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**STATEMENT OF QUALIFICATIONS**

# Route 606 Bridge Replacement over I-95 with 606 Improvements, Spotsylvania County



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Date	February 4, 2016
Solicitation #	C00105463DB89
Submitted to	Virginia Department of Transportation
Submitted by	Wagman Heavy Civil, Inc. 26000 Simpson Road North Dinwiddie, VA 23803
Phone	804-631-0000
Fax	804-733-6281

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wagman.com





General Construction | Heavy Civil | Geotechnical

Brenda L. Williams  
Commonwealth of Virginia  
Virginia Department of Transportation (VDOT)  
1401 East Broad Street  
Richmond, VA 23219

February 4, 2016

RE: Statement of Qualifications (SOQ)  
Route 606 Bridge Replacement over I-95 with 606  
Improvements, Spotsylvania County, Virginia  
A Design-Build (DB) Project  
Contract ID/RFQ No: C00105463DB89

Dear Ms. Williams:

**Wagman Heavy Civil, Inc. (Wagman)** is pleased to submit our SOQ for the Route 606 Bridge Replacement over I-95 with 606 Improvements (I-95/606) Project. In accordance with the Letter of Submittal requirements for Section 3.2, we offer the following information for review.

**3.2.1** Wagman’s address is shown in 3.2.2. This submittal is signed in ink by an authorized representative of Wagman Heavy Civil, Inc.

**3.2.2 Offeror’s Point of Contact Information:**

Mr. David W. Lyle, V.P., DB/Major Pursuits  
Wagman Heavy Civil, Inc.  
26000 Simpson Road, North Dinwiddie, VA 23803  
T 804-631-0003 / F 804-733-6281  
M 804-731-3707 / dwlyle@wagman.com

**3.2.3 Principal Officer Information:**

Mr. Greg M. Andricos, PE, President/COO  
Wagman Heavy Civil, Inc.  
3290 North Susquehanna Trail, York, PA 17406  
T 717-764-8292 / F 717-764-2799  
M 717-825-8688 / gmandricos@wagman.com

**3.2.4 Offeror’s Corporate Structure:** Wagman Heavy Civil, Inc. is an active, registered Corporation (SCC Corp ID: F019898-8) in Virginia and will take financial responsibility for this project. A single 100% performance bond and payment bond will be provided for the total contract value and time period. There are no liability limitations on behalf of Wagman Heavy Civil, Inc.

**3.2.5 Identity of Lead Contractor/Designer:** Wagman Heavy Civil, Inc. is the Lead Contractor responsible for overall contract execution/construction and will execute the Contract with VDOT. Rinker Design Associates, P.C. (RDA) is the Lead Designer and will be responsible for the overall design.

**3.2.6 Affiliated/Subsidiary Companies (Appendices):** Full legal names/addresses are listed in the Attachment.

**3.2.7 Debarment Forms (Appendices):** Executed Attachments 3.2.7 (a) and (b) Debarment Forms.

**3.2.8 Offeror’s VDOT Prequalification Evidence (Appendices):** Wagman’s prequalification (No. W002) is Active and in good standing as outlined in VDOT’s Rules Governing Prequalification Privileges.

**3.2.9 Evidence of Obtaining Bonding (Appendices):** Wagman will provide performance/payment bonds based on the current estimated contract value in Section 2.1, and these bonds will cover the Project and any warranty periods. The bond will be underwritten for the full amount of the contract. Wagman’s Surety Co. has an A.M. Best’s Rating of “A minus and a Financial Size Category VIII or better.”

**3.2.10 Full Size Copies of SCC/DPOR Registration Documentation (Appendices):** Attachment 3.2.10 and full size copies of registration provide evidence and certify that the Wagman Design-Build Team (DBT) complies with the requests set forth and that all businesses/individuals listed are active and in good standing.

**3.2.11 DBE Statement (15% Commitment):** The DBT is committed to achieving the 15% DBE participation goal for the entire value of this contract.

We thank you for the opportunity to submit our SOQ. We are confident that our DBT will deliver this project for VDOT and project stakeholders in a high quality, timely, and economical manner.

Very truly yours,  
WAGMAN HEAVY CIVIL, INC.

