Response to Request for Qualifications

SKIFFES CREEK CONNECTOR
James City County, Virginia

State Project No.: 0060-047-627, P101, R201, C501, B619, B620
Federal Project No.: STP-5A03(455)
Contract ID Number: C00100200DB104

May 30, 2019
3.2 Letter of Submittal
May 30, 2019

Ms. Sudha Mudgade, P.E., PMP, DBIA
Alternative Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

Dear Ms. Mudgade:

Shirley Contracting Company, LLC (Shirley), as the Offeror, is pleased to submit to the Virginia Department of Transportation (VDOT) our response to your Request for Qualifications (RFQ) for the project referenced above. With Dewberry Engineers Inc. (Dewberry) as our Lead Designer, Shirley offers VDOT an experienced Team with a proven track record of delivering design-build projects on time, under budget and with a partnering approach. As an example of our experience and our history working together as a Team, Shirley and Dewberry have been awarded 42 design-build projects valued at more than $4 billion.

3.2.1 - The Offeror’s full legal name and address is Shirley Contracting Company, LLC, 8435 Backlick Road, Lorton, VA 22079.

3.2.2 - Our Point of Contact is: Garry A. Palleschi, Vice President, 8435 Backlick Road, Lorton, VA 22079, Phone: (703) 550-3579, Fax: (703) 550-9346, Email: gpalleschi@shirleycontracting.com

3.2.3 - Our Principal Officer is: Michael E. Post, Chief Executive Officer, 8435 Backlick Road, Lorton, VA 22079, Phone: (703) 550-8100

3.2.4 - Shirley Contracting Company, LLC, a limited liability company, will be the legal entity, will have financial responsibility for the Project and will have joint and several liability for the performance of the work. There are no liability limitations. Our bonding approach will be to provide performance and payment bonds for the total contract value and time period.

3.2.5 - The Lead Contractor for the Project will be Shirley Contracting Company, LLC and the Lead Designer will be Dewberry Engineers Inc.

3.2.6 - The full legal names and addresses of all affiliated and/or subsidiary companies of the Offeror are provided in Attachment 3.2.6.

3.2.7 - Signed Certification Regarding Debarment Forms for Primary and Lower Tier Covered Transactions are included as Attachments 3.2.7(a) and 3.2.7(b).

3.2.8 - Shirley Contracting Company, LLC is currently Prequalified (active status) with VDOT. Our Vendor Number is S018. A screen shot print out from VDOT’s on-line Prequalified List is attached as Attachment 3.2.8.

3.2.9 - Included as Attachment 3.2.9 is a letter from our surety that provides evidence that we are capable of obtaining a performance and payment bond for the current estimated contract value, and that these bonds will cover the Project and any warranty periods.

3.2.10 - Virginia State Corporation Commission (SCC) and Virginia Department of Professional and Occupational Regulations (DPOR) registration information for all business entities on the Offeror’s team are included in Attachment 3.2.10. Full size copies of registrations and licenses or evidence indicating the same are provided in the appendix to this Statement of Qualifications.

3.2.11 - Shirley is committed to achieving the 13% DBE participation goal for the entire value of the contract.

On behalf of our Team, we thank the VDOT for the opportunity to submit this SOQ and we look forward to partnering with VDOT and all involved to deliver another successful project.

Sincerely,

Garry A. Palleschi
Vice President

RE: Skiffes Creek Connector
James City County, Virginia
Contract ID Number: C00100200DB104
3.2 Letter of Submittal
3.3 Offeror’s Team Structure
3.3 Offeror’s Team Structure

Introduction
Shirley Contracting Company, LLC (Shirley) has the experience and personnel to successfully manage all design-build elements of the Skiffes Creek Connector (Project). Shirley, along with Dewberry Engineers Inc., (Dewberry) as our Lead Designer, are VDOT’s most experienced design-build team having been awarded 21 VDOT design-build projects to date, valued at more than $1.5 billion. Successful completion of these projects has provided our Team with experience that directly correlates to elements of this Project including:

- Design and construction of bridges over CSXT Railroad;
- Design, permitting, and construction of bridges over environmentally sensitive areas;
- Management of multiple utility conflicts; and
- Experience working in the Hampton Roads District.

In addition to this experience that best qualifies our Team for this Project, our success is further exemplified by the awards we have received including those shown in Table 1.

<table>
<thead>
<tr>
<th>Project</th>
<th>Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-64 Capacity Improvements Segment I</td>
<td>2018 DBIA National Award of Merit</td>
</tr>
<tr>
<td></td>
<td>2018 DBIA Mid-Atlantic Region Award of Merit</td>
</tr>
<tr>
<td>I-66 Widening</td>
<td>2017 DBIA Mid-Atlantic Region Award</td>
</tr>
<tr>
<td>Route 27/244 Interchange Modifications</td>
<td>2016 DBIA National Award of Merit</td>
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<tr>
<td></td>
<td>2016 DBIA Mid-Atlantic Region Transportation</td>
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<tr>
<td></td>
<td>2016 DBIA Mid-Atlantic Excellence in Engineering</td>
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<tr>
<td></td>
<td>2016 HCCA Excellence in Infrastructure</td>
</tr>
<tr>
<td>I-66/Route 29/Linton Hall Road Interchange</td>
<td>2016 ACEC Metropolitan Washington Engineering Excellence Award</td>
</tr>
<tr>
<td></td>
<td>2016 VTCA Transportation Engineering Award</td>
</tr>
<tr>
<td>InterCounty Connector - Contract C</td>
<td>2012 ACI Award of Excellence in Heavy Construction</td>
</tr>
<tr>
<td></td>
<td>2012 ARTBA Globe Award</td>
</tr>
<tr>
<td>Route 28 Corridor Improvements PPTA</td>
<td>2012 NVTA Salute</td>
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<tr>
<td></td>
<td>2004 Tower of Dulles Award</td>
</tr>
<tr>
<td>Dulles Greenway Capital Improvements</td>
<td>2008 DBIA Regional Design-Build Excellence Award</td>
</tr>
</tbody>
</table>

Our success on design-build projects is due in large part to the selection of personnel and team members, each with strengths that address critical project risks. The Shirley/Dewberry Team, with more than 17 years of design-build experience, is committing Key Personnel to address these risks. This experience facilitates development of a thorough understanding of each other’s capabilities, enabling us to efficiently manage each discipline. Further, we bring additional design-build strength to the Project through our partners and specialty firms as shown in Table 2 and our Organizational Chart.

<table>
<thead>
<tr>
<th>Firm</th>
<th>Role on Project</th>
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</thead>
<tbody>
<tr>
<td>Dewberry</td>
<td>Dewberry Engineers Inc., (Dewberry) will be the Lead Designer and will lead design and construction quality control for our Team. Dewberry has extensive design-build experience as the Lead Designer on all of Shirley’s 21 design-build projects for VDOT. Dewberry is a nationally recognized engineering firm headquartered in Fairfax, Virginia and is ranked among Engineering News-Record’s Top 25 in highway design.</td>
</tr>
</tbody>
</table>
3.3 Offeror’s Team Structure

<table>
<thead>
<tr>
<th>Firm</th>
<th>Role on Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES Consulting, LLC (CES)</td>
<td>CES will provide the Quality Assurance Manager and Quality Assurance Inspectors for the Project. CES is a registered DBE in the Commonwealth of Virginia and specializes in providing Construction Management and Project Controls Services to governmental agencies and contractors.</td>
</tr>
<tr>
<td>ECS Mid-Atlantic, LLC (ECS)</td>
<td>ECS will provide QA testing technicians and laboratory services as a subconsultant to CES. They are a premier provider of geotechnical engineering, construction materials testing, environmental consulting, and facilities engineering services across Maryland, Pennsylvania, New Jersey, and Virginia. With more than 600 employees and over 30 years of experience, ECS is equipped to help clients through the entire project cycle for both the private and public sectors.</td>
</tr>
<tr>
<td>DMY Engineering Consultants, Inc. (DMY)</td>
<td>DMY will provide geotechnical investigations, testing, and analysis as a subconsultant to Dewberry. DMY is a registered DBE in the Commonwealth of Virginia whose expertise lies in providing geotechnical site investigation, drilling, instrumentation, geotechnical design and analysis, laboratory testing, and construction materials testing/inspection.</td>
</tr>
<tr>
<td>Quantum Spatial, Inc. (Quantum)</td>
<td>Quantum will provide aerial mapping as a subconsultant to Dewberry. Quantum is a professional geospatial mapping organization with a proud record of performance providing similar services to multiple state, local, federal, and private organizations.</td>
</tr>
<tr>
<td>Accumark, Inc.</td>
<td>Accumark, Inc. will complete utility designations and test pits as a subconsultant to Dewberry. They specialize in providing comprehensive subsurface utility engineering services, focused on reducing utility conflicts and utility relocation costs.</td>
</tr>
<tr>
<td>Diversified Property Services Inc.</td>
<td>Diversified Property Services Inc., is a registered DBE in the Commonwealth of Virginia and will provide right-of-way and land acquisition services. As a VDOT prequalified ROW acquisition firm, they will handle all areas of appraisal and appraisal review services, negotiations, acquisition of rights, expert witness testimony, and relocations.</td>
</tr>
<tr>
<td>Old Dominion Settlements, Inc. T/A Key Title (Key)</td>
<td>Key will provide title research and settlement services for properties acquired on the Project. Key has closed over 50,000 real estate transactions since 1973 and has accumulated a wealth of experience in all aspects of the real estate closing process.</td>
</tr>
</tbody>
</table>

### 3.3.1 Key Personnel

Information on Key Personnel in Table 3 is included as Attachment 3.3.1-Key Personnel Resume Forms.

<table>
<thead>
<tr>
<th>Key Personnel Position</th>
<th>Name</th>
<th>Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Project Manager (DBPM)</td>
<td>Robbie Roberts</td>
<td>Shirley Contracting Company, LLC</td>
</tr>
<tr>
<td>Quality Assurance Manager (QAM)</td>
<td>Bryan Barnson, PE, CCM, DBIA</td>
<td>CES Consulting, LLC</td>
</tr>
<tr>
<td>Design Manager (DM)</td>
<td>Matt Thomas, PE</td>
<td>Dewberry Engineers Inc.</td>
</tr>
<tr>
<td>Construction Manager (CM)</td>
<td>Kyle Davidson</td>
<td>Shirley Contracting Company, LLC</td>
</tr>
</tbody>
</table>

Each individual has extensive experience in the design, construction, and administration of VDOT design-build projects, as well as overall design and construction expertise. Design-build projects require a high level of coordination and integration among the various disciplines. It is critical that Key Personnel have an extended history of working together and an understanding of how all disciplines interact. A successful team must integrate the design, construction, QA/QC, ROW, utility, permitting, safety, third party coordination, and public relations disciplines into a single, cohesive project.

### 3.3.2 Organizational Chart

The Organizational Chart at the end of this section outlines the structure of our proposed Team. The “chain of command” shown in the chart by solid lines represents the primary reporting relationships. Dashed lines represent communication relationships between major project disciplines and participants. This structure has been created to specifically address the overall project scope, the anticipated schedule...
3.3 Offeror’s Team Structure

for completion, and risks involved in meeting project objectives. The following narrative describes the functional relationships and communications among our Team:

**Design-Build Project Manager, DBPM (Robbie Roberts)** is tasked with full and complete authority over all aspects of the Shirley Team’s responsibilities. In addition to being the primary point of contact with VDOT after award of the Project, Robbie has the ultimate responsibility for contract management and to coordinate and integrate all project disciplines. He has full authority to resolve all disputes or disagreements through best efforts and good faith negotiations with VDOT representatives. Robbie will lead coordination efforts with third-party stakeholders and lead all coordination efforts with CSXT/AECOM. Working with VDOT, he will coordinate public outreach efforts, public meetings, and answer project inquiries.

**Quality Assurance Manager, QAM (Bryan Barnson, PE, CCM, DBIA)** reports directly to the DBPM and is completely independent from the construction operations and QC inspections. Bryan has full responsibility for assuring the Project is in compliance with the Contract Documents and environmental permits. He manages all aspects of the QA program, directs the QA inspections by the QA inspectors and independent QA testing technicians, and monitors the QC program. Bryan will manage a comprehensive system of QA/QC documentation and, based on all testing levels (QC, QA, and Owner), verifies the acceptability of work and certifies compliance with the Contract Documents as part of the application for payment. This position is unique in that Bryan has the autonomy to report findings directly to VDOT in addition to the DBPM, and if work is not in compliance with the Contract Documents, he has the authority to unilaterally halt or suspend work, and the responsibility to assure corrective action is taken before accepting work and certifying payment.

**Design Manager, DM (Matt Thomas, PE)** reports to the DBPM and has overall responsibility for management of the design process. Of vital importance is Matt’s role in integrating the various design disciplines with the construction, ROW, utility, permitting, and safety elements. He establishes and oversees the Design QA/QC program ensuring that design QA and QC functions are exclusively designated and not assigned to those with conflicting duties or production work, as outlined in the *VDOT Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects (2018)*. Matt remains involved throughout the construction phase to support implementation of the design, review shop drawings, attend regular progress and public meetings, and respond to all construction questions and RFI’s.

**Construction Manager, CM (Kyle Davidson)** reports to the DBPM and Environmental Compliance Coordinator. He is responsible for managing all aspects of construction and the QC process. Prior to construction, Kyle facilitates constructibility reviews for design, works closely with the Utility Manager to plan relocations, and coordinates with the ROW Manager to prioritize and schedule acquisitions. During construction, he is on site at all times, updates the Project schedule, oversees the QC Manager, Project Manager, and Superintendent, and ensures construction materials and activities are in accordance with the Contract Documents. Kyle manages a system ensuring qualified personnel monitor, inspect, document, and maintain compliance with environmental permits and certifies the C107 inspection reports. He communicates with the Design Manager arranging for design engineer’s review of construction submittals and shop drawings.

