bristol, TN office with the same Design Manager (Mike Russell) as is being proposed for the Atkins project. The purpose of the project is identical to that of the Atkins project – to replace the existing structurally deficient bridges using a Design Build delivery method. The existing 4-span bridges are being replaced with single span structures incorporating MSE walls to shorten the original bridge length and reducing long term maintenance cost of the structures.

**The roadway and bridge design** incorporated the project's requirements to not preclude future widening of I-81 and to correct a substandard vertical curve while performing all work within the existing right of way. This necessitated constructing a portion of the permanent NB bridge in the median to carry both NB and SB traffic in subsequent phases. The first and second phases of construction in the median and NB lanes are complete. The design elements for roadway, bridge, MOT, geotechnical and drainage are **virtually identical** to those on the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project.

**The design of the structures and MOT** very carefully accommodated the extremely narrow median as shown in the picture to the right, there was virtually no remaining space between the Phase 1 bridge and the existing structures. Partial demolition of the existing NB bridge along with reduced lane widths and temporary traffic shifts along the mainline provided adequate room to construct the bridge. Temporary detours to the median and associated temporary drainage were carefully designed to accommodate the 70mph work zone design speed. This approach will be very similar to what will be required at the Atkins site.

**Geotechnical** - Due to the karst geology in the general area of the site, the adjacent sinking stream and visible sinkholes in the area WRA contracted with Forest Environmental Services, Inc., who performed an electro-resistivity analysis of the site. Although low resistive values (typically indicative of clay deposits) were measured to



depths of 40 feet, correlating the resistivity data with the soil borings revealed that the rock in the area was conductive.

The project also includes the installation of a storm drain under active lanes of I-81. Close observations of the soil boring drilling operation enabled us to identify rock fill used in the embankment, which is not explicitly apparent when reviewing the splitspoon samples and would have interfered with any trenchless installation of the storm drain. This information prompted recommendations to alter the location and elevation of the trenchless installation of the storm drain, which was ultimately recommended to be installed by conventional auger boring methods. A photo of this installation is shown above.



**Bridge Foundation** - Due to the shallow bedrock underlying the project, the competency of the rock confirmed through our geophysical studies, and the reduced bridge span, a "True MSE Abutment" was designed for the project. The spread abutments were designed to rest on MSE fill specifically designed to resist the added abutment load. The subgrade below the MSE walls was designed to be excavated to rock and aggregate fill used as the reinforced fill. This excavation places the leveling pad for the walls below the adjacent stream and reduces settlements for the bridge similar to a pile foundation. The single span jointless bridges utilized steel girders and buried approach slabs to reduce long term maintenance needs.

**WRA Team Advantage**

***Teaming with Orders again as the Design-Builder, WRA is proposing the same Design Manager for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project as was used on the I-81 Bridge Replacement over Halls Bottom Road Design Build. This will ensure an integrated team approach to the project that has a proven track record of delivering high quality and innovative roadway and bridge designs on schedule. The close working relationships developed between WRA and Orders has allowed construction related issues (which will be encountered on any project) to be quickly resolved to maintain the project schedule and budget.***

**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 Start Date	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: <b>I-81 Bridges over Buffalo Creek</b>  Location: <b>Rockbridge County, Virginia</b>	Name: <b>Fairfields Echols, LLC (Fairfield Skanska, Inc.)</b>	Name of Client: <b>VDOT</b> Phone: <b>(540) 332-7724</b> Project Manager: <b>Wayne Nolde</b> Phone: <b>(540) 332-7724</b> Email: <b>wayne.nolde@vdot.virginia.gov</b>	<b>08/2004</b>	<b>07/2007</b>	<b>\$27,151</b>	<b>\$28,897 (including approved work orders)</b>	<b>\$2,221</b>

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

- Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project**
- ✓ Interstate Roadway
  - ✓ Interstate Bridge Replacement
  - ✓ River & Creek Crossing
  - ✓ Environmental Permits
  - ✓ Hydraulics and SWM
  - ✓ Geotechnical
  - ✓ MOT & TMP
  - ✓ Public Involvement
  - ✓ Design QA/QC
  - ✓ Construction Engineering
  - ✓ Project Management

**WRA's Role – WRA was selected as the prime designer for the I-81 bridge replacement project at Buffalo Creek.** WRA completed approximately 90% of the design from our Richmond, Virginia office. The bridges had reduced shoulder width and were classified as functionally obsolete. The project was to be the first part of the I-81 reconstruction efforts and were designed to widen I-81 from 4 to 6 lanes.

**Roadway Design –** The project required the reconstruction of approximately one mile of the interstate facility. The design required total replacement of the existing pavement section, which required the roadway typical section to be shifted to the east to ensure two travel lanes where maintained during construction at all times.