David W. Lyle, Vice President, Design-Build / Major Pursuits

## 3.3 Offeror's Team Structure

### 3.3 Offeror's Team Structure

Wagman will provide VDOT with an experienced and integrated DBT for the I-95/606 Project. Wagman has selected individuals from across our organization to provide the most qualified staff for this Project. These individuals will report to executive management of Wagman throughout construction.

**3.3.1 Identity of and Qualifications of Key Personnel.** The individuals from our Team (Key Personnel), below, will be responsible for overseeing the different components in the delivery of this project. It is important to note that our Team has been strategically selected, from key personnel to key subcontractors/subconsultants, to best deliver the I-95/606 Project to VDOT. Our Key Personnel each possesses extensive DB experience to form this a well-integrated and experienced team.

#### 3.3.1.1 Design-Build Project Manager—Jorge Gambini (Wagman Heavy Civil, Inc.)

**Mr. Jorge Gambini** will serve as the Design-Build Project Manager (DBPM) and will oversee the project to include design, construction, construction quality management, and contract administration. He has over 15 years of construction experience and is a Senior Project Manager for Wagman. He has served in a management role on local and international construction projects, and has successfully delivered significant projects including DB, Bridges and Highway Rehabilitation. Before joining Wagman, Mr. Gambini worked on eight VDOT projects as a Project Manager, Construction Manager, or Project Engineer. His responsibilities for these roles included estimating, proposal preparation, financial management, and supervising the quality and safety of his projects. During his career, Mr. Gambini has worked on numerous bridge replacement projects crossing Interstates or railroads, which all required coordination to minimize impacts to the traveling public during lane closures. His most recent projects within VDOT's Fredericksburg District demonstrating his qualifications and experience include:

- Route 608 over I-95
- I-95 over CSX Railroad (Mile Marker 102)
- Route 360 over Rappahannock River
- Multiple Culvert Rehabilitation, Region 2 DB

As DBPM, Mr. Gambini will report directly to VDOT at an executive level for all project activities including contract administration, scheduling, design, construction, and quality. He will directly manage the Key Personnel: Mr. Shaz Moosa, P.E. (Quality Assurance Manager), Mr. Darell Fischer, P.E., DBIA (Design Manager), and Mr. Bob Rosencrance (Construction Manager). Also reporting to Mr. Gambini will be additional personnel whose roles will be instrumental to the Project's success: Mr. Jerry Whitlock (Design/Construction Coordinator), Mr. Bryan Szostak (Safety Manager), and Mr. Christopher Reed (Public Relations Manager).

#### 3.3.1.2 Quality Assurance Manager—Shaz Moosa, P.E. (Engineering & Materials Technologies, Inc.)

**Mr. Shaz Moosa, P.E.** will serve as the Quality Assurance Manager (QAM) on the Project and will be responsible for the QA inspection and testing of all materials used and work performed on this Project, to include monitoring of the contractor's quality control (QC) program. He will ensure that all work and materials, testing, and sampling are performed in conformance with the contract requirements and the "approved for construction" plans and specifications. Mr. Moosa is from Engineering & Materials Technologies, Inc. (EM Tech), which is an independent firm that has no contractual relationship and no involvement in construction operations (to include QC inspection and testing) for this Project.

Mr. Moosa has a Bachelor's degree in Civil Engineering and a Master's degree in Geotechnical Engineering, both from Iowa State University. His education and work history provide invaluable knowledge and significant hands-on experience to lead the Project QA efforts. He has provided QA/QC services throughout Virginia and the Washington, DC Metropolitan area since 1986 and is a registered, licensed Professional Engineer in the Commonwealth of Virginia.

Currently, Mr. Moosa is serving as the QAM on the Truslow Road Reconstruction and Garrisonville Road widening projects, both of which are a part of a PPTA contract with Stafford County. Other DB or PPTA roadway construction and improvement projects where Mr. Moosa has provided (or is currently providing and/or supervising) QA/QC inspections and materials testing services include: Prince William Parkway Widening, U.S. Route 1 North Improvements, and Heritage Center Parkway.

On the I-95/606 Project, Mr. Moosa's responsibilities will include holding preparatory meetings before the start of each new contractor activity; overseeing QA inspection staff; assuring that the minimum testing and inspection frequencies as defined in the tables of the Minimum Standards for DB projects are met for both QA and QC; reviewing and signing monthly contractor pay estimates; developing and following through to successful resolution project NCRs and deficiencies; and assuring that all project QA/QC records are kept up-to-date and in accordance with the approved project QA/QC Plan.