**Value Added Positions**

To mitigate risks and address key project elements, our Team is *exceeding the Request for Qualifications (RFQ) requirements* by committing the **Value Added** personnel shown in Table 4. These individuals play an important role in our ability to mitigate risk, complete the work ahead of schedule, under budget, and in a safe, quality manner with minimal resource requirements from VDOT.
3.3 **Offeror’s Team Structure**

<table>
<thead>
<tr>
<th>Value Added Position</th>
<th>Name</th>
<th>Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Permitting</td>
<td>Beth Patrizzi</td>
<td>Dewberry Engineers Inc.</td>
</tr>
<tr>
<td>Environmental Compliance Coordinator</td>
<td>Chris Monahan, REM</td>
<td>Shirley Contracting Company, LLC</td>
</tr>
<tr>
<td>Lead Structural Engineer</td>
<td>Parul Amin, PE</td>
<td>Dewberry Engineers Inc.</td>
</tr>
<tr>
<td>Utility Manager</td>
<td>Todd Kief</td>
<td>Shirley Contracting Company, LLC</td>
</tr>
</tbody>
</table>

**Environmental Permitting (Beth Patrizzi)** reports to the DM and is responsible for the development and obtaining of all necessary environmental permits. From her recent experience on I-64 Capacity Improvements Segments I and III, Beth brings extensive experience working closely with the same agencies and environmentally sensitive concerns that will be involved on the Skiffes Creek Connector Project. Beth has worked closely with these agencies to compile, analyze, and document the quantitative impacts on the environment from a wide variety of projects including municipal, roadway, land development, wetland and stream restoration, and utility projects. She is well versed in Section 10, Clean Water Act (CWA) Sections 404/401, and NPDES Section 402 regulatory permitting and mitigation. Beth applies her knowledge of ecological habitats to analyze data on wetlands, water quality, and threatened and endangered species in order to complete NEPA documents. She works closely with the design engineers and contractors to minimize impacts and obtain regulatory clearances, allowing projects to stay on schedule and reduce risk.

**Environmental Compliance Coordinator (Chris Monahan, REM)** reports to the CM and is responsible for ensuring compliance with all environmental commitments during construction. He will provide oversight and monitoring of environmental issues and regulations to prevent damage to the environment at the project site. Chris determines project needs and will monitor work in progress to ensure the final deliverables adhere to the project’s requirements. Chris will oversee activities and interaction with environmental regulatory agencies and in coordination with Dewberry, will manage permitting, compliance, and mitigation for the Project. During design, he will review plans to provide feedback and monitor plans during construction to suggest changes based on field conditions.

**Lead Structural Engineer (Parul Amin, PE)** reports directly to the DM and is responsible for oversight, review and verification of all structural design elements with a key focus on the challenges of the CSXT and Skiffes Creek Crossings. Having served as the Lead Structural Engineer for seven bridges over water crossings, three bridges over rail including one over CSXT, and serving as the Senior Bridge Engineer for several of our most recent design-build projects, Parul is uniquely qualified to lead the design of both bridges on this Project. During design, she coordinates with roadway, hydraulic and geotechnical engineers to ensure the structural plans are coordinated with those design disciplines and accurately account for unique design requirements associated with them. During construction, Parul will oversee the review of all shop drawings and responses to RFI’s and questions, and will oversee development of the bridge load ratings and as-built documentation.

**Utility Manager (Todd Kief)** leads our in-house efforts to manage utility relocations as an integral part of our design-build program. With over 33 years of construction management experience, Todd has managed the utility relocations for Shirley’s design-build projects for more than 17 years. Todd’s experience and close relationships with multiple utility owners enables him to maintain a thorough understanding of the relocation process, risks, costs, schedule, and interaction with other Project disciplines. Reporting to the DBPM, Todd will actively coordinate existing and proposed utilities with the design, ROW, permitting, safety, and construction disciplines. As the liaison with each individual utility company, he will ensure full integration of utilities into the Project scope and schedule. Working with the design team, Todd’s first priority is to avoid relocations. If not possible, the focus will be to minimize relocations to the greatest extent practical. When relocations are unavoidable, he will ensure that they are coordinated with construction and completed within schedule. He will interact with CSXT to coordinate any conflict resolution for utilities located within their ROW.
3.4 Experience of Offeror’s Team
3.5 Project Risks
3.5 Project Risks

In preparation of this Statement of Qualifications (SOQ), we carefully reviewed all Request for Qualifications (RFQ) documents and performed site visits to understand the existing conditions and constraints with the goal of avoiding and reducing impacts from potential risks. Our Team is committed to taking ownership of each risk factor and developing strategies for risk mitigation in partnership with VDOT and all stakeholders. The three most relevant and critical risks to the Project’s overall success are:

**PROJECT RISK 1 – CSXT RAILROAD CROSSING**

Why the Risk is Critical
One of the most critical features of the Skiffes Creek Connector Project is the proposed 2-span bridge crossing of both CSX Transportation (CSXT) Railroad and Route 143. Considered a critical corridor, this rail line is the sole rail access to multiple military facilities, the Port of Newport News and numerous CSXT customers in the Hampton Roads region. Also used by several other freight railroads and Amtrak, there are at least fourteen freight and six passenger trains passing through the Project area per day, or an average of almost one per hour. Ensuring the continuous safety and maintenance of the facility is an unyielding requirement of CSXT. As our Team recently encountered on the nearby I-64 Capacity Improvements- Segment I Project, they have rigid safeguards and protocol’s in place that will be mandatory for the Project to comply with, and these measures supersede any schedule and/or cost implications. Given these constraints, the nature of the work and timeline allowed for Project completion, this crossing of the CSXT facility will be a critical risk that could negatively affect both the Project schedule and cost.

Impact on the Project
This risk will have multiple impacts to the Project’s schedule and cost resulting from the numerous CSXT-specific requirements intended to protect their facility. These include:

- All coordination will be required via a third-party (AECOM) acting as CSXT’s agent and Project representative;
- Plan reviews and approvals by a third-party, AECOM, are typically at least 45-days per submission and are in addition to VDOT’s review period. Multiple submissions with these review timeframes may impact the schedule;
- Schedule impacts due to the extensive “means and methods” submittals addressing every element of work. These submittals are made to AECOM and, similar to Plan submissions, can require at least a 45-day review timeframe before work can commence;
- Design constraints, both vertical and horizontal, will affect the bridge span, height and location;
- Provisions for crash protection will increase construction cost and duration;
- Easement requirements and limitations may impact the schedule and bridge structure location;
- Additional cost and time allowance for providing Railroad Protective Insurance;
- Requirement for a Railroad Flagman to be onsite full-time during work in proximity to the facility at the Project’s cost. In addition, the schedule could be impacted by: the estimated 9-month lead time to obtain the Flagman, the limitation of work hours to typically 50 hours per week, sick and/or vacation time, reassignment due to another priority project or incident response, and training - usually on a quarterly basis for a minimum of a week, but also any time there is an incident corporately;
- Annual all-day training may be required, at the discretion of CSXT, for every individual and subcontractor working on the Project at the Project’s cost; and
3.5 Project Risks

- Schedule delays due to train schedules having priority over construction schedules. The Flagman will require that work activities stop for a period prior to, and during, trains entering the Project area.

Mitigation Strategies
The keys to mitigating this risk are having a thorough understanding of CSXT’s requirements and planning for them from the earliest stages of Project development. Having recently completed several projects over CSXT facilities including: I-64 over Industrial Park Drive (part of the I-64 Capacity Improvements - Segment I Project), Backlick Road Bridge Replacement over CSX, Riverdale Park CSX Railroad Crossing, and Monroe Street Bridge over CSX, the Shirley Team is experienced with CSXT’s requirements, processes and procedures. The steps that we will take to mitigate the impacts of this risk include:

- Recognizing that AECOM is CSXT’s representative for all Project issues, our Team will contact AECOM during the RFP Phase and immediately after Award to discuss the scope, review the schedule, establish points of contact, review all anticipated requirements, and to coordinate an “Introduction Meeting”;
- Immediately obtain permission from CSXT to enter the right-of-way to perform pre-design as-built surveys for horizontal and vertical rail locations, utility designations and test pits, locations of property lines and other features, and geotechnical explorations;
- Explore design alternatives that span the CSXT right-of-way to avoid impacts to their facilities and existing utilities;
- Ensure design of substructure elements are in compliance with CSXT crash requirements;
- Clarify in the RFP Phase whether an aerial easement with CSXT is required to be obtained in VDOT’s name. If required, plan for and include in our Proposal schedule and cost;
- Create, maintain and communicate a detailed Submittal Register that includes activities, timeframes and responsibility for all Design, and Means and Methods submittals. These will also be included as an integral part of the Project CPM. Examples of expected submittals include:
  - Ballast Protection
  - Pile Driving
  - Excavations
  - Support of Excavations
  - MSE Wall Construction
  - Girder Erection Plans
  - Temporary Falsework
  - Anti-Climb Fence
  - Access Plan
  - Site Security
  - Emergency Action Plan
  - Project Schedule
- During the Design Phase, perform detailed constructibility reviews to ensure that all CSXT requirements are addressed;
- Submit our application request for a Flagman with at least nine months lead time;
- Incorporate train schedules, Flagman non-work periods and other work restrictions into the Project CPM. Ensure that CPM allows adequate float for critical activities that could be impacted by overruns to these periods or unforeseen impacts;
- Plan the work such that no track crossings will be required during construction;
- Determine insurance requirements and cost during the RFP Phase; plan to utilize CSXT’s insurance website, EBIX, for expedited submission and approval of Railroad Protective Insurance upon Award; and
- Establish a process of daily onsite Flagman coordination with our Construction Team for a safety briefing, review of train schedules, update any work restrictions, and discuss any issues or concerns.

Role of VDOT and Other Agencies
Our Team recognizes that we have primary responsibility for addressing and mitigating this risk. As the
3.5 Project Risks

Project owner, VDOT will maintain its oversight role regarding Plan review and comments made by CSXT, as well as design concepts made by the Team to mitigate impacts to their facility. Assuming VDOT has, or will, make the initial contact with CSXT and/or AECOM regarding the Project during the procurement phase, we are prepared to incorporate any commitments resulting from these discussions. Should an aerial easement be required as part of CSXT’s approval, we will take the administrative steps necessary to obtain the easement, with the understanding that it will be acquired in VDOT’s name and that VDOT will pay any property costs directly to CSXT for the easement. We anticipate VDOT’s participation in scheduled progress and coordination meetings.

PROJECT RISK 2 – UTILITY RELOCATIONS

Why the Risk is Critical

Utility relocations have the potential to negatively impact the successful and timely completion of the Project. This is largely due to the time and cost associated with design, engineering, reviews, approvals, and relocation work. The lack of direct control over individual utility owners can have a compounding negative affect making the existence of utilities a critical risk to the Project.

The proposed alignment of the new two-lane roadway intersects numerous existing utilities between Routes 60 and 143. Utilities introduce risk as they have the potential to conflict with elements of the new roadway and/or bridges. It is critical that conflicts be identified and resolved prior to the construction phase of the Project. The utilities and potential conflicts include, but are not limited to:

- 16” gas line at proposed Bridge B620 over CSXT Rail/Route 143 - fill on the south bridge approach may impact or damage the gas line;
- Underground utilities at the proposed Bridge B620 over CSXT Rail/Route 143 - potential conflicts between existing large diameter water, sanitary, and gas along Route 143 and the foundations for the north approach;
- Underground utilities at the Project intersection with Route 60 - potential conflicts with existing large diameter water, sanitary and gas; and
- Overhead Electric - potential conflicts with distribution lines and ensuring the Project avoids conflicts with the relocated overhead transmission lines.

Impact on the Project

The design and construction activities pertaining to the evaluation and resolution of utility conflicts, if not proactively managed, may impact the Project cost and schedule. The design phase activities include utility designation and test pitting of all utilities within the Project limits to verify existing conditions. Test hole information is compared with information from the individual utility owners and, as the design progresses, the conflicts are confirmed. With both the number and size of known utilities located within the Project limits, the field investigation and documentation of existing utilities will be critically important.

For the 16” gas line adjacent to the railroad, the schedule may be impacted by the evaluation of the fill material above the utility for the new bridge approach. Relocation or protection of the gas line could delay bridge activities which are likely to be on the critical path. In addition, the time associated with any potential relocations of the water, sanitary and gas lines parallel to Route 143 could impact work on the north side of the bridge. Similarly, the underground utilities at the intersection with Route 60 may conflict with the storm system and signal foundations.
While the overhead power distribution lines do not appear to conflict with the new roadway and bridges, that is not the case with the overhead power transmission lines. VDOT recognized this impact early in the Project development phase and, per the RFQ, those lines will be raised sufficiently to eliminate the conflict. Elevating the transmission lines is a major relocation which, if not completed on schedule, could impact the start of road work in the area.

**Mitigation Strategies**

Our Team has extensive experience with developing mitigation strategies to address utility conflicts and the risk they bring to the Project. We will engage our Utility Manager and in-house resources to build on the established relationships with each of the utility owners encountered on the Segments I & III of the I-64 Capacity Improvements Design-Build Projects. In addition, we will closely follow practices that have proven to be successful in mitigating risk associated with utilities. Those practices include:

A. **Commit an in-house Utility Manager**, as Value Added personnel, to focus on mitigating the risk. Having an in-house Utility Manager allows our Team to exercise control of the utility relocation process, provide expedited flexibility to adapt to project challenges, and facilitate the overall integration and constructability review functions. Our I-64 Segment I and Segment III Projects benefitted from having experienced personnel address utility relocations, resulting in no schedule impacts due to utility conflicts or relocations;

B. **Optimize design to avoid utilities.** Always a key focus of our Team, we continuously review design alternatives that minimize utility relocations to the greatest extent possible;

C. **Integrate utilities with other Project disciplines.** Led by the DBPM, weekly Design Meetings are an extremely important tool in ensuring that all utilities are fully integrated with other disciplines, including design, permitting, ROW, and construction.

D. **Create a realistic and well planned Project schedule.** We coordinate the timeframes for relocations with each utility owner and the other disciplines, such as right-of-way, permitting and construction, to arrive at a proposed sequence of work and schedule that maximizes float and creates flexibility;

E. **Coordinate through weekly construction meetings.** Led by the Construction Manager, these meetings will facilitate coordination among the utility, construction, QA/QC team and VDOT;

F. **Supplement when relocation work is required.** Through close working relationships with the utility companies, we have experience in assisting with both design activities and the actual relocation work to maintain some level of control on cost and schedule. If schedule slippages and/or delays are identified, the we are prepared to supplement resources, self perform portions of the work, or re-sequence the work to minimize impacts.