**Hydraulic Analysis –** The project required a detailed hydraulic analysis of Buffalo Creek to ensure the project had no impact to the 100-year flood elevation. Additionally, the analysis included the evaluation of temporary causeways into the stream during construction. Three stormwater management facilities were designed for the projects and all existing corrugated metal drainage pipes were replaced requiring the boring and jacking of several pipes. The

height due to the depth of the gorge. The Buffalo Creek bridges featured an innovative design element for the treatment of the deck joints at the abutments. The ends of the steel girders are encased in a concrete diaphragm that is integral with the deck and located just beyond the bearings. The deck joints are tooth expansion joints that are located on the abutment side of the concrete diaphragm. VDOT has since included the detail in the Design Guidelines as a special alternative joint detail known as the Virginia Abutment. The design of the bridge was carefully coordinated with VDOT to ensure that it would accommodate future widening of I-81 to four lanes in each direction.

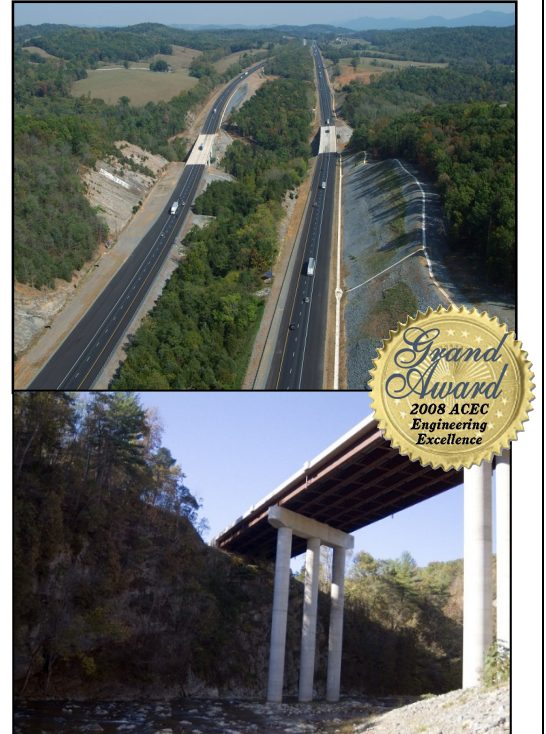
**TMP –** The sequence of construction and maintenance of traffic required all existing travel lanes to remain open during construction. This required a phased construction of the bridges. The Buffalo Creek northbound bridge was constructed in two phases, while the southbound bridge was shifted into the median and constructed in a single phase.

project also included the design of the extension of 2 box culverts.

**Geotechnical Engineering –** WRA provided all geotechnical engineering services for the project, which included an extensive testing and boring program to locate potential karst features. Our geologists performed extensive site visits and used dye testing to identify underground stream features that may have impacted the project design. At the Buffalo Creek northbound bridge it was determined the existing median contained a major underground stream network. The bridge and roadway improvements were shifted to the outside of the existing northbound I-81 lanes to avoid the karst features. WRA provided a detailed geotechnical report including the design of a major embankments, rock cut slopes and bridge foundations.

**Public Involvement –** WRA provided all presentation materials and participated in the Design Public Hearing for the project.

**Project Awards:**  
**VDOT Virginia Statewide Construction Quality Award, NPHQ Award**  
**“Breaking The Mold” and ACEC Grand Award For Design Excellence**



**Structural Design –** The structural design of the two I-81 bridges over the Buffalo Creek gorge with a depth well over 100 feet on I-81 was a main focus of the design. The bridges were on independent alignments and grade with approximately 1,000' distance between the roadways. The NBL bridge was the more challenging design due to the requirement that it be constructed in two stages just downstream from the existing bridge, and due to the site topography. Alignment studies also revealed the need to raise the profiles of the bridges approximately 8 feet to meet current FHWA Interstate Design Standards. The design consists of continuous hybrid steel plate girder bridges with the following span configurations: NBL Bridge: 137'-166'-166'-137' = 606' and the SBL Bridge: 138'-154'-154'-138' = 584'. The NBL Bridge is on a curved alignment while the SBL Bridge is on a tangent alignment. Both bridges required tall piers of up to 110 feet in

**WRA Team Advantage**  
**WRA's experience Designing Bridge Replacement on I-81 is unmatched. Team members responsible for roadway, structures and geotechnical are also proposed for the Atkins project. This experience will be leveraged extensively during the design on the MOT, Roadway and Bridges.**

**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 Start Date	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: <b>I-81 Bridge Replacements over New River and Route 232 Bridge over I-81</b> Location: <b>Montgomery and Pulaski Counties, Virginia</b>	Name: <b>Vecellio and Grogan</b>	Name of Client: <b>VDOT</b> Phone: <b>(540) 387-5332</b> Project Manager: <b>Mr. Timothy Dowdy</b> Phone: <b>(540) 387-5332</b> Email: <b>timothy.dowdy@vdot.virginia.gov</b>	<b>11/2016 (I-81 NB)</b>	<b>05/2020 (I-81 NB)</b>	<b>\$48,013 (I-81 NB)</b>	<b>\$48,653 (I-81 NB)* *with approved change orders</b>	<b>\$4,200</b>