### *3.3.1.3 Design Manager–Darell Fischer, P.E., DBIA (Rinker Design Associates, P.C.)*

**Mr. Darell Fischer, P.E., DBIA** will serve as the Design Manager (DM) for the project. He will be responsible for coordinating individual design disciplines and ensuring the overall Project design is in conformance with the Contract Documents. Mr. Fischer will also establish and oversee a QA/QC program that covers all disciplines to include design review and calculations, working plans, shop drawings, specifications, and constructability. As noted above, Mr. Fischer will report directly to the DBPM. Our Team's selection of Mr. Fischer is strategic due to his extensive DB experience in Virginia and his ability to manage all technical and disciplinary aspects of the design. He brings substantial design (e.g., roadway, drainage, traffic, maintenance of traffic) expertise to the Team with 29 years of experience. His experience as DM includes seven VDOT DB projects: Route 36 Roadway Improvements, Middle Ground Boulevard Extension, I-581/Elm Avenue Interchange Improvements, Rolling Road/Franconia-Springfield Interchange Improvements, I-95 at Temple Avenue Improvements, Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway, and I-64 Segment II. Additionally, Mr. Fischer is a current member of the VTCA Engineering Consultant Leadership Committee.

### *3.3.1.4 Construction Manager–Bob Rosencrance (Wagman Heavy Civil, Inc.)*

**Mr. Bob Rosencrance** will serve as the Construction Manager (CM) and will be onsite for the duration of construction operations for this Project. He will be responsible for managing the planning, scheduling, and execution of the construction process. Mr. Rosencrance will manage a multi-disciplined staff of construction professionals and subcontractors and will be the main interface for the construction QC manager, the QC testing technicians, and the offsite materials sampling and testing. He will oversee all construction QC activities to ensure the materials used and work performed meet contract requirements, plans, and specifications.

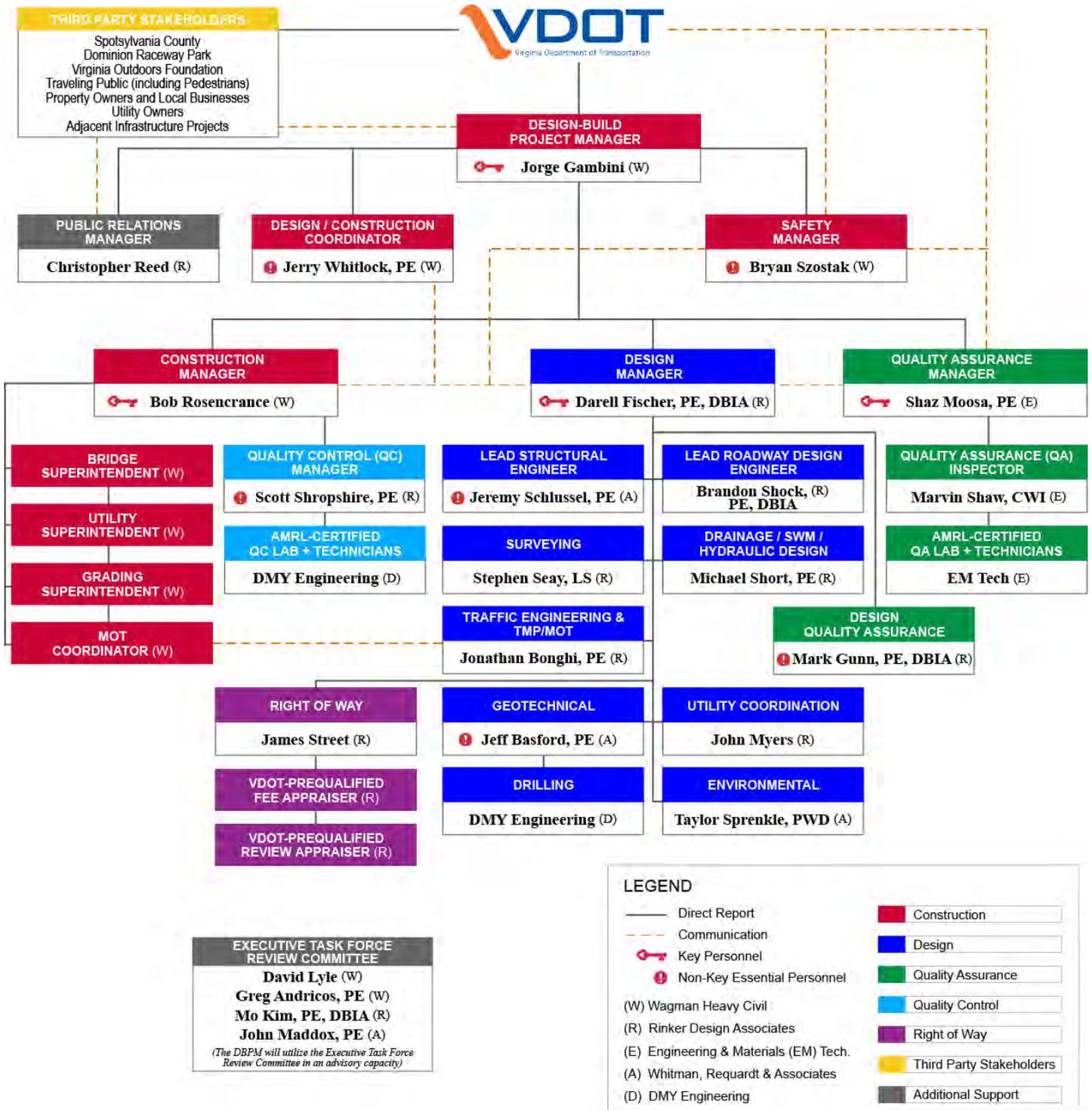
Mr. Rosencrance has 17 years of bridge and roadway construction experience. He has developed project management skills which include cost estimating, CPM schedule development, planning and coordinating traffic control, and planning and scheduling of project staff. As a CM for Wagman, he is responsible for the management of all field operations on projects including labor, equipment, subcontractors, and material deliveries. He is also responsible for the project schedule, budget, and field production as well as the project QC team. He routinely manages teams of similar size and capabilities required to successfully deliver the scope of work for this Project.