Specific mitigation strategies developed at this stage of the procurement includes:

<table>
<thead>
<tr>
<th>Mitigation Strategies</th>
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<tbody>
<tr>
<td><strong>Gas Line (16”) at Proposed Bridge B620 over CSXT Railroad / Route 143</strong></td>
</tr>
</tbody>
</table>
| ■ Early coordination with utility owner.  
■ Advance the roadway and bridge design at this location so impact can be determined.  
■ Innovative solutions for protecting the utility such as buried protection slab or “arch” structure.  
■ Design bridge to avoid. |
| **Underground Utilities at Proposed Bridge B620 over CSXT Railroad / Route 143** |
| ■ Early location of utilities through test pitting.  
■ Coordination with utility owners.  
■ Avoid relocation through bridge design.  
■ Relocate utilities as last option. |
### 3.5 Project Risks

#### Mitigation Strategies

| Underground Utilities at Skiffes Creek Connector Intersection with Route 60 | ■ Early location of utilities through test pitting.  
■ Coordination with utility owners.  
■ Avoid relocation through design of signalization and drainage improvements.  
■ Relocate utilities as last option. |
| Overhead Power Transmission and Distribution Lines | ■ Monitor status of relocation Project (elevation of transmission lines).  
■ Develop sequence and schedule to defer work near the power lines.  
■ Identify access to work areas without needing to cross under the lines until relocation is completed. |

#### Role of VDOT and Other Agencies

Following Notice to Proceed, we will work closely with the VDOT Special Projects Utility Coordinator and include them on all correspondence with the utility owners. VDOT’s role will be to participate in Utility Field Inspection (UFI) Meetings; review and provide comment on any proposed utility relocation designs; authorize utility relocations; administer the necessary VDOT and federal documentation; assist in providing access (approval of lane closures) to the utility owners for work within VDOT right-of-way; and provide general oversight of the utility relocations. We will also request from VDOT their assistance in identifying any VDOT-owned assets within the Project area to make sure those assets are maintained, protected and/or relocated as required by the Project.

#### CRITICAL RISK 3 – ENVIRONMENTAL CONSTRAINTS

**Why the Risk is Critical**

Our Team is sensitive to the challenges and concerns associated with working within the immediate proximity of drinking water reservoirs and an environmentally constrained project site, having recently completed the I-64 bridge widenings over Lee Hall Reservoir as part of the I-64 Capacity Improvements – Segment I Project, and our current I-64 widening adjacent to Queens Lake as part of the I-64 Capacity Improvements – Segment III Project. The Skiffes Creek Connector improvements will involve many of these same challenges as the work spans Skiffes Creek and is immediately upstream of the Skiffes Creek Reservoir. These constraints and challenges will require close coordination with multiple environmental agencies for approval and continued monitoring of the site during construction. Design plans and permit monitoring activities will need to be developed to account for the many sensitive areas and schedule requirements. The potential for environmental constraints to affect the schedule, cost, and extend beyond the physical limits of the proposed improvements make this a critical Project risk.

**Impact on the Project**

Improper identification or inadequate protection of environmental constraints could create several impacts on the Project including:

- Increased impacts to Wetlands and Waters of the U.S. (WOUS);
- Impacts to Threatened and Endangered (T&E) Species and/or archeological resources; and
- Deposition of material or degradation of water quality in the Skiffes Creek Reservoir.

Any of these impacts could adversely impact the schedule, result in a loss of public support, require temporary work stoppages to address permit agency concerns, and increase Project costs. These potential
3.5 Project Risks

impacts are further described below:

- **Skiffes Creek Reservoir** – Working immediately upstream of the Skiffes Creek Reservoir and directly over Skiffes Creek introduces unique challenges from an environmental design perspective. These challenges are further complicated by the types of soils within and surrounding the Project limits. Any runoff from the Project site has the immediate impact of degrading water quality, resulting in turbid water and sediment deposition in the creek and reservoir. Sediment deposition would increase impacts to wetlands and waters, require additional permit approvals and modifications, and require documentation of unpermitted impacts. Any of these would affect the schedule and cost.

- **Wetland & Water Impacts** – Based on topographic information provided with the RFQ documents, as well as our first hand knowledge of the site having located our I-64 Capacity Improvements – Segment I construction trailer complex on VDOT property at the eastern end of the Project, we know that runoff will be directed to several streams and outfalls having both permanent and temporary impacts requiring documentation and approval from the permitting agencies. These include both Skiffes Creek and the stream restoration area, among other smaller wetland and stream/ditch areas. Unintended impacts to these areas which are not permitted would require documentation and approval of permit agencies, halting work while permit approvals are obtained. Additional impacts to Skiffes Creek and the reservoir could result in more extensive coordination with other agencies than will be expected with the US Army Corps of Engineers (USACE) and Department of Environmental Quality (DEQ).

- **T&E and Archeological Resources** – As noted in the EA, two archeological resources (44JC0664 and 44JC1024) may be impacted by the proposed improvements and require additional investigation. Additionally, several T&E species have suitable habitats within the Project area including the Northern Long-eared Bat, Little Brown Bat, and Tri-colored Bat. Coordination with VDHR, SHPO, U.S. Fish and Wildlife Service (USFWS), Virginia Department of Game and Inland Fisheries (DGIF), and NOAA will be required to obtain permits. Improper planning could result in delays to the start of construction or development of construction sequencing which doesn’t adequately account for Time of Year Restrictions (TOYR). Either of these could adversely impact the construction schedule and project completion. Early coordination with VDHR and the SHPO will be necessary to identify proper avoidance and mitigation strategies for the two archeological resource sites. Failure to do so could require extensive design changes and additional construction elements, resulting in delays to plan approval and/or additional construction costs.

**Mitigation Strategies**

Recognizing these environmental constraints by our Team will ensure their accurate identification and focus early in the design process to avoid schedule and cost impacts. Based on our experience on the I-64 projects, our Team has identified the following mitigation strategies to address each of the elements of the environmental risk:

- **Early Agency Coordination** – Immediately upon NTP, we will reach out to each of the permitting review and approval agencies to understand past coordination and determine what additional efforts are needed. We will obtain and review the 2019 Programmatic Agreement to determine if all stipulations will be integrated into the design, and early coordination with the VDHR and SHPO will be conducted. Field investigations will be completed to confirm or complete wetland delineations and a JD will be acquired from the USACE. Early coordination will include a pre-application meeting to familiarize the permitting agencies with the Project, provide updates on the continued design efforts, address any challenges, and ensure specific requests and requirements are
incorporated into the permit documents and applications when they are first submitted for review and approval. Each of these efforts will expedite the permitting and approval process and develop a good relationship between all parties.

- **Addition of Value Added Staff** – A critical mitigation approach is to commit Beth Patrizzi and Chris Monahan as Value Added personnel throughout all phases. Beth will lead all environmental permitting activities and initiate the coordination and communication efforts with permitting agencies immediately upon NTP. She will lead all permit package development, lead coordination efforts for our Team with the permitting agencies during design and through permit approvals, and then oversee permit monitoring and reporting requirements during construction. Chris will be involved during design for coordination with environmental agencies and acquisition of needed mitigation. During construction, he will review construction progress and ensure environmental commitments are properly implemented by construction staff and that proper controls and impact avoidance measures are implemented. Our Team is committing these additional resources in recognition of the sensitivity of the project site as well as the increased focus on environmental compliance by VDOT and regulatory agencies. By implementing a two-pronged approach, we can ensure approved impacts are properly implemented in the field and unintended impacts are avoided.

- **Development of Phased E&S Plans** – Consistent with our approach on I-64 Segment III, our Team will develop E&S plans which are phased to match the construction staging of the improvements. By developing E&S plans which match construction sequencing (as opposed to traditional two-phase plans), inspections of devices are more straightforward and logical. This more detailed phasing of plans will eliminate questions as to which devices should be installed at any given time, and instead will provide clear direction as to what devices are required at all times throughout all phases. Use of more robust devices, such as super silt fence instead of silt fence, will ensure any sediment runoff is controlled within the limits of the Project, avoiding undesired downstream impacts. Recognizing the soil types in the area, we will discuss with VDOT and the permitting agencies whether measures outside of the project footprint are appropriate and/or necessary (such as a turbidity curtain at the upper end of the reservoir). Even though controls on-site will be designed to address sediment runoff, fine material which is suspended in the water may not be adequately trapped by conventional methods (such as traps, basins, check dams, or silt fence). Consideration for elements such as a turbidity curtain will ensure all erosion & sediment concerns from the general public and adjacent property owners are addressed.

- **Schedule Integration** - Beginning in the RFP phase and continuing through development of the Project schedule, allowances for the time necessary to obtain all environmental permits will be integrated into our overall sequence of work. As the Project progresses, our Team will closely monitor the schedule for slippages and/or delays. If observed, all parties will review the causes and determine the appropriate action to recover. These actions may include close coordination with the agencies, adding resources, re-sequencing the work, or creating innovative ways to avoid impacts.

Not only will these mitigation strategies ensure we properly identify the challenges and concerns associated with each risk, they will also ensure we adequately account for the additional efforts, coordination, and schedules necessary to avoid impacts to the project schedule and/or cost.

**Role of VDOT and Other Agencies**

We understand that not all of the environmental approvals or studies have been completed at this time, but expect that VDOT will provide all additional studies and final recommendations as part of the RFP. Studies which are required by the design-builder will be identified in the RFP documents and we expect
3.5 **Project Risks**

VDOT’s role will be to review permit submittals and remain involved in discussions with permitting agencies to ensure past coordination efforts and agreements are adhered to during the acquisition of all construction permits. During construction, we anticipate VDOT staff will complete periodic monitoring of the project site and provide input to our Team for areas where additional focus is necessary. In addition to VDOT, the following agencies are expected to be involved in the environmental permitting or continued monitoring process:

- **USACE** – Issue Jurisdictional Determination and Section 404 permits;
- **DEQ** – Issue VWP permit and/or 401 certification and coordination for CZMA;
- **SHPO** – Section 106 and 4(f) consultation;
- **DGIF, USFWS, NOAA, VDAC, VDCR** – Section 7 consultation & endangered species coordination;
- **FHWA** – Issue LEDPA (if not already completed); and
- **City of Newport News & Newport News Waterworks** – coordination for avoidance of sediment deposition and runoff into Skiffes Creek Reservoir.
2.10 Acknowledgement of Receipt of RFQ, Revisions, and/or Addenda Form C-78-RFQ
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00100200DB104
PROJECT NO.: 0060-047-627

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 – February 27, 2019
   (Date)

2. Cover letter of RFQ Addendum #1 – April 2, 2019
   (Date)

3. Cover letter of RFQ Addendum #2 – April 19, 2019
   (Date)

   [Signature]
   5/29/19

   Garry A. Palleschi
   PRINTED NAME

   Vice President
   TITLE
3.1.2 SOQ Checklist
ATTACHMENT 3.1.2

Project: 0060-047-627
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.

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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# ATTACHMENT 3.1.2

**Project: 0060-047-627**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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## ATTACHMENT 3.1.2

**Project: 0060-047-627**  
**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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<th>SOQ Page Reference</th>
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3.2.6 List of Affiliated and Subsidiary Companies
ATTACHMENT 3.2.6
State Project No. 0060-047-627

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.

- The Offeror does not have any affiliated or subsidiary companies.
- Affiliated and/or subsidiary companies of the Offeror are listed below.

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<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
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<tr>
<td>Subsidiary</td>
<td>Shirley Design/Build, LLC</td>
<td>8435 Backlick Road, Lorton, Virginia 22079</td>
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<td>Affiliate</td>
<td>Clark Construction Group, LLC</td>
<td>7500 Old Georgetown Road, Bethesda, MD 20814</td>
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<td>Affiliate</td>
<td>Metro Earthworks</td>
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3.2.7 Debarment Forms
ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0060-047-627

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.

Signature: [Signature]
Date: 5/29/19
Vice President
Title

Shirley Contracting Company, LLC
Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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] [Date] [Title]

[Name of Firm]
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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] [Date: 4/8/2019] [Title]

Ces Consulting Llc

Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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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]  [April 12, 2019]  [Vice President]
[Date]  [Title]

DMY Engineering Consultants Inc.

Name of Firm
Project No.: 0060-047-627

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.

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W. G. McKeague  4/12/2019  Vice President
Signature  Date  Title

Quantum Spatial, Inc.
Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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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  
04/15/2019  
Executive Vice President  
Date  
Title  

Accumark, Inc.

Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this 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]  4/17/19  [Title]

[Signature]  4/17/19  [Title]

ECS NJO-APARTYL LLC

Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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

4/9/2019

Diversified Property Services, Inc.

Name of Firm
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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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] 4-12-19 [Name of Firm]
Vice President
Title

OLD DOMINION SETTLEMENTS, INC., T/A Key Title

Name of Firm
3.2.8 VDOT Prequalification Certificate
Vendor ID: S018
Vendor Name: SHIRLEY CONTRACTING COMPANY, LLC
Prequal Level: Prequalified
Prequal Exp: 09/30/2019

-- PREQ Address --
8435 BACKLICK RD.
LORTON, VA 22079-1403
Phone: (703)550-8100
Fax: (703)550-7897

Bus. Contact: CLYMORE, DANIEL EDWARD
Email: DCLYMORE@SHIRLEYCONTRACTING.COM

-- DBE Information --
DBE Type: N/A
DBE Contact: N/A

Vendor ID: S1303
Vendor Name: SHOOSMITH CONSTRUCTION, INC.
Prequal Level: Prequalified
Prequal Exp: 09/30/2019

-- PREQ Address --
11800 LEWIS RD
CHESTER, VA 23831
Phone: (804)748-5823
Fax: (804)748-8482

Bus. Contact: DUNLAP, GARY N
Email: GDUNLAP@SHOOSMITH.COM

-- DBE Information --
DBE Type: N/A
DBE Contact: N/A
3.2.9 Surety Letter
April 26, 2019

Sudha Mudgade, P.E., PMP, DBIA
Alternative Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Request for Qualifications - Contract ID Number:C00100200DB104 - A Design-Build Project
Skiffes Creek Connector From: Route 60 (Pocahontas Trail) To: Route 143 (Merrimac Trail)
James City County, Virginia
Estimated Contract Value: $28 million

Dear Ms. Mudgade:

Travelers Casualty and Surety Company of America (A.M. Best Financial Strength Rating A++, Financial Size Category XV) and their co-surety partners, have the privilege of providing surety bonds for Shirley Contracting Company, LLC. The available bonding capacity on individual projects is in excess of $750,000,000.

In our opinion, Shirley is one of the finest, best managed construction firms in the country. Shirley has handled each of its projects in a professional manner and completed all satisfactorily.

As surety for Shirley Contracting Company, LLC, Travelers Casualty and Surety Company of America, is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project, subject to acceptable review of the contract documents and bond forms, financing, availability of reinsurance, and Shirley Contracting Company, LLC continuing to satisfy other underwriting considerations at the time the bonds are requested.

This letter is not an assumption of liability and is issued only as a reference request from our client.