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

- Relevance to the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River Project***
- ✓ Interstate Bridge Replacement
  - ✓ Interstate Roadway
  - ✓ River Crossing
  - ✓ Future I-81 Widening
  - ✓ Environmental Permits
  - ✓ Hydraulics and SWM
  - ✓ Geotechnical
  - ✓ TMP
  - ✓ Public Involvement
  - ✓ Design QA/QC
  - ✓ Construction Engineering
  - ✓ Project Management

VDOT retained WRA as the prime designer to provide comprehensive planning and engineering design services to VDOT for the replacement of two 1,600-foot bridges that carry Interstate 81 traffic over the New River, and replacement of the Route 232 Bridge over I-81. Services include planning and design of I-81 bridge replacements and approaches; bridge replacement of the Route 232 bridge over I-81; traffic data collection, forecasting/analysis, and preparation of an Interchange Modification Report for FHWA; hydrologic and hydraulic analyses; flood plain studies; surveys; and all aspects of public involvement, including individual meetings with project stakeholders to cultivate understanding and support of the project's goals and objectives. WRA is responsible for all aspects of project planning and design, as well as support during construction in the form of shop drawing reviews, addressing requests for information, and assisting the Department with technical support during construction. WRA is the prime designer on the project, and the majority of design efforts have been accomplished by WRA staff in our Blacksburg, and Richmond, VA.

**Roadway Design** – The project required extensive roadway approach designs for I-81 NB; I-81 SB; and Route 232 to accommodate Maintenance of Traffic and Ultimate Conditions. The ramp connections for the I-81 Exit 105 interchange were tweaked to provide for both temporary and permanent conditions as well. The reconstruction of the Route 232 bridge posed unique challenges in the planning for maintaining traffic that WRA addressed with optimized geometric design and special pier protection systems.

**Bridge Design** – This project includes replacement of the existing I-81 bridges over the New River with a new 7-span, continuous, haunched structural steel superstructure resting on dual hammerhead piers with a total length of approximately 1,670 feet. The bridges carry three lanes with shoulders each north and southbound. The bridges incorporate jointless concepts by utilizing the Virginia style abutments (developed by WRA), which encase the end of the structural steel with a floating concrete backwall and a tooth joint in the abutment. The northbound bridge will be constructed in two phases, and the southbound bridge in a single phase. Also included in the project is the reconstruction of the Route 232 bridge over I-81, which includes a complete replacement structure 300 feet long with a two-span continuous, steel superstructure on a conventional pier with semi-integral abutments. WRA worked closely with VDOT to confirm that the design of the proposed bridges would accommodate future widening of I-81 and included proposed widening concepts in the Stage I Bridge Report.

**Geotechnical Design** – The project area is situated in complex geological formations, including the Pulaski fault and karst topography. The known presence of karst topography required extensive subsurface analysis and varied pier foundation designs to minimize the risk during construction. Retaining walls are required to eliminate shoulders from spilling down large existing fill slopes. Additionally, as the

project entered final design significant changes to the stormwater management regulations had a profound impact on the design of stormwater management basins requiring additional geotechnical investigations for those design features.

**Drainage/H&HA/SWM Design** – With the bridges spanning the New River and its tributaries paralleling I-81 leading to the New River, extensive modelling of the New River was required to ensure all applicable impacts of the construction were considered. The phasing of the project introduced a need to model each phase independently to ensure no-rise of the 100-year flood elevation of the river. Due to the project construction phasing described above, Phase 1 SWM design was designed in accordance with Performance Based Criteria and Phase 2 SWM was designed in accordance with new Runoff Reduction Method Criteria.

**TMP** – The sequence of construction and maintenance of traffic requires two lanes of traffic to be maintained during construction with only minimal nighttime lane closures permitted. Short duration closures of the Route 232 off ramp is incorporated to facilitate the construction of the Route 232 bridge. All traffic impacts were carefully coordinated with the Southwest Regional Operations group with additional restrictions placed on construction activities to coincide with high traffic events associated with nearby Virginia Tech and Radford University. The project incorporates long term high-speed crossovers in the second phase when southbound traffic will be shifted on to the newly constructed northbound bridge, which is designed to accommodate four lanes of traffic during that phase. Construction vehicle access from the mainline I-81 was carefully considered and improvements to the mainline shoulder incorporated both for long-term incident management along I-81 but also to serve as an acceleration lane for construction vehicles. As noted earlier, the phasing of the project during final design necessitated the development of independent MOT plans for the two phases of the project.

**Public Involvement** – WRA provided all presentation materials and participated in the Design Public Hearing for the project. Due to the adjacent New River and City of Radford property, several stakeholder meetings were needed to ensure the public's support of the project.



**WRA Team Advantage**  
***WRA is proposing the same core Roadway, Bridge, and Geotechnical Design Team for the Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway, and Middle Fork Holston River project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.***



*in conjunction with*



*Subconsultants:*