### **3.3.2 Organizational Chart and Narrative**

**Team Members.** The following firms will support Wagman and RDA on this Project:

- **Engineering & Materials Technologies, Inc. (EM Tech)**, a Virginia-certified DBE, will provide the QAM, QA inspection services, and QA laboratory services.
- **Whitman, Requardt & Associates, LLP (WRA)** will provide bridge design, geotechnical design, and environmental services for the project.
- **DMY Engineering Consultants, Inc. (DMY)**, a Virginia-certified DBE, will provide geotechnical drilling and laboratory services for design and construction QC laboratory services.

The Wagman Team organizational chart (on the following page) shows the chain of command and identifies major functions to be performed for the Project. To enhance our Team, we have identified additional Non-Key Essential Personnel whose roles are critical to the success of the Project based on the following factors: Safety (a Wagman core value), Risk Mitigation (extensive, relevant personnel experience to develop successful strategies), Public Relations (partnering with stakeholders to embrace change), and Quality (an integrated project – design and construction – that meets or exceeds the expectations of VDOT and the DBT).



**Functional Relationships and Communication.** The integration of our design and construction staff with VDOT and the project stakeholders throughout the duration of the Project will promote routine and open communication. VDOT’s participation in formal partnering will be requested to foster an atmosphere of trust and transparency between VDOT, the DBT, and project stakeholders. This will encourage open dialogue when issues arise that may jeopardize the success of the Project.

**VDOT:** VDOT will coordinate directly with our DBPM as the primary contact for all aspects of design and construction oversight of the Project. Bi-weekly design and weekly construction progress meetings will include discussions on contract administration; safety; schedule updates; conflict resolution; stakeholder concerns; and

progress updates for design, construction, and right of way (ROW) acquisition. Open lines of communication between the QAM and VDOT will assist with monitoring quality assurance (QA) oversight.

The DBPM will serve as VDOT’s single point of contact for all design- and construction-related issues upon contract execution. Reporting to the DBPM are six primary positions: QAM, DM, CM, Public Relations Manager, Design/Construction Coordinator, and Safety Manager. This structure, combined with the DBPM’s maintenance of an action item log for potential issues and three-month look-ahead schedule, will ensure the Project remains on-schedule and in conformance with VDOT commitments.