Sincerely,

[Signature]
Travelers Casualty and Surety Company of America
A.M. Best Rating A++ XV

By: [Signature]
Karen C. Bowling, Attorney-In-Fact
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint Karen C Bowling of COLUMBIA Maryland, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this 3rd day of February, 2017.

State of Connecticut
City of Hartford ss.

By: ________________________________

Robert L. Raney, Senior Vice President

On this the 3rd day of February, 2017, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the 30th day of June, 2021

______________________________
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing President Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 26th day of April 2019

______________________________
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880. Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.
3.2.10 SCC and DPOR Information Tables, Licenses and Registrations
**ATTACHMENT 3.2.10**

**State Project No. 0060-047-627**

**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 listed are active and in good standing.

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Information (3.2.10.1)</th>
<th>DPOR Information (3.2.10.2)</th>
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<td>SCC Number</td>
<td>SCC Type of Corporation</td>
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<td>Shirley Contracting Company, LLC</td>
<td>S082038-3</td>
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<td>Dewberry Engineers Inc.</td>
<td>F100462-3</td>
<td>Corporation</td>
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<td>Dewberry Engineers Inc.</td>
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<td>DMY Engineering Consultants, Inc.</td>
<td>0768895-5</td>
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<td>Quantum Spatial, Inc.</td>
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<td>Accumark, Inc.</td>
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<td>Diversified Property Services of Virginia, Inc.</td>
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<td>Old Dominion Settlements, Inc. T/A Key Title</td>
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### SCC and DPOR Information

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<tr>
<th>Business Name</th>
<th>Individual's Name</th>
<th>Office Location Where Professional Services will be Provided (City/State)</th>
<th>Individual's DPOR Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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<tr>
<td>Dewberry Engineers Inc.</td>
<td>Matthew Thomas</td>
<td>Glen Allen, VA</td>
<td>4805 Lake Brook Drive Suite 200 Glen Allen, VA 23060</td>
<td>Professional Engineer</td>
<td>0402046511</td>
<td>June 30, 2020</td>
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<tr>
<td>CES Consulting, LLC</td>
<td>Bryan Barnson</td>
<td>Suffolk, VA</td>
<td>105 Saint Andrews Drive Suffolk, VA 23435</td>
<td>Professional Engineer</td>
<td>0402055847</td>
<td>December 31, 2019</td>
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License Details

Name                      SHIRLEY CONTRACTING COMPANY LLC
License Number            2705071652
License Description       Contractor
Firm Type                 LLC - Limited Liability Company
Rank¹                     Class A
Address                   8435 BACKLICK ROAD, LORTON, VA 22079
Specialties²              Highway / Heavy (H/H)
Initial Certification Date 2002-10-08
Expiration Date           2020-10-31

1 Refer to the Statutory Definitions (http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.

2 Refer to the Classification Definitions (http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20) and Specialty Definitions (http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30) for detailed definitions of these classifications and specialties.

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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
DPOR License Lookup  License Number 0411000941

License Details

Name   DEWBERRY ENGINEERS INC
License Number  0411000941
License Description  Business Entity Branch Office Registration
Business Type  Corporation
Rank  Business Entity Branch Office
Address  8401 ARLINGTON BLVD, FAIRFAX, VA 22031
Initial Certification Date  2012-07-02
Expiration Date  2020-02-29

Related Licenses

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<th>License Number</th>
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<td>0403003333</td>
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<td>0402023693</td>
<td>JAMES, RUSSELL R</td>
<td>Professional Engineer License</td>
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<td>0406001718</td>
<td>CENA, JANICE MARIE</td>
<td>Landscape Architect License</td>
<td>Landscape Architecture</td>
<td>2021-01-31</td>
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Showing 1 to 3 of 3 entries

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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
DPOR License Lookup  License Number 0411000942

License Details

Name: DEWBERRY ENGINEERS INC
License Number: 0411000942
License Description: Business Entity Branch Office Registration
Business Type: Corporation
Rank: Business Entity Branch Office
Address: 4805 LAKE BROOK DR STE 200, GLEN ALLEN, VA 23060
Initial Certification Date: 2012-07-02
Expiration Date: 2020-02-29

Related Licenses

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Showing 1 to 3 of 3 entries

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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
License Details

Name: CES CONSULTING LLC
License Number: 0407005783
License Description: Business Entity Registration
Firm Type: LLC - Limited Liability Company
Rank: Business Entity
Address: 23475 ROCK HAVEN WAY SUITE 255, DULLES, VA 20166
Initial Certification Date: 2010-11-05
Expiration Date: 2019-12-31

Related Licenses

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DPOR License Lookup License Number 0411000382

License Details

Name: ECS-MID-ATLANTIC LLC
License Number: 0411000382
License Description: Business Entity Branch Office Registration
Rank: Business Entity Branch Office
Address: 1643 MERRIMAC TRL STE A, WILLIAMSBURG, VA 23185
Initial Certification Date: 2004-12-10
Expiration Date: 2020-02-29

Related Licenses

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<td>Professional Engineer License</td>
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Showing 1 to 1 of 1 entries

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**DPOR License Lookup** License Number 0407005631

## License Details

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<tr>
<th>Name</th>
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<tr>
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<td>2010-03-10</td>
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## Related Licenses

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<td>Professional Engineer License</td>
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Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0407005489

License Details

Name: QUANTUM SPATIAL INC
License Number: 0407005489
License Description: Business Entity Registration
Rank: Business Entity
Address: 6216 RESOURCES DR, SHEBOYGAN FALLS, WI 53085
Initial Certification Date: 2009-07-30
Expiration Date: 2019-12-31

Related Licenses

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<td>04080000008</td>
<td>MCKEAGUE, WILLIAM J</td>
<td>Surveyor Photogrammetrist License</td>
<td>Land Surveying</td>
<td>2021-02-28</td>
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Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0407005172

License Details

Name
ACCUMARK INC

License Number
0407005172

License Description
Business Entity Registration

Firm Type
Corporation

Rank
Business Entity

Address
9500 KING AIR CT, ASHLAND, VA 23005

Initial Certification Date
2008-03-28

Expiration Date
2019-12-31

Related Licenses

<table>
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<tr>
<th>License Number</th>
<th>License Holder Name</th>
<th>License Type</th>
<th>Relation Type</th>
<th>License Expiry</th>
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<tbody>
<tr>
<td>0402010372</td>
<td>LABAUGH, W C III</td>
<td>Professional Engineer</td>
<td>Engineering</td>
<td>2019-08-31</td>
</tr>
</tbody>
</table>

Showing 1 to 1 of 1 entries

1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR’s Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup License Number 4008001190

License Details

Name: DIVERSIFIED PROPERTY SERVICES OF VIRGINIA INC
License Number: 4008001190
License Description: Appraisal Business Registration
Firm Type: Corporation
Rank: Business Entity
Address: 20 E TIMONIUM ROAD SUITE 111, TIMONIUM, MD 21093-0000
Initial Certification Date: 2000-11-29
Expiration Date: 2020-11-30

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
License Details

Name          THOMAS, MATTHEW C
License Number 0402046511
License Description Professional Engineer License
Rank          Professional Engineer
Address      GLEN ALLEN, VA 23060-9278
Initial Certification Date 2010-06-17
Expiration Date 2020-06-30

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
DPOR License Lookup  License Number 0402055847

License Details

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<tr>
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<tr>
<td>License Description</td>
<td>Professional Engineer License</td>
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<tr>
<td>Address</td>
<td>SUFFOLK, VA 23435</td>
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<td>2017-12-20</td>
</tr>
<tr>
<td>Expiration Date</td>
<td>2019-12-31</td>
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DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).
Alert to business entities regarding mailings from VIRGINIA COUNCIL FOR CORPORATIONS or U.S. BUSINESS SERVICES is available from the Bulletin Archive link of the Clerk's Office website.

LLCM3220  LLC DATA INQUIRY

LLC ID: 8082038 - 3  STATUS: 00 ACTIVE  STATUS DATE: 08/01/02

LLC NAME: Shirley Contracting Company, LLC

DATE OF FILING: 08/01/2002  PERIOD OF DURATION:  INDUSTRY CODE: 00

STATE OF FILING: VA VIRGINIA  MERGER INDICATOR:

CONVERSION/DOMESTICATION INDICATOR: Y

PRINCIPAL OFFICE ADDRESS

STREET: 8435 BACKLICK RD

CITY: LORTON  STATE: VA ZIP: 22079-0000

REGISTERED AGENT INFORMATION

R/A NAME: C T CORPORATION SYSTEM

STREET: 4701 Cox Rd Ste 285  RTN MAIL:

CITY: Glen Allen  STATE: VA ZIP: 23060-6808

R/A STATUS: 5 ENTITY AUTHORIZ  EFF DATE: 10/04/13 LOC: 143 HENRICO COUNTY

YEAR FEES PENALTY INTEREST BALANCE
18 50.00 

50.00 CR

(Screen Id:/LLC_Data_Inquiry)
**CISM0180**  
**CORPORATE DATA INQUIRY**

**CORP ID:** F100462  
**STATUS:** 00 ACTIVE  
**STATUS DATE:** 10/21/15

**CORP NAME:** Dewberry Engineers Inc.

**DATE OF CERTIFICATE:** 06/13/1989  
**PERIOD OF DURATION:**  
**INDUSTRY CODE:** 00  
**STATE OF INCORPORATION:** NY  
**STOCK INDICATOR:** S  
**MERGER IND:** S SURVIVOR  
**CONVERSION/DOMESTICATION IND:**  
**GOOD STANDING IND:** Y  
**MONITOR INDICATOR:**  
**CHARTER FEE:** 50.00  
**MON NO:**  
**MON STATUS:** MONITOR DTE:  
**R/A NAME:** CORPORATION SERVICE COMPANY  

**STREET:** 100 Shockoe Slip Fl 2  
**AR RTN MAIL:**

**CITY:** Richmond  
**STATE:** VA  
**ZIP:** 23219-4100  
**R/A STATUS:** 5 B.E. AUTH IN VI  
**EFF. DATE:** 01/01/18  
**LOC:** 216  
**ACCEPTED AR#:** 218 08 6229  
**DATE:** 05/25/18  
**RICHMOND CITY**  
**CURRENT AR#:** 218 08 6229  
**DATE:** 05/25/18  
**STATUS:** A  
**ASSESSMENT INDICATOR:** 0  
**YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES**

| 19  | 100.00 |  | 100.00 | 2,000 |

(Screen Id:/Corp_Data_Inquiry)
LLCM3220  LLC DATA INQUIRY

LLC ID: 5341600  - 7  STATUS: 00 ACTIVE  STATUS DATE: 10/14/10

LLC NAME: CES Consulting, LLC

DATE OF FILING: 10/14/2010  PERIOD OF DURATION:  INDUSTRY CODE: 70

STATE OF FILING: VA VIRGINIA  MERGER INDICATOR:

CONVERSION/DOMESTICATION INDICATOR:

PRINCIPAL OFFICE ADDRESS

STREET: 23475 ROCK HAVEN WAY

SUITE 255

CITY: DULLES  STATE: VA  ZIP: 20166-0000

REGISTERED AGENT INFORMATION

R/A NAME: AVTAR SINGH

STREET: 6773 LEOPOLDS TRAIL  RTN MAIL:

CITY: HAYMARKET  STATE: VA  ZIP: 20169-0000

R/A STATUS: 1 MEMBER/MANAGER  EFF DATE: 05/18/16 LOC: 176 PRINCE WILLIAM

YEAR FEES PENALTY INTEREST BALANCE

18 50.00

(Screen Id:/LLC_Data_Inquiry)
The State Corporation Commission will be closed Monday, May 27, 2019 in observance of Memorial Day.

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

CISM0180  CORPORATE DATA INQUIRY

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<th>STATUS:</th>
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<td>CORP NAME:</td>
<td>DMY ENGINEERING CONSULTANTS INC.</td>
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<td>CONVERSION/DOMESTICATION IND:</td>
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<td>MERGER IND:</td>
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<tr>
<td>CHARTER FEE:</td>
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<td>MON NO:</td>
<td></td>
<td>MON STATUS:</td>
<td></td>
</tr>
<tr>
<td>R/A NAME:</td>
<td>WEIYI MA</td>
<td>AR RTN MAIL:</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| STREET: | 45662 TERMINAL DRIVE | SUITE: | 110 | |
| CITY: | DULLES | STATE: | VA | ZIP: | 20166-0000 |
| R/A STATUS: | 1 DIRECTOR | EFF. DATE: | 09/06/13 | LOC: | 153 |

| ACCEPTED AR#: | 218 12 4885 | DATE: | 08/20/18 | |
| CURRENT AR#: | 218 12 4885 | DATE: | 08/20/18 | |
| YEAR FEES: | 130.00 | PENALTY: | | INTEREST: | |
| TAXES: | | BALANCE: | | TOTAL SHARES | 10,000 |

(Screen Id:/Corp_Data_Inquiry)
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<td>STATUS DATE: 04/16/04</td>
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<td>STATE OF FILING: VA VIRGINIA</td>
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<td>MERGER INDICATOR:</td>
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<td>CONVERSION/DOMESTICATION INDICATOR:</td>
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<tr>
<td>PRINCIPAL OFFICE ADDRESS</td>
<td></td>
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<tr>
<td>STREET: 14026 THUNDERBOLT PL STE 100</td>
<td></td>
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<tr>
<td>CITY: CHANTILLY</td>
<td>STATE: VA ZIP: 20151-0000</td>
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<tr>
<td>REGISTERED AGENT INFORMATION</td>
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<tr>
<td>R/A NAME: JAMES A ECKERT</td>
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<tr>
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<td>RTN MAIL:</td>
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<tr>
<td>CITY: CHANTILLY</td>
<td>STATE: VA ZIP: 20151-0000</td>
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<td>LOC: 129 FAIRFAX COUNTY</td>
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<td>YEAR</td>
<td>FEES</td>
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(Screen Id:/LLC_Data_Inquiry)
CISM0180

CORPORATE DATA INQUIRY

CORP ID: F113594 - 8
STATUS: 00 ACTIVE
STATUS DATE: 03/14/01

CORP NAME: Quantum Spatial, Inc.