The *Public Relations Manager, Mr. Christopher Reed*, will conduct open houses and other informal outreach efforts to allow the public to view plans and discuss concerns through the design and construction process. The DBPM, Design/Construction Coordinator, DM, and CM will be present to answer questions and address

possible concerns. We anticipate VDOT’s oversight and support in our coordination efforts with project stakeholders. Our Public Relations Manager will facilitate informal meetings and outreach to stakeholders to minimize VDOT’s direct efforts associated with public outreach and to gain project buy-in from stakeholders.

*Mr. Jerry Whitlock, P.E.* will serve as the Project’s *Design/Construction Coordinator* and be fully integrated into the Team. He will report directly to the DBPM and communicate with the DM, CM, and QC Manager. He will be available to respond to questions involving engineering decisions for design- or construction-related issues. Mr. Whitlock brings significant experience to the Team through his involvement in over \$150 million on Virginia DB projects. In addition to being a licensed Professional Engineering in the Commonwealth (License #043179), he holds the Virginia Department of Environmental Quality (DEQ) Registered Land Disturber (RLD) Certification as well as the VDOT Erosion Sediment Control Contractor Certification (ESCCC).

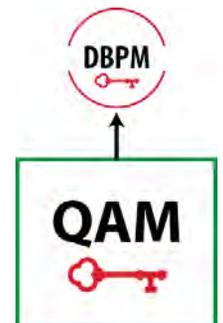
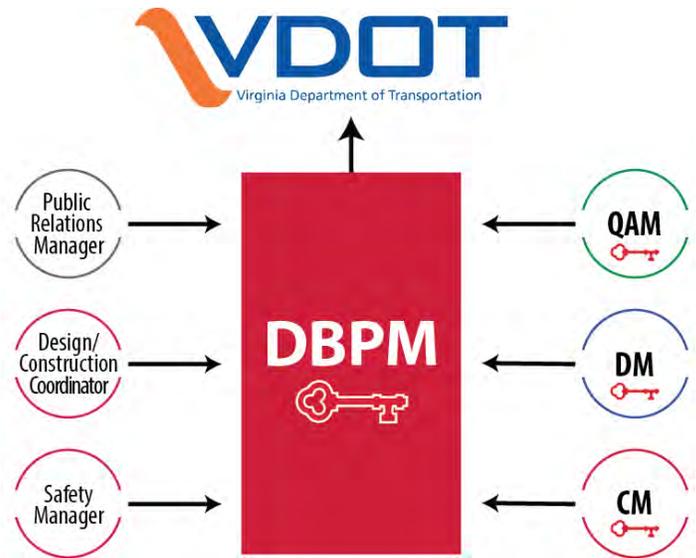
**WAGMAN CORE VALUES**  
Our values are the foundation of our company and reflect our guiding principles:

- Integrity
- Mutual Respect
- Safety
- Innovation
- Sense of Urgency
- Community

*Mr. Bryan Szostak* will be the Project’s *Safety Manager*. He will report directly to the DBPM and communicate with both design and construction disciplines on this Project. Safety is one of Wagman’s Core Values; thus, we feel that this is an essential project position. Mr. Szostak will review TMP/MOT during design and work with all personnel and team members that visit the work site to ensure that safety measures are in place to protect the traveling public and workers.

The QAM will report to the DBPM, with independent oversight by VDOT. The QA inspector (shown in our organizational chart) will be full-time to provide daily feedback to the QAM. The QA team will document any NCRs and correspond directly with the DBPM and VDOT. QA inspectors and laboratory will report to the QAM. Our QAM will also monitor the construction QC program to ensure all work and materials, testing, and sampling is performed in accordance with the contract requirements and the “approved for construction” plans and specifications. *The organization of the Wagman Team stipulates clear separation and complete independence between the QC and QA programs for construction activities.*

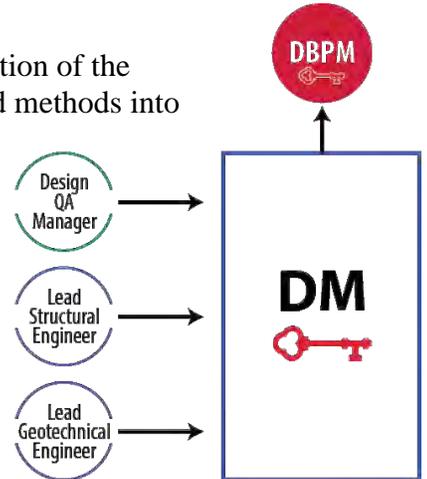
**Design:** The DM will report to the DBPM as required and coordinate with the Design/Construction Coordinator daily to develop an efficient and constructible design. Furthermore, he will work with the CM during construction to confirm field conditions meet design assumptions and reevaluate these assumptions if necessary. The Design QA Manager will report to the DM and independently monitor the design



QA/QC process. WRA will be subcontracted to RDA for their respective services and their individual discipline leads will report to the DM. This structure will ensure effective and efficient design management.

Our DM will be assisted by *Mr. Mark Gunn, PE, DBIA*, who will provide an independent *Design QA* review; Mr. Gunn is not part of the day-to-day production team but will coordinate with each of the QC reviewers to ensure that reviews are conducted by a qualified independent staff person of each team member and/or discipline [per section 4.1.4 of VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012]. A final review and acceptance by the DM will then be performed prior to providing VDOT with any draft (or final) design plans for review and approval in accordance with the requirements of the Contract Documents, prior to initiation of construction activities on the Project.

Coordination between the design and construction staff will start during preparation of the technical proposal and continue throughout the Project to incorporate means and methods into the design and to ensure that what is constructed is in accordance with the design intent. Monthly (or more frequently, as the project demands) team meetings will be held to include design disciplinary reviews, over-the-shoulder reviews, and comment resolution meetings with stakeholders. Guided by the information discussed in these team meetings, the design disciplinary leads will provide daily feedback and updates to the DM ensuring that the schedule is maintained and the construction means and methods are implemented. Our design leads are comprised of senior level engineers and managers and are depicted in the preceding organizational chart.

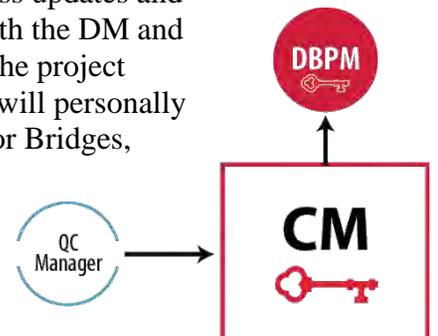


A key component of our Team is the inclusion of WRA to provide structural, geotechnical, and environmental services. WRA has recent, successful teaming experience with RDA (Route 28 Widening in NOVA, Route 7/ Battlefield Parkway in NOVA, and Route 29 Solutions in Culpeper) and with Wagman (Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway). *Mr. Jeremy Schlusel, P.E.* (WRA) will provide essential leadership in *structural* design. Furthermore, he has recent, direct experience working with Wagman, having served as the Lead Bridge Engineer on the newly completed Route 54 bridge replacement over I-95 in Ashland and the Route 608 over I-95 rehabilitation in the Fredericksburg District. He is also the Lead Bridge Engineer on the VDOT Fall Hill Avenue bridge over I-95, a DB project in the District. He will utilize his 19 years of expertise in structural design, which includes 25 bridges in the Fredericksburg District since 2005. Mr. Schlusel will report to the DM.

Similarly, *Mr. Jeff Basford, P.E.* (WRA) has 15 years of *geotechnical* engineering and pavement design expertise, which includes experience on several major VDOT interstate projects. He recently completed the geotechnical engineering for several DB projects, including Fall Hill Avenue and is currently working with Wagman/RDA on the Route 7 Widening and Bridge Rehabilitation over the Dulles Toll Road and Airport Access Highway. Each of these projects included similar soils and potential settlement challenges at the proposed bridge abutments. Mr. Basford will utilize these experiences to effectively mitigate the geotechnical risk on this project. Mr. Basford will report to the DM and support the CM during construction.

**Construction:** The CM will report to the DBPM and communicate directly with the QAM/DM/Public Relations Manager and VDOT’s field personnel to provide construction progress updates and verify conformance with the contract documents. He will also communicate with the DM and the Design/Construction Coordinator to ensure construction is consistent with the project design. Our CM will be on-site for the duration of construction operations and will personally oversee the entire construction team. Construction leads have been identified for Bridges, Grading, MOT Coordination, and Construction QC – all reporting to the CM.