DATE OF CERTIFICATE: 02/09/2000 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: WI WISCONSIN STOCK INDICATOR: S STOCK
MERGER IND: S SURVIVOR CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 200.00 MON NO:
MON STATUS: MONITOR DTE:
R/A NAME: C T CORPORATION SYSTEM

STREET: 4701 Cox Rd Ste 285 AR RTN MAIL:
CITY: Glen Allen STATE: VA ZIP: 23060-6808
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 10/04/13 LOC : 143
ACCEPTED AR#: 219 04 1822 DATE: 02/27/19 HENRICO COUNTY
CURRENT AR#: 219 04 1822 DATE: 02/27/19 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
19 670.00

(Screen Id:/Corp_Data_Inquiry)
CISM0180

CORPORATE DATA INQUIRY

CORP ID: 0440745 - 8  STATUS: 00 ACTIVE  STATUS DATE: 02/07/15
CORP NAME: ACCUMARK, INC.

DATE OF CERTIFICATE: 01/30/1995 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: S CRAIG MARTIN

STREET: 9500 KING AIR CT AR RTN MAIL:

CITY: ASHLAND STATE: VA ZIP: 23005-0000
R/A STATUS: 2 OFFICER EFF. DATE: 01/05/12 LOC: 142
ACCEPTED AR#: 219 04 6226 DATE: 03/07/19 HANOVER COUNTY
CURRENT AR#: 219 04 6226 DATE: 03/07/19 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
19 100.00

(Screen Id:/Corp_Data_Inquiry)
Note: The SCC website will be unavailable Thursday, April 18, from 6-10 p.m. for system maintenance. We apologize for the inconvenience and appreciate your patience.

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CISM0180 CORPORATE DATA INQUIRY

CORP ID: F130410 - 6 STATUS: 00 ACTIVE STATUS DATE: 09/04/15

CORP NAME: DIVERSIFIED PROPERTY SERVICES OF VIRGINIA, INC. (USED IN VA BY: DIVERSIFIED PROPERTY SERVICES, INC)

DATE OF CERTIFICATE: 08/05/1997 PERIOD OF DURATION: INDUSTRY CODE: 00

STATE OF INCORPORATION: MD MARYLAND STOCK INDICATOR: S STOCK

MERGER IND: CONVERSION/DOMESTICATION IND:

GOOD STANDING IND: Y MONITOR INDICATOR:

CHARTER FEE: 50.00 MON NO:

R/A NAME: BRENDAN R HANTZES MON STATUS: MONITOR DTE:

STREET: 3771 VERMACCHIA DR AR RTN MAIL:

CITY: CHANTILLY STATE: VA ZIP: 20151-0000

R/A STATUS: 2 OFFICER EFF. DATE: 08/09/02 LOC: 129

ACCEPTED AR#: 218 10 8967 DATE: 07/16/18 FAIRFAX COUNTY

CURRENT AR#: 218 10 8967 DATE: 07/16/18 STATUS: A ASSESSMENT INDICATOR: 0

YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
18 100.00

(Screen Id:/Corp_Data_Inquiry)
Note: The SCC website will be unavailable Thursday, April 18, from 6-10 p.m. for system maintenance. We apologize for the inconvenience and appreciate your patience.

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Commonwealth of Virginia
State Corporation Commission

CISM0180 CORPORATE DATA INQUIRY

CORP ID: 0243891 9 STATUS: 00 ACTIVE STATUS DATE: 08/09/16
CORP NAME: OLD DOMINION SETTLEMENTS, INC.

STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: MON NO:
R/A NAME: RONALD H. LAZARUS

STREET: 7010 LITTLE RIVER TURNPIKE, SUITE 240 AR RTN MAIL:

CITY: ANNANDALE STATE: VA ZIP: 22003-0000
R/A STATUS: 4 ATTORNEY EFF. DATE: 09/05/95 LOC : 129
ACCEPTED AR#: 218 16 2695 DATE: 11/13/18 FAIRFAX COUNTY
CURRENT AR#: 218 16 2695 DATE: 11/13/18 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
18 220.00 25,000

(Screen Id:/Corp_Data_Inquiry)
3.3.1 Key Personnel Resume Forms
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

**Brief Resume of Key Personnel anticipated for the Project.**

<table>
<thead>
<tr>
<th>a. Name &amp; Title</th>
<th>Robbie Roberts, Senior Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment</td>
<td>Design-Build Project Manager (DBPM)</td>
</tr>
<tr>
<td>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):</td>
<td>Shirley Contracting Company, LLC – (Full Time)</td>
</tr>
<tr>
<td>d. Employment History:</td>
<td>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):</td>
</tr>
</tbody>
</table>

**Shirley Contracting Company, LLC**

**Senior Project Manager, 2014-Present**

General responsibilities include design management and oversight. Lead bi-weekly design meetings attended by all design discipline managers and construction staff to include discussions on schedule, owner review comments, environmental permitting as well as right-of-way and utility relocation issues. Manage and perform plan reviews during design phase of projects including constructability reviews, quantity take-offs, and cost estimates. Serve as the key point of contact with the Owner on the Project, acting as the lead for all weekly and monthly progress meetings, communicating weekly planned activities, negotiating and discussing any issues or change orders, and public coordination and outreach. Project management responsibilities during construction phase including CPM schedule preparation and updating, set-up of construction budgeting, and vendor and subcontractor purchasing prior to construction start. Perform daily planning and weekly look-ahead schedules, subcontractor coordination, coordination and scheduling of quality control resources, and responsible for the overall financial management of the Project. Manage, train and develop project management staff and field personnel. Assist in the pursuit of new opportunities for the company.

- **I-64 Capacity Improvements – Segment I Design-Build ($103.5M)**, 3/2015 to 12/2017 – Senior Project Manager
- **Estimating Department – 8/2014 to 3/2015** – Senior Project Manager

**KBS, Inc.**

**Senior Project Manager, 2011-2014**

General responsibilities included operational responsibilities for planning, schedule preparation, purchasing, submittal review, quality control and financial management. Managed, trained and developed project management and field staff. Developed and built relationships with clients, design professionals and subcontractors.

- **Chrysler Museum Expansion & Renovation ($15M)**, 7/2012 to 7/2014 – Senior Project Manager
- **Estimating Department – 10/2011 to 6/2012** – Senior Project Manager

**Clark Construction Group, LLC**


General responsibilities included developing and maintaining positive working relationships with owners and design teams. Managed, trained and developed project management staff. Supervised activities related to contract administration, procurement, schedule, submittals, quality control, applications for payment, punch-list and closeout.

- **Rosslyn Commons ($50M), 10/2010 to 9/2011 - Senior Project Manager**
- **Clarendon Center ($118M), 7/2007 to 9/2010 - Senior Project Manager**
- **Liberty Center ($30M), 4/2006 to 6/2007 - Senior Project Manager**
- **Westin Hotel – Arlington Gateway ($33M), 6/2005 to 3/2006 - Project Manager**
- **1875 Pennsylvania Avenue ($45M), 6/2003 to 5/2005 - Project Engineer**

| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: |
| Virginia Polytechnic Institute & State University, Blacksburg, VA/ MS / 2003 / Architecture (Construction Management Option) |
| Virginia Polytechnic Institute & State University, Blacksburg, VA/ BS / 1995 / Business (Finance Major) |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: |
| N/A |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. |
| 1. **Note your role, responsibility, and specific job duties for each project, not those of the firm.** |
| 2. **Note whether experience is with current firm or with other firm.** |
Role/Responsibilities: As Design-Build Project Manager and Deputy DBPM, with design management responsibility, led meetings with full design team including environmental, traffic, roadway, drainage and structural disciplines for the $178 million project. Robbie’s responsibilities include the preparation of design meeting minutes and tracking of deliverables and performing frequent plan reviews for completeness and compliance with contract requirements. He prepared preliminary and full baseline construction schedule submissions and compiled and edited Quality Assurance and Quality Control Plan to meet or exceed minimum requirements for design-build projects. Robbie also provided data required for environmental permit applications. He scheduled, led and prepared meeting minutes for Monthly Owner Progress Meetings throughout the design phase, and prepared monthly updates to the preliminary and approved baseline construction schedules, as well as monthly applications for payment and reports. Robbie led the Team from the start of construction and conducts safe start meetings with Shirley and subcontractor crews. He managed the start of Stage 1 construction in August 2018, which incorporated day and night time activities, and concurrently managed staff in the performance of ongoing design reviews, quantity checks and design review comment resolution. His duties also include issuing purchase orders and subcontracts for Stage 1 work. He coordinates with VDOT staff on both design and construction related matters and participated in public information meetings to share general project information and details addressing environmental concerns. He also coordinated with adjacent projects, primarily the I-64 Segment II Project. The project’s scope included the addition of a new travel lane and inside shoulder, both eastbound and westbound, for over 8 miles in York County, Virginia. Scope also included replacement of bridges over Queens Creek, widening of bridges over Lakeshead Drive and Colonial Parkway, stormwater management ponds, and noise walls.

2. I-64 Capacity Improvements – Segment I Design-Build – Newport News, Virginia
Shirley Contracting Company, LLC, Senior Project Manager (3/2015 to 12/2017)
Role/Responsibilities: Robbie performed design management and plan review and was responsible for project delivery including planning, schedule preparation, purchasing, subcontractor coordination, quality control, public outreach, and financial management. His duties included coordination with VDOT to include Weekly Construction Update Meetings and Monthly Owner Progress Meetings. He frequently communicated with and provided construction updates to the City of Newport News engineering and waterworks departments. Robbie established a direct working relationship with the point of contact for all work over and adjacent to the CSX railroad. He executed agreements for access, prepared and submitted demolition and erection plans, participated in CSX Preconstruction Meetings, provided schedule information and communicated daily requirements with the flagman assigned to the project. Robbie worked closely with VDOT to incorporate scope items added by work order without any additional time. He managed the construction and quality teams in expediting punch list work and submission of the materials notebook. The project was delivered on time, December 1, 2017. The $103.5 million widening project included the addition of a new travel lane and inside shoulder, both eastbound and westbound, for almost 6 miles in Newport News, Virginia. The scope included the full replacement of bridges over Industrial Park Drive and adjacent CSXT railroad tracks, widening of bridges over Fort Eustis Boulevard and Lee Hall Reservoir, stormwater management ponds, and noise walls.

3. Clarendon Center – Arlington, Virginia
Clark Construction Group, LLC, Senior Project Manager (7/2007 to 9/2010)
Role/Responsibilities: Robbie was the Lead Project Manager from preconstruction through closeout for the $118 million Clarendon Center South and North projects in Arlington County, Virginia, for affiliate Clark Construction Group, LLC. The projects included two new office buildings and an apartment building with an elevated, landscaped plaza area over 4 levels of below grade parking on either side of the Clarendon Metro Station beneath Clarendon Boulevard. Robbie’s responsibilities included development of the project schedule, purchasing of subcontractors and suppliers, assisting the client with utility relocations, design and constructability reviews, management of the design-build subcontractor for electrical work, management of self-perform support of excavation and cast-in-place concrete work, and management of project staff. He also supervised numerous scope additions requested by the owner and coordinated the completion of the project with ongoing tenant fit-out projects in the office and retail spaces. The project was completed on time and on budget.

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

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 for this position.
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

**Brief Resume of Key Personnel anticipated for the Project.**

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Bryan Barnson, P.E., CCM, DBIA - Construction Manager/Design Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Quality Assurance Manager (QAM)</td>
</tr>
<tr>
<td>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):</td>
<td>CES Consulting, LLC (Full Time)</td>
</tr>
<tr>
<td>d. Employment History: With this Firm 4 Years With Other Firms 4 Years</td>
<td></td>
</tr>
</tbody>
</table>

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):

**CES Consulting, LLC**

**Construction Manager/Design Project Manager, 2015-Present**

Bryan is serving as the VDOT Construction Manager on the I-64 Capacity Improvements Segment II Design-Build Project, as well as a VDOT Project Manager for the Hampton Roads District Structure and Bridge Office. Bryan developed extensive experience managing key aspects of VDOT design-bid-build and design-build projects from the Preliminary Engineering stage through Construction. He tackles complex issues through each phase of construction having had experience managing both the design and construction side of projects. Examples of typical work items Bryan manages include project submittal review as an owner (VDOT) representative to include coordination with VDOT Hampton Roads District disciplines (Structure & Bridge, Materials, Traffic Engineering, Environmental), Quality Assurance (QA) plan development for unique roadway items (CCPRM/FDR), Coordination/scheduling of office engineers/inspection staff, review of project documentation ensuring conformance with the minimum requirements for VDOT Design Build projects, coordination of IA/VST inspections/testing, review of complex MOT implementations, coordination of MOT/Work activities with localities/stakeholders, review and processing of design build pay applications, and facilitating VDOT project environmental inspections.

- I-64 Capacity Improvements-Segment II Design-Build ($138M) - 11/2016 to 7/2019 - IA CM
- I-64/I-664 Interchange Bridge Deck Epoxy Overlays, ($1.4M) - 4/2015 to 11/2017 - Design PM
- 2016 Hampton Roads District Wide Bridge Painting, ($1.1M) - 4/2015 to 11/2017 - Design PM
- Hampton Roads District Wide Bridge Washing, ($160K) - 4/2015 to 11/2017 - Design PM
- Hampton Roads District Wide Bridge Maintenance, ($12M) - 4/2015 to 11/2017 - Design PM
- Route 629 Over Fountaine Creek Bridge Reconstruction – 3/2016 to 8/2016-Design PM
- Route 651 Over Moore’s Branch Bridge Reconstruction – 3/2016 to 9/2016-Design PM
- Route 621 Over Mills Swamp Bridge Reconstruction – 7/2015 to 12/2015-Design PM

**Skanska USA Civil Southeast, Inc.**

**Project Engineer/Superintendent, 2011-2015**

Bryan progressively garnered experience managing large scale Design-Build, and Design Bid-Build heavy civil construction projects. As both a Project Engineer and Superintendent, Bryan was tasked with managing Quality, Safety, and Environmental risks. In these roles, he has gained exposure in a leadership capacity in activities including pile driving, concrete placement, formwork design, crane lifting and rigging, quality control/assurance testing, and environmental risk mitigation.

- NNSY Pier 5 Replacement Project, NAVFAC ($164M) - 6/2011 to 3/2013 - Project Engineer
- New Midtown Tunnel P3 Project, VDOT/ERC ($1.8B) - 3/2013 to 4/2015 – Superintendent
- 

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
<th>Virginia Military Institute, Lexington, VA/ Bachelor of Science / 2011 / Civil Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
<td>2019 DBIA, 2017/Professional Engineer/Virginia Registration #55847, 2016/Professional Engineer/Maryland Registration #50258, 2016/Certified Construction Manager (CMAA)</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
<td></td>
</tr>
<tr>
<td>1. Note your role, responsibility, and specific job duties for each project, not those of the firm.</td>
<td></td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
<td></td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</td>
<td></td>
</tr>
</tbody>
</table>

(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-64 Segment II Widening Design Build Project - James City County, York County, Newport News, VA**  

**Role/Responsibilities:** Bryan has been vital to the successful project delivery for the $138M I-64 Widening Segment II design-build project serving as the consultant VDOT Construction Manager. This project (located just outside the proposed Skiffes Creek Connector limits) extends the 3-lane section of I-64 from roughly mile marker 248 to mile marker 241 of which includes the addition of 12’ wide travel lanes and 12’ wide shoulder lanes within the existing median space, and the repair and widening of 9 existing bridges. In his role, Bryan has taken a key leadership position within the VDOT team structure, managing all facets of the project including quality, safety, environmental, project/document controls, and public relations.