Our *QC Manager, Mr. Scott Shropshire, P.E.*, will assist the CM in achieving a quality project. Mr. Shropshire, a former Area Construction Engineer (ACE) in the Fredericksburg District, is well versed in VDOT’s



quality initiatives and will provide the same commitment to this project that he did during his 8-year tenure as an ACE for the Department. Furthermore, Mr. Shropshire brings QC (and QA) experience on a couple of very recent projects in the Fredericksburg District (Poplar Road Improvements and Truslow Road Improvements).

Daily coordination meetings between the CM, senior inspectors, and the QAM will facilitate communication regarding construction progress. Weekly planning and schedule meetings will include the QC and QA team, VDOT representatives, and design team members as necessary. Before each shift, field supervisors will review safety and performance with their crews to establish protocols in upcoming work.

**Executive Task Force Review Committee:** The Executive Task Force Review Committee will communicate with the DBPM to provide a unified and global evaluation of project challenges to ensure that the project's goals are maintained. They will establish a resolution hierarchy to ensure that solutions are developed and coordinated at the lowest level feasible.

Issues will be tracked through the use of a resolution matrix and will be reported to the DBPM for his acceptance and implementation.

Our Executive Task Force Review Committee is composed of vice presidents from our key design and construction team members in order to facilitate quick responses and resolutions. Additionally, they bring extensive experience on DB and complex projects within their areas of expertise.



## 3.4 Experience of Offeror's Team

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**Wagman**, founded in 1902, continues today as a fourth generation, private, family-owned, heavy civil contractor specializing in transportation infrastructure and has grown to become a nationally recognized leader within the industry. Wagman is a heavy civil contractor with offices in Virginia, specializing in transportation infrastructure, and has grown to become a nationally-recognized leader within the industry. Wagman's core competencies include DB, bridges, structures, utilities, highways, excavation, drainage, modified concrete, and geotechnical construction services including self-performing the design and installation of complex support of excavation systems adjacent to existing infrastructure. Wagman builds and rehabilitates bridges, highways, cut and cover tunnels, retaining walls, noise walls, interchanges and other structures. Wagman is an experienced DB Contractor who has partnered to complete the design and construction of over \$1 billion of transportation projects in the Mid-Atlantic Region.

In 2013, Wagman acquired Key Construction Company, Inc. (Key) and D.W. Lyle Corporation (D.W. Lyle). These acquisitions provided Wagman with an additional 50+ years of heavy construction experience in Virginia. Wagman retained the key personnel from these acquisitions whose knowledge, resources, and experience strengthen Wagman's Team. With the acquisition of Key and D.W. Lyle, both of whom have an extensive history as VDOT contractors, **Wagman has fully integrated its presence in Virginia.** Furthermore, in February 2015, Wagman occupied a new office in Dinwiddie, Virginia. **With innovative engineering experience and a large fleet of heavy equipment, we are well-positioned to manage this project and can ensure its successful delivery.**

Wagman has extensive DB experience in the Mid-Atlantic region. Wagman has been working on DB projects for over 40 years. Recent projects include:

- ICC Contract A (DC Metro Area)
- ICC Contract B (DC Metro Area)
- Route 895 PPTA
- Route 288 PPTA
- James Madison Highway (Route 15) PPTA
- Route 60 over Route 288
- Route 895 Airport Connector
- I-495 HOT Lanes
- Route 61 over New River
- Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway
- Odd Fellows Road Interchange



**RDA** will be the Lead Designer for the Project and provide roadway, utility, pedestrian access, and drainage design as well as utility coordination and ROW acquisition (as needed). RDA is a mid-sized firm of over 100 employees with locations in Manassas, Fredericksburg, and Glen Allen. RDA has been providing professional services throughout Virginia for over 33 years. They are a Virginia-certified small business and a leading provider of professional civil engineering, transportation engineering, environmental, surveying, ROW acquisition, utility design and coordination, and permitting services. RDA consistently receives "Exceeds Expectations" on their consultant performance reports from VDOT, including scores ranging from 3.76 to 4.0 on the Stringfellow Road project.

RDA's DB experience includes the following projects within the last 15 years, ranging in value from \$6 - \$138 million. Thirteen of these projects are VDOT DB projects, nine of which RDA was the Lead Designer.