Similar to the requirements of the Quality Assurance Manager role, Bryan is actively managing every aspect related to Quality for this design build project. This includes responsibilities such as:

- Coordinating and scheduling all Independent Assurance (IA) inspection and testing resources;
- Maintaining VDOT’s owner frequency of testing logs/testing documentation;
- Coordinating with VDOT disciplines (Hampton Roads Materials/Elko) for IA/VST testing;
- Reviewing all Design Build Quality Control/Quality Assurance testing and inspection frequencies for compliance with the minimum requirements for VDOT Design Build projects;
- Acting as project Quality Assurance lead for CCPRM and FDR operations on the project to include development of VDOT Quality Assurance plan, facilitating Preparatory Inspection Meetings, maintaining all deficiency tracking/Non-compliance reporting, and implementing testing/inspection FOT;
- Responsible for coordination with QAM on tracking and VDOT resolution of Non-compliance reports;
- Responsible for monthly review of QA/QC testing, inspection documentation, and material book to ensure compliance with the VDOT design build minimum requirements, as it relates to pay application review/approval;
- Construction submittal review and approval authority to include appropriate coordination and review/comment resolutions with Hampton District resources (TE, S&B, Materials etc.);
- Responsible for approval of all lane closures and LCAM coordination as well as verification of Plan/WAPM compliance for unique phased TMP implementations; and
- Facilitating all VDOT bridge repair/widening inspections for acceptance.

In addition, Bryan is also serving as a key asset to VDOT in maintaining environmental compliance. Similar to the Skiffes Creek Connector, this project entails highly sensitive wetlands/streams and property owners. Typical environmental/permit compliance responsibilities include:

- Coordinating VDOT project ECI inspections (Direct report to CM);
- Reviewing and performing project C-107 processes to ensure permit compliance is maintained; and
- Reviewing/responding to Hampton Roads District NPDES and Water Quality inspection reports.

**New Midtown Tunnel- Elizabeth River Tunnel - Portsmouth/Norfolk, VA**  

**Role/Responsibilities:** As a superintendent on one of the largest PPTA projects in the Commonwealth of Virginia, Bryan was exposed to every aspect of a design-build PPTA project. Specifically, Bryan managed all field operations related to the rehabilitation of the two existing downtown tunnels, to include the installation of 200k sf of Promat fireproofing, complete electrical rehab (Total electrical rehabilitation value: $90M), installation of Jet Fan ventilation systems, concrete spall/delamination repairs, and removal of suspended concrete panel ceiling in the EB Downtown Tunnel. Bryan was also responsible for coordination of quality control testing and inspection to include maintenance of quality control testing logs, facilitating preparatory inspection meetings, as well as managing MOT deployment, maintenance, and pickup during nightly lane/tunnel closures.

**NNSY Pier 5 Replacement Project – Portsmouth, VA**  

**Role/Responsibilities:** Bryan provided field engineering support on the $164M Pier 5 Replacement Project. This project entailed an extensive amount of pile driving, concrete, and demolition work. Bryan’s responsibilities included developing detailed work plans and Activity Hazard Analysis (AHAs) for all work activities involved with the Pier 4 and Pier 5 demolition, which included the coordination of all quality testing and inspections. His field experience includes managing concrete pours ranging from 30-200cy, engineering formwork plans for utility trenches, and performing and maintaining pile driving logs. Bryan also developed and maintained the project turbidity monitoring plan during dredging operations of existing Pier 4 and Pier 5 and was responsible for quality assurance reporting of all dredge operations to include coordination of 3-D side scan sonar and manual sounding.

* *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.*  
* 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 for this position.**
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

**Brief Resume of Key Personnel anticipated for the Project.**

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Matt Thomas, PE, Associate</th>
</tr>
</thead>
</table>

| b. Project Assignment: | Design Manager (DM) |

| 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): | Dewberry Engineers Inc. (Full Time) |

| d. Employment History: | With this Firm 14 Years With Other Firms 9 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):

**Dewberry Engineers Inc.**

**Design Manager, 2010-Present**

General responsibilities include management of Dewberry’s Richmond, Virginia roadway design staff and oversight of multiple transportation design projects. Management responsibilities include setting project schedules, developing agendas and attending progress meetings, and coordinating with agencies to gain environmental and construction permits. Project responsibilities include oversight of roadway plan development, signing and sealing plans for right-of-way acquisition and construction, coordination and direct communication with design sub-consultants, leading coordination of internal design disciplines including roadway, structural, stormwater management/water resources, and environmental staff, and implementation of design QC processes. During construction, responsibilities include communicating and coordinating directly with construction staff to respond to questions, distribute and review shop drawings, submittals, and RFIs, and continues to serve as the single point of contact between Dewberry and the client.

- **Route 10 Widening, $15.2M**, 2/2018 to 6/2019 – Design Manager
- **I-64 Capacity Improvements - Segment III Design-Build, $178M**, 1/2018 to 12/2018 - Roadway Design Manager
- **I-64 Capacity Improvements - Segment I Design-Build, $103.5M**, 3/2015 to 12/2017 - Roadway Design Manager
- **Route 10 Eastbound Widening, $800K**, 9/2016 to 7/2017 - Design Manager
- **I-64 Pavement Rehabilitation Design-Build, $14.5M**, 1/2014 to 11/2014 - Roadway Design Manager
- **I-64 Exit 91 Interchange Improvements Design-Build, $21M**, 10/2012 to 8/2015 - Roadway Design Manager
- **Route 659 Relocation, $7M**, 2/2013 to 2/2013 - Roadway Design Manager
- **Route 29/Tye River Bridge Replacement Design-Build, $7M**, 1/2010 to 1/2012 - Roadway Design Manager
- **Airport Connector Road Design-Build, $32M**, 1/2007 to 1/2009 – Roadway Design Manager

**Dewberry Engineers Inc.**

**Design Engineer 2005-2010**

General responsibilities included setting horizontal and vertical roadway geometry, roadway plan development, coordination with other roadway, drainage, stormwater management/water resources, structural, and environmental staff. During construction, responsibilities included reviewing shop drawings, submittals, and RFIs.

- **Fort Lee Roundabout Design-Build, $2M**, 12/2012 to 10/2013 - Roadway Design Engineer
- **Route 28 PPTA Improvements (Frying Pan Road Interchange), $21M**, 12/2006 to 5/2010 – Roadway Design Engineer

| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | Virginia Polytechnic Institute & State University, Blacksburg, VA/Bachelor of Science/2005/Civil Engineering |

| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2010/Professional Engineer/Virginia #0402 046511, 2013/Professional Engineer/North Carolina #040595 |

| g. Document the extent and depth of your experience and qualifications relevant to the Project. | 1. Note your role, responsibility, and specific job duties for each project, not those of the firm. 2. Note whether experience is with current firm or with other firm. 3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation. |
I-64 Capacity Improvements – Segment I Design-Build – York County, VA
Dewberry Engineers Inc, Roadway Design Manager (3/2015 to 12/2017)
Role/Responsibilities: Matt served as the Roadway Design Manager for the design of the $103.5M widening project that consisted of the construction of 5.5 miles of one lane widening and resurfacing of the existing two lanes in each direction on I-64. The scope of the project also included the full replacement of bridges over Industrial Park Drive and adjacent CSX railroad tracks, widening of bridges over Fort Eustis Boulevard and Lee Hall Reservoir, stormwater management ponds, ITS, and noise walls. Matt was responsible for the development of the horizontal and vertical geometry, roadway drainage design, and noise barrier layout. Due to the large size of the project, Matt managed staff from multiple offices and facilitated weekly internal design update meetings to ensure the designs and deliverables were consistent across the offices. Matt also coordinated with the structural engineers, surveyors, traffic engineers, stormwater management engineers, and environmental staff to set internal schedules and develop submittal documents. During construction, Matt coordinated roadway and drainage related responses to questions, RFI's, submittals and shop drawing reviews. Matt was also responsible for the design of the added scope items for the strengthening of the outside shoulders from Fort Eustis Boulevard to the eastern project limits. The addition of this scope item was designed, constructed, and delivered on time for the original completion date of December 1, 2017.

Airport Connector Road Design-Build - Henrico County, VA
Roles/Responsibilities: As the Roadway Design Manager, Matt was responsible for the design and design management for the construction of 1.6 miles of a new four lane divided roadway and trumpet style interchange at the connection with Route 895. This project also included several MSE walls and three bridges, one of which was over a CSX Railroad spur and required additional coordination with CSX for approval of construction and permanent horizontal and vertical clearances. Matt led the development of the roadway and drainage designs, coordinated with traffic engineers, structural engineers, stormwater management engineers, surveys and environmental permitting. As this was a design build project with a shortened schedule, Matt coordinated with the Contractor to develop multiple submission packages to allow different pieces of the project to begin construction while the final design was being developed. Coordination for these early packages included working with surveys, environmental, and drainage teams to develop the limits of disturbance so that permits could be obtained and clearing could begin. Matt was responsible for the design and coordination of the temporary traffic control, signing and marking, and signals. During construction, Matt attended and facilitated construction progress meetings in addition to reviewing shop drawings, submittals, and RFIs.

Route 10 Widening – Chesterfield, VA
Dewberry Engineers Inc, Design Manager (2/2018 to 6/2019)
Role/Responsibilities: Matt was responsible for the design and design management for the widening of 1.6 miles of Route 10 in Chesterfield County as it passes beneath Route 288. Matt managed his team of roadway, drainage, stormwater, and traffic staff for the design to add a third lane in each direction on Route 10. This project also included the design of three new traffic signals, multiple overhead and ground mounted signs, and multiple underground stormwater management detention facilities. As Design Manager, Matt was responsible for setting deliverable schedules and coordinating with multiple sub-consultants to complete the survey, traffic analysis, geotechnical investigations, and environmental permitting. Chesterfield County asked Matt to look for ways to reduce the total project schedule and he identified design opportunities that eliminated most of the utility relocations and reduced the amount of additional right-of-way needed. This was achieved by working with the stormwater management engineers to look for opportunities to use large culvert pipes and special manholes to provide detention to meet water quantity requirements. The use of these large diameter pipes eliminated the need for multiple surface stormwater BMPs that would be outside of existing right-of-way and impacting existing utilities.

* 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 for this position.
**Brief Resume of Key Personnel anticipated for the Project.**

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Kyle Davidson, Structural Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>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):</td>
<td>Shirley Contracting Company, LLC (Full Time)</td>
</tr>
</tbody>
</table>
| d. Employment History: | Shirley Contracting Company, LLC  
Structural Project Manager, 2017-Present |
| | Responsibilities include collaborating with design engineers during the design phase of projects to determine scope and methods of construction for the particular structures. Perform constructability reviews and provide comments to the design team. Perform quantity takeoffs and solicit subcontractor and supplier quotations. Purchase, negotiate, and develop contract agreements with subcontractors and suppliers. Work with the project construction teams to develop the CPM Schedule for the structural activities on the Projects as well as organize and finalize project budgets prior to construction. Determine needed resources including manpower, equipment, and materials while staying in line with budgetary requirements. Organize and lead weekly project staff meetings to detail out three week look-ahead schedules, determine status of critical submittals, discuss manpower and equipment issues, and review production quantities in place and overall financial status of the work. Coordinate and schedule all construction work with the quality control and quality assurance staff on projects and assists in updating and revising logic in the monthly CPM schedule updates. Establish and maintain strong relationships with owner, subcontractors, and suppliers.  
- **I-64 Capacity Improvements Segment III Design-Build, $178M**, 1/2018 – 9/2021, Structural Project Manager  
- **I-95/Route 630 Reconstruction and Widening Design-Build, $105M**, 12/2017 – 12/2018, Structural Project Manager  
- **Route 606 Bridge Replacement over I-95 and 606 Improvements Design-Build, $16.8M**, 10/2017 – 1/2019, Structural Project Manager  
- **I-64 Capacity Improvements Segment I Design-Build, $103.5M**, 6/2017 – 12/2017, Structural Project Manager |
| RR Dawson Bridge Company, LLC  
Project Manager/Superintendent, 2007-2017 |
| Responsibilities included coordination with the project team, management of all aspects of daily field construction activities including manpower, equipment, and materials; purchasing, managing cost control activities, subcontractor coordination and management; oversight of construction activities to ensure quality and compliance with contract specifications. Served as key point of contact for Project owners and/or general contractors. Attended weekly and monthly progress meetings delivering updated look-ahead schedules, verifying critical material deliveries, and coordinating quality control inspections for the work.  
- **Dominion Boulevard Improvements, $44M**, 1/2013 – 12/2016 – Project Manager  
- **Jefferson Park Avenue Bridge Replacement, $5.8M**, 1/2011 – 9/2012 - Superintendent  
- **Spotsylvania Parkway Bridge over I-95, $5.2M**, 8/2009 – 4/2010 – Assistant Superintendent  
| e. Education: | Old Dominion University, Norfolk, VA/Bachelor of Science/2004/Education |
| f. Active Registration: | Year First Registered/ Discipline/VA Registration #: 2010/Virginia Transportation Construction Management Institute. Erosion & Sediment Control Contractor Certification will be renewed prior to project commencement. Responsible Land Disturber Certificate will be acquired prior to project commencement.  
| g. Document the extent and depth of your experience and qualifications relevant to the Project.  
1. **Note your role, responsibility, and specific job duties for each project, not those of the firm.** |
2. Note whether experience is with current firm or with other firm.
3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be 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.)

**Route 606 Bridge Replacement Over I-95 and 606 Improvements Design-Build, Spotsylvania, VA**
**Shirley Contracting Company, LLC, Structural Project Manager (10/2017 to 01/2019)**

**Role/Responsibilities:** Kyle served as structural Project Manager for this $16.8M Interchange along I-95 in Spotsylvania County. He helped complete constructability reviews prior to construction and performed all purchasing and procurement of major materials including pier and abutment piling, structural girders, as well as the complete MSE Wall abutment design and fabrication package. Working alongside the construction manager for the Project, Kyle developed the complete budget and construction schedule for the critical path bridge elements. Both abutments required wick drain, surcharge and settlement periods due to compressible soils in the region. Kyle coordinated installation of all geotechnical monitoring equipment and worked closely with the engineers to allow the bridge and project schedule to remain on track for an early interim milestone opening in October 2018. Kyle developed all working drawings for major operations including the girder erection and existing bridge demolition over Interstate I-95. Kyle determined the needed resources including manpower, equipment and materials while staying in line with budgetary needs. He established and maintained strong relationships with owner, subcontractors, and suppliers and led the weekly project meetings with onsite bridge crews, grading crews and critical subcontractors; tracking and updating progress throughout the critical construction periods. Kyle coordinated all scheduling and expected daily work activities for the required quality control inspections for the structural work on the Project.

**I-95/Route 630 Reconstruction and Widening Design-Build, Stafford, VA**
**Shirley Contracting Company, LLC, Structural Project Manager (12/2017 to 11/2018)**

**Role/Responsibilities:** Kyle served as structural Project Manager for the $105M Interchange along I-95 in Stafford County. Kyle assisted with the purchasing and procurement of all major materials including steel H-pile, structural girders, and MSE Walls for the three bridges that were constructed as part of the Project scope. Additionally, Kyle helped develop and coordinate shop drawings for the retaining walls on the Project. He assisted with the coordination and installation of over 150 slope stability piles required to support the embankment construction of the added Ramp A Bridge, a small single span bridge over existing Courthouse Road. He led weekly project staff meetings with the Shirley onsite structural and grading crews as well as the major subcontractors. Kyle and his staff helped develop three-week look ahead schedules used to coordinate all construction, lane closure requests, as well as quality control inspections for the Project. The I-95/Route 630 Reconstruction & Widening Project is comprised of a diverging diamond interchange (DDI) which features two parallel bridges carrying Route 630 over I-95 as well as new on and off ramps to be constructed tying into I-95. The DDI will route traffic onto the left side of the roadway at the approaches to the bridge and funnel it back onto the conventional right side of the roadway after departing the bridge on the opposite side. New on and off ramps will be constructed tying into I-95.

**I-64 Capacity Improvements Segment I Design-Build, Newport News, VA**
**Shirley Contracting Company, LLC, Structural Project Manager (06/2017 to 12/2017)**

**Role/Responsibilities:** Kyle served as the structural Project Manager during the final construction phase of the $103.5M widening of interstate I-64 in Newport News, VA. Kyle managed the self-perform construction of the phased demolition and replacement of the twin bridges carrying I-64 over Industrial Park Drive and CSX Railroad. Kyle assisted in the developed and approvals of all working drawings including girder erection and bridge demolition plans over CSXT railroad spur line and Industrial Park Drive. Daily coordination was required with CSXT during all phases of the Project as Kyle served as the key point of contact with the railroad flagman and AECOM inspection staff. He scheduled and managed the installation of wick drains used to overcome settlement challenges for abutment construction. He also managed the rehabilitation of the twin I-64 bridges over Lee Hall Reservoir; a two-span, three-lane bridge requiring substructure repairs, deck joint closures, deck extensions, buried approach slab installation as well as a phased concrete deck overlay. Additionally, he managed the multi-phased rehabilitation work associated with the twin bridges carrying I-64 over Fort Eustis Boulevard; requiring substructure repairs, steel girder painting, deck joint closures, deck extensions and buried approach slab installation.

* 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. Kyle is currently assigned to I-64 Capacity Improvements – Segment III Project and will be available for this assignment full time when construction commences.
3.4.1 Work History Forms
### PROJECT NARRATIVE:
In March 2015, VDOT awarded Shirley Contracting Company LLC, (Shirley) the $85 M Interstate 64 (I-64) Capacity Improvements - Segment I Design-Build contract. Our Team was chosen because of our experience associated with construction of complex transportation projects on high volume, high speed roads, excellent safety record, and innovative approach to the design and construction aspects of the Project. The Project entailed the median widening of approximately 5.2-miles of I-64 in Newport News, VA; adding a new travel lane and full width shoulder in each direction on the interstate; replacement or widening of six bridges, including two bridges over CSX Rail; and construction of nearly 2.5 miles of noise barrier wall.

Utilizing our experiences working on similar interstate facilities, such as I-95, Shirley was able to sequence work operations and phase the construction so the overall impacts to the traveling public were minimized. The entirety of the phased median widening construction took place behind temporary concrete traffic barriers keeping both the workers and the public safe during construction. The Design Team developed an innovative Temporary Traffic Control (TTC) approach that allowed commencement of construction activities within six months of NTP by creating an Advanced TTC Plan Set. This strategy allowed for shoulder strengthening and median clearing within existing right-of-way to start while final roadway and bridge design elements were being completed. The Environmental Team worked closely with the permitting agencies to avoid work in jurisdictional areas while the final Joint Permit Application and mitigation measures were finalized.

Due to the significant deterioration of the existing pair of I-64 bridges over Industrial Park Drive and CSX Spur line, the Shirley Team was able to enhance VDOT’s RFP concept by choosing to replace the existing bridges with more efficient and new 2-span structures, rather than widen and rehabilitate them as called for in the RFP. The Team developed a new span arrangement that located both the pier and abutments outside of the CSX right-of-way improving long term maintenance and avoidance of the railroad right-of-way. The existing bridges were completely demolished in phases and traffic was maintained at all times. The design and construction Team coordinated all design and working drawings with CSX and their Consultant Reviewer, AECOM. All construction sequencing, shop drawings, bridge demolition, girder erection and fencing requirements required extensive CSX review. The phased removal and replacement of these bridges was completed in 18 months.

### PROJECT SCOPE:
- Median Widening of 5.2-miles of Interstate 64 in each direction;
- Demolition and Re-Construction of 2 new bridges over CSX Rail;
- Widening and Repairs of 4 existing bridges;
- Extensive Maintenance of Traffic Operations for over 100,000 VPD;
- TMS, DMS, CCTV and Overhead Signage/installation;
- Installation of 7 bio-retention and constructed wetland SWM facilities;
- Utility relocation/installation;
- Installation of over 210,000 S.F. of Noise Barrier Wall; and,
- Installation of over 15,000 LF of storm sewer including trenchless crossing.

### SIMILARITIES TO SKIFFES CREEK CONNECTOR
- Design-Build Delivery
- Construction of a Bridge Over CSX Rail
- Coordination with CSX and AECOM
- Hampton Roads District
- Geotechnical Challenges
- Environmental Permitting and Shriet Compliance Monitoring
- Storm Drainage and SWM Pond Facilities
- Utility Relocations
- MOT Operations
- Overhead Sign Structures
- Teamed with Lead Designer – Dewberry
- Same Key Personnel & Value Added Staff:
  - Robbie Roberts
  - Kyle Davidson
  - Matt Thomas
  - Todd Kief

### SHIRLEY'S ROLE:
As the Design-Builder and Lead Contractor, Shirley was responsible for management and oversight of the entire Project, including design and engineering, environmental permitting, utility relocations and overall Project administration and construction management, including QA/QC. All construction work was performed on a heavily traveled roadway and all lane restrictions were coordinated by Shirley with VDOT to allow for public notifications of impacts to traffic. Shirley was responsible for creating and monitoring the schedule throughout design and construction.

### ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY & WORKMANSHIP:
To minimize impacts to the public, the Team committed to provide shoulders during all phases of construction and full-length paved construction entrances. This allowed safe ingress and egress to the median construction work zones. Along with VDOT, VSP, and the City of Newport News, the Team developed a Incident Management Program that allowed for safe and effective removal of minor traffic accidents from the work zone, as well as quick response and remediation of roadway hazards such as potholes. Through the addition of scope enhancements proposed by VDOT such as the widening and strengthening of 8-miles of outside shoulder and the introduction of High Polymer Binder to the Asphalt Surface Mixes, the budget was increased by over 15%. Even with the increase in Project scope, the Shirley Team was able to complete the Project by the original Final Completion Date of December 1, 2017. The Project received the Design-Build Institute of America's National and Mid-Atlantic region Award of Merit recognizing the high quality and adherence to the Design-Build Project Delivery standards.

### IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:
Effective design QA/QC procedures and active communication with VDOT plan reviewers led to high quality design submittals and enabled early approval of Advanced TTC/MOT plans. This early approval allowed our Team to start construction within six months of NTP. Throughout construction, the Project maintained a full-time Quality Assurance Manager and QC Team.

### INNOVATIVE DESIGN SOLUTIONS TO REDUCE FUTURE MAINTENANCE:
Although the RFP allowed for the widening and rehabilitation of the existing bridges over Industrial Park Drive and CSX Railroad, our Team developed plans which provided two new 2-span bridges in lieu of widening and repair of the existing 3-span bridges, resulting in shorter structures which will require less maintenance by VDOT. Geotechnically, the bridges at Industrial Park Drive presented unique challenges due to the extremely soft and yielding soils prone to settlement. The Team overcame these issues by use of several techniques including:
- MSE abutments designed for the anticipated settlement during and post construction as determined by the geotechnical investigation and analysis;
- Use of wick drains in the new abutment areas combined with surcharge and minimal waiting periods; and,
- Pile down-draged was avoided by use of an outer shell pile casing installed below problem soils and prior to permanent pile driving.

### ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM

<table>
<thead>
<tr>
<th>Name: I-64 Capacity Improvements - Segment I</th>
<th>Name: Dewberry Engineers Inc.</th>
<th>Name of Client: VDOT</th>
<th>Project Manager: Janet M. Hedrick, PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Newport News, VA</td>
<td>Phone: 757-494-5478</td>
<td>Email: <a href="mailto:Hedrick@vdot.virginia.gov">Hedrick@vdot.virginia.gov</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Contract information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual Estimated)</th>
<th>f. Contract Value (in thousands)</th>
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<tbody>
<tr>
<td>December 1, 2017</td>
<td>December 1, 2017</td>
<td>$84,879</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$101,396*</td>
</tr>
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</table>
**PROJECT NARRATIVE**
In February 2014, Shirley was awarded a $26.3 million contract for the design-build delivery of the segment Gloucester Parkway between Loudoun County Parkway and Pacific Boulevard. The 0.8 mile segment of new 4-lane divided roadway would provide the missing link connecting Route 28 to the Ashburn, Virginia suburb and provide much needed congestion relief for parallel commuter routes including Route 625 to the south and Route 7 to the north. Major project features included dual 1,320 LF bridges over the Broad Run flood plain. The jointless bridges included a superstructure of concrete deck supported by 69” and 77” concrete bulb-T beams and a substructure of concrete column piers and Virginia Alternate abutments supported on 60’ drilled shaft foundations. Roadway features included new signalized intersections at Loudoun County Parkway and Pacific Boulevard, 0.4 miles of widening of Loudoun County Parkway to accommodate new turn lanes to Gloucester Parkway, a shared use path along the north side Gloucester Parkway and a concrete sidewalk along the south side.

Shirley implemented innovative SWM designs and extensive property owner coordination to minimize right-of-way (ROW) impacts and reduce ROW acquisition costs for VDOT. Although the RFP allowed the acquisition of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond, our Team coordinated with an adjacent developer to obtain treatment in an adjacent project’s facility and implemented 14 Filterra structures to eliminate the need of over 0.5 acres of ROW for a SWM pond. A team of project inspectors from Quinn Consulting Services and VDOT oversight staff to verify the quality of materials and workmanship while performing over 100,000 man-hours of construction with no lost-time incidents.

**ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY & WORKMANSHIP:**
Minimizing the impact of the construction on adjacent environmental resources, including the wetlands and streams in the Broad Run Flood Plain and existing conservation easements abutting both sides of the ROW on the east side of the project, was a significant Project focus. Construction means and methods were developed to safely access bridge construction from narrow access roads to avoid impacts to the conservation easements. These means and methods enabled our Team to deliver quality workmanship while performing over 100,000 man-hours of construction with no lost-time incidents.

**IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:**
The Shirley/Dewberry Team adhered to a comprehensive QA/QC plan throughout design and construction. During the design phase, the Design Manager ensured effective constructability, QC, and QA reviews were completed on all design deliverables, enabling expedited and efficient review and approval time-frames by VDOT. During Construction, the Team relied on effective communication between the production forces, independent Dewberry QC inspectors, independent QA inspectors from Quinn Consulting Services and VDOT oversight staff to verify the quality of materials and workmanship and cooperatively resolve project challenges.

**INNOVATIVE DESIGN SOLUTIONS TO REDUCE FUTURE MAINTENANCE:**
Quoted from VDOT’s press release on August 5, 2016: “The Gloucester bridge over Broad Run is now the longest “jointless” bridge in Virginia, meaning the bridge superstructure and substructure, particularly the girders and bearings, shouldn’t require significant maintenance for many decades.”
**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. Contract 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. Original Contract Value (in thousands)
g. Final or Estimated Contract Value (in thousands)
h. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.

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**PROJECT NARRATIVE**

Shirley Contracting Company, LLC (Shirley) was awarded a $43M contract for the design and construction of the new 840-foot long, six lane wide Monroe Avenue Bridge to carry US Route 1 over CSXT’s North East Rail Corridor. Due to the heavily traveled roadway that the bridge carried, daily maintenance of traffic was required to limit the impacts to the traveling public. The phased construction was sequenced with the eastern span of the new bridge opening mid-way through the Project. All traffic was removed from the existing bridge, placed on the new span, and the existing bridge demolished and the second phase constructed in its place. Due to limited width on the three-lane bridge deck, the development and installation of the reversible center lane traffic signals were vital in the maintenance of traffic. They allowed for two lanes (the original width of Route 1) to flow in the direction of rush hour.

The Project was constructed over one of the busiest passenger rail corridors in the U.S, carrying 40 to 80 trains per day including daily VRE and AMTRAK commuter trains as well as heavy freight traffic. Additionally, the new bridge spanned over WMATA’s Yellow Line Underground Easement which paralleled the railroad corridor. As the Design-Builder, Shirley coordinated all arrangements with CSXT including the early development of the right of entry and flagman agreements for the Owner (Pulte Homes). During design, all bridge plans and calculations were reviewed by CSXT and their Consultant Reviewer AECOM. Construction submittals including pile driving criteria, existing bridge demolition, structural steel erection and under-bridge utility plans were all reviewed and approved with both CSXT and WMATA agencies.

Minimizing the impact of the construction on the surrounding neighborhood played a significant role in the design. Driving pile within 100 feet of private residences, installing deep (16 feet) utility lines within eight feet of existing businesses, and demolishing retaining walls within five feet of retail stores required constant attention and demanded thorough communication between Shirley and the community. This was accomplished through monthly project update meetings at a local recreation center. Progress reports were followed by question and answer sessions where questions were answered and input was received.

**PROJECT SCOPE**

- Design-Build Delivery
- Construction of a Bridge over CSXT’s heavily traveled NE Rail Corridor
- Coordination with CSXT and AECOM
- Major Utility Relocations Including Waterline and Underground Dominion Transmission Line
- Roadway Construction
- MOT Operations
- Environmental Permitting
- Public Involvement and Outreach
- Third Party Stakeholder Communication & Coordination
- Challenging Geotechnical Conditions

**SHIRLEY’S ROLE**

For the Project, Shirley controlled the Design-Build Management of the bridge and the approach portion of the roadways to the bridge. The Owner controlled the design of the surrounding roadways and Shirley was the Contractor as well for these pieces. This was a challenging arrangement for both parties and required a trust and confidence in each Team’s ability to meet design schedules for construction not to be delayed. This required a close teaming partnership with the City of Alexandria. In this capacity, Shirley had overall responsibility and management of the complete scope of work including all design and engineering, utility relocations, permitting, quality control, construction, public outreach, and overall Project administration and management. Shirley was the primary point of contact with the Owner, and created and monitored the Project schedule.

**ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY & WORKMANSHIP**

The Project met several environmental challenges including known hazards such as arsenic and petroleum laden soils. Shirley worked with the Owner's consultants to stockpile and safely remove these materials as they were encountered. Safely working adjacent to the railroad was of utmost importance. All workers attended CSXT safety training and performed daily roadway safety talks and briefs with the flagman. Steel erection over the rail corridor was performed seamlessly with a well coordinated and planned procedure utilizing double crane picks under CSXT controlled work windows.

**IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN**

Shirley implemented a comprehensive QA/QC plan which was adhered to throughout design and construction. The Project was constructed utilizing City of Alexandria standards as well as VDOT specifications. Following the VDOT model, the Project maintained a full-time, third-party Quality Assurance Manager and Quality Control inspection and testing staff. All Project daily inspection reporting and materials documentation and testing was submitted weekly and reviewed by the QA Manager and City of Alexandria Engineering Department. The program maintained the National NCR’s and closeout was completed on time.

**INNOVATIVE DESIGN SOLUTIONS TO REDUCE FUTURE MAINTENANCE**

Working closely with the City of Alexandria Transportation Department, many bridge elements were required to meet architectural requirements such as arched substructure piers with corbelled pilasters as well as ornamental fascia girder stiffeners. Additionally, the bridge design utilized low maintenance construction materials such as ASTM A588 Weathering Steel girders as well a low permeability mix for the superstructure deck concrete.
<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/ general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Start Date</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</th>
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</thead>
</table>
| I-64 Capacity Improvements - Segment 1 Design-Build | Shirley Contracting Company, LLC | Name of Client: VDOT  
Project Manager: Janet M. Hedrick, PE  
Phone: 757-956-3071  
Email: Janet.Hedrick@vdot.virginia.gov | 3/2015 | 12/2017 | $84,879 | *Difference due to Owner added scope $101,396 |

**PROJECT NARRATIVE:**

In 2015, Dewberry, as part of the Shirley-Dewberry design-build Team, was awarded the contract to widen I-64 in Newport News from 4-lanes to 6-lanes for a distance of approximately 5.2 miles. Widening was completed through construction of a single additional lane in each direction in the median, and either a raised or depressed median was incorporated to maintain drainage depending on the remaining median width. Originally identified as an option to the contract, the auxiliary lanes at the Fort Eustis Boulevard Interchange were also lengthened to improve capacity and safety. Four existing bridges on I-64 were widened to accommodate the 6-lane section (two over the Lee Hall Reservoir and two over Fort Eustis Boulevard), and the new I-64 Industrial Park Drive and CSXT Railroad were completely demolished and replaced. Additional project elements included approximately 12,500 LF of noise barriers, stormwater management facilities, drainage improvements, geotechnical ground improvements for soft and unsuitable soils, concrete pavement patching and repair, and asphalt pavement overlay.

During design, VDOT issued a contract modification to strengthen the outside shoulders between the Fort Eustis Boulevard Interchange and the eastern project limit to allow operation of a fourth thru lane in each direction in the future. Shoulder strengthening was incorporated by removal of the existing shoulder pavement and partial subbase removal, and replacement with a full-depth pavement section.

**PROJECT SCOPE:**

- Field surveys;
- Geotechnical investigations;
- Environmental permitting, wetland and stream delineations, and permit monitoring;
- Ground improvements utilizing pin piles, lightweight fill, embankment surcharges, and soil cement to address slope stability, global stability, and settlement challenges;
- Temporary shoulder strengthening design;
- Interstate roadway widening design;
- Structural design for interstate bridge widenings and replacements;
- Noise analysis and public survey coordination;
- Hydraulic design and stormwater management;
- Temporary traffic control and transportation management plan development;
- Overhead signing, pavement markings, fiber optic, DMS and camera design; and
- Landscape design.

**Dewberry's Role:**

As the Lead Designer, Dewberry’s Fairfax, Virginia office, supported by their Richmond, Virginia office, was responsible for completion of all engineering services. In addition to all engineering services, Dewberry also completed all design field surveys, environmental permitting and documentation, and quality control (QC) during construction. Dewberry oversaw sub-consultant services to complete updated aerial mapping, utility designations and test pits, geotechnical investigations and recommendations, noise analysis, and pipe video inspections.

**Environmental Compliance, Safety, Quality & Workmanship:**

In order to minimize impacts to the public, we developed temporary traffic control plans to maintain the full design speed through all horizontal transitions, resulting in transitions twice the length of minimum requirements for enhanced public safety. Full width shoulders were maintained on at least one side of the roadway throughout the entire length of the project, ensuring that disabled vehicles could be moved from the travel lanes as quickly as possible. Environmental constraints and concerns were addressed through development of E&S plans which matched with the advance construction plans and final construction plans, and regular E&S and permit compliance checks were completed by Dewberry staff who were involved in the development of the original permit application package, ensuring all commitments were adhered to during construction.

**IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:**

Dewberry implemented a comprehensive QA and QC plan which was adhered to throughout design, effectively reviewing plans which were developed in two offices in different geographic areas (Fairfax, VA and Richmond, VA). Advance temporary traffic control plans were developed to allow construction to start before final plan approvals, and QA/QC efforts ensured no re-work or design conflicts arose through any phase of design, allowing construction to continue without adverse design impacts.

**INNOVATIVE DESIGN SOLUTIONS TO REDUCE FUTURE MAINTENANCE:**

Although the RFP allowed for the widening and rehabilitation of the existing 4-span bridges over Industrial Park Drive and CSXT Railroad, our Team developed plans which provided new 2-span bridges. The resulting shorter structures will require less maintenance for VDOT and also provided additional horizontal clearance between the CSXT railroad and the superstructure of the bridge. As construction began, the conditions of both bridges and identification of large voids beneath the approach slabs and adjacent to the abutments made it clear that the choice to completely replace both bridges provided a safer and superior overpass of the CSXT railway than what would have been possible through repair and widening of the existing bridges.
PROJECT NARRATIVE:
Under a single design contract, Dewberry’s Fairfax, Virginia office completed the preliminary and final design for improvements to the I-66 corridor between Manassas and Gainesville, Virginia. These improvements included:

- Widening 4 miles of I-66 from 4 to 8-lanes, including one HOV lane in each direction;
- Ramp modifications at the Route 234 Business & Bypass Interchanges;
- Complete reconstruction of the Route 29 Interchange in Gainesville; and
- Traffic analysis and modeling for additional improvements in Gainesville to improve the operation of I-66.

As part of the traffic analysis at the Route 29 interchange in Gainesville it was determined that a new interchange was necessary at the Route 29 intersection with Linton Hall Road to improve operations on I-66 (the I-66/Route 29/Linton Hall Road Interchange). As part of this new interchange, at-grade railroad crossings of Route 29 and Gallagher Road were eliminated and a braced ramp network was designed on southbound Route 29 between I-66 and Gainesville. Additionally, University Boulevard was designed to provide a direct connection between Route 29 and Wellington Road, including an overpass of both I-66 and Norfolk Southern Railroad.

Due to funding constraints, construction plans were separated into five construction packages. Dewberry worked with VDOT to identify these break-out packages so that phased improvements and added capacity could be completed as quickly as possible. The I-66/Route 29/Linton Hall Interchange was the final construction project to be advertised and was completed in 2015. Completion of the I-66/Route 29/Linton Hall Road Interchange has significantly improved operations on Route 29 and on Linton Hall Road and eliminated safety and operation concerns associated with the skewed crossing of Norfolk Southern Railroad while accommodating additional development and retail growth adjacent to the project.

PROJECT SCOPE:
- Field surveys & geotechnical investigations;
- Environmental permit plate preparation;
- Traffic and operational analysis and documentation (IJR);
- Roadway design;
- Structural design, including two new bridges over the railroad; TMP and complex temporary traffic control plan design;
- Lighting and electrical design and traffic signal design;
- Public meeting preparation, attendance, and support; and
- Coordination with Norfolk Southern Railroad.

ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY & WORKMANSHIP:
E&S plans for this segment of construction were developed to avoid impacts to sensitive areas including multiple stream crossings and environmentally sensitive properties. SWM facilities were constructed in the earliest phases of construction to address water quantity and quality concerns during and after construction. Extensive detention areas were designed at the I-66/Route 29 Interchange to reduce downstream flooding and prevent flooding of the railroad and avoid the need to install new drainage facilities below the railroad tracks.

IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:
Due to funding constraints, design of the interchange extended for more than 10 years, and construction was not completed until nearly 20 years after design began. During design, plans were changed from metric units to English units, and multiple survey updates were completed to ensure updated information was reflected on right-of-way acquisition, utility relocation, and construction plans. Dewberry’s design team was led by the same staff for the duration of the 18 years when plans were developed, the Project was built, and construction change orders were made. As a result, the design changes accounted for less than 2% of the total construction value. Dewberry’s staff implemented an extensive QA/QC process to regularly check plans, coordinate designs between disciplines, and ensure constant coordination among design staff, resulting in accurate and comprehensive plans which required virtually no design adjustments during construction.

ATTACHMENT 3.4.1(b)

DEWBERRY’S ROLE:
As the Engineer of Record for the improvements, Dewberry was responsible for all services outlined in the “Project Scope” as well as coordination with sub-consultants and VDOT. In addition to providing all design services, Dewberry prepared presentations and graphics for multiple public hearings, public meetings, and citizen outreach meetings, provided support to VDOT right-of-way acquisition and negotiation staff during acquisition of right-of-way and easements, and coordinated with Norfolk Southern Railroad for the improvements over and adjacent to railroad property. Dewberry designed retaining wall concepts and designs which maintained development potential for adjacent properties, ultimately resulting in dedication of right-of-way and easements and construction cost contributions instead of acquisition of property and loss of development potential to private property owners. During construction, Dewberry reviewed shop drawings, responded to RFI’s, and attended monthly coordination meetings and detail-specific construction meetings.

SIMILARITIES TO SKIFFES CREEK CONNECTOR
- Field Survey and Base Mapping
- Environmental Permitting
- Geotechnical Investigations
- Roadway Design
- New roads for improved local connectivity
- Hydraulics Design
- Structural Design of multiple bridges
- Two New Bridges over Railroad
- Traffic Sign Design
- Right-of-Way Acquisition Plans
- Extensive Utility Relocations
- Teamed with Lead Contractor – Shirley

PROJECT SCOPE:
Under a single design contract, Dewberry’s Fairfax, Virginia office completed the preliminary and final design for improvements to the I-66 corridor between Manassas and Gainesville, Virginia. These improvements included:

- Widening 4 miles of I-66 from 4 to 8-lanes, including one HOV lane in each direction;
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PROJECT SCOPE:
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- Roadway design;
- Structural design, including two new bridges over the railroad; TMP and complex temporary traffic control plan design;
- Lighting and electrical design and traffic signal design;
- Public meeting preparation, attendance, and support; and
- Coordination with Norfolk Southern Railroad.
The extension of Gloucester Parkway from Pacific Boulevard to Loudoun County Parkway was a significant missing link which was required to relieve congestion on the adjacent Route 7 and Waxpool Road corridors by proving another direct access roadway into Ashburn. Construction of this segment of road had not been completed due to the significant and costly 1,320’ parallel bridges which were required over Broad Run and the associated floodplain. Designed as a 4-lane roadway with pedestrian facilities on each side, the typical section accommodates a future widening to the median without the need for additional right-of-way acquisitions or utility relocations, and entrances were coordinated with adjacent development to reduce impacts and improve access to current and future developments. Turn lane improvements were completed on Loudoun County Parkway, and privacy and security elements were added on the southern side of Gloucester Parkway based on coordination with the Washington Redskins, whose practice and team facilities are immediately adjacent to the road. The bridge over Broad Run was designed to avoid a rise in the floodplain, and pier locations were optimized to avoid impacts to existing water, sanitary, and reclaimed water facilities. At the time the bridge was opened to traffic, it was the longest bridge using VDOT’s jointless bridge technology in Virginia.

As the Engineer of Record, Dewberry’s Fairfax, VA office was responsible for all aspects of final design including field surveys, environmental permitting and permit monitoring, oversight of design subconsultants, and construction quality control inspection. Dewberry attended coordination meetings with VDOT and Loudoun County, as well as all meetings with the adjacent property owners and representatives. Project corridors by proving another direct access roadway into Ashburn. Construction of this segment of road had not been completed due to the significant and costly 1,320’ parallel bridges which were required over Broad Run and the associated floodplain. Designed as a 4-lane roadway with pedestrian facilities on each side, the typical section accommodates a future widening to the median without the need for additional right-of-way acquisitions or utility relocations, and entrances were coordinated with adjacent development to reduce impacts and improve access to current and future developments. Turn lane improvements were completed on Loudoun County Parkway, and privacy and security elements were added on the southern side of Gloucester Parkway based on coordination with the Washington Redskins, whose practice and team facilities are immediately adjacent to the road. The bridge over Broad Run was designed to avoid a rise in the floodplain, and pier locations were optimized to avoid impacts to existing water, sanitary, and reclaimed water facilities. At the time the bridge was opened to traffic, it was the longest bridge using VDOT’s jointless bridge technology in Virginia.

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