- I-95 Express Lanes
- I-495 HOT Lanes
- Seminary Road/I-395 HOV Ramp
- Route 36 Roadway Improvements
- Middle Ground Boulevard Extension
- I-581/Elm Avenue Interchange Improvements
- Crosspointe Centre Roadway Improvements
- I-66/Route 15 Interchange Reconstruction
- I-95/Temple Avenue Improvements
- Rolling Road/Franconia-Springfield Interchange Improvements
- Stafford County PPTA Bond Projects
- Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway
- I-64 Segment II
- James Madison Highway (Route 15) PPTA
- Sudley Manor Drive PPTA
- GMU Campus Drive (West Campus Connector)
- Heritage Center Parkway
- Prince William Parkway
- Route 29 Solutions
- Route 460 PPTA (GEC)



**EM Tech** will provide QA materials testing and inspection services for this project. They have performed similar services on several DB roadway projects in Northern Virginia that involve the upgrading and improvement of segments of high volume roadways. Reconstruction of these roadway segments make them wider, raise their traffic capacity, reduce traffic congestion, bring them up to current standards, and improve drainage. In addition to the construction/reconstruction of the pavement, the improvements include the stabilization of slopes and the construction of retaining walls, stormwater management structures/ponds, and box culverts. Some of EM Tech's representative DB projects in Virginia include Prince William Parkway Widening, Heritage Center Parkway, and Stafford County PPTA Bond Projects (Truslow Road and Garrisonville Road Reconstructions).



**WRA** will provide geotechnical design services as well as structural analysis and design services for this project. WRA has provided engineering and planning services in the Mid-Atlantic region for nearly 100 years. WRA and Wagman have successfully partnered on numerous projects over the years, ranging from large interchanges (\$200 million) to small bridge widening and rehabilitation projects (\$0.5 - 8.5 million). WRA, with a staff of over 640 company-wide, has highway, traffic, and bridge engineers as well as transportation and environmental planners with over 30 years of experience. This experienced staff allows knowledge to be passed through the disciplines at all levels and provides excellent resources for our clients.

WRA has established itself as a regional leader in the capital improvement planning and civil engineering field by setting standards and leading in innovative technology; this enables the firm to establish an excellent reputation within the planning and engineering community. WRA has been recognized as a Top 200 Engineering Firm by *Engineering News-Record* for the past decade. Some of WRA's representative VDOT DB projects include Walney Road Bridge Replacement and Road Widening, Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway, and Fall Hill Avenue Widening and Mary Washington Boulevard Extension.

### *Design-Build Approach*

In pursuit of DB projects such as the I-95/606 Project, the Wagman Team has developed core strategies to promote a structured DB approach that ensures safe, effective, and economical delivery of infrastructure projects to the owner and stakeholders. Our approach for the I-95/606 Project includes the following elements:

- Selecting teaming partners based on strategic factors including:
  - *Prior Working Experience.* Wagman's relationship with RDA began over 10 years ago on the US Route 15 Widening PPTA project in Prince William County. RDA was the lead engineer and Wagman was a major subcontractor on the project. During the same timeframe, Wagman worked with WRA on dozens of Design-Bid-Build projects in Mid-Atlantic region, including several along (and over) the I-95 corridor. The culmination was a successful teaming relationship on the Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road and Airport Access Highway Project – Wagman, as the Offeror, RDA as the lead designer, and WRA providing structural and geotechnical designs. This project is in the final design stages, and the same team is being proposed for this I-95/606 Project.
  - *DB Expertise.* In addition to the working relationships described above, Wagman values teaming partners that have significant DB expertise as well as experience along the I-95 corridor. As evidence, RDA has provided lead design services on 15 DB projects and design support services on another 5 DB projects in the past 15 years to include the 95 Express Lanes and the I-95 at Temple Avenue Interchange Improvements projects. Further supporting this philosophy, WRA has recent DB experience, most notably the Fall Hill Avenue Widening and Mary Washington Boulevard Extension project, which crosses I-95 with a bridge replacement. Additionally, WRA designed and Wagman recently built the Route 54 and the Route 608 bridge crossings of I-95.
- Committing key personnel experienced at assessing and managing project risks based on successful similar project experience such as the I-95 at Temple Avenue Interchange Improvements and the Fall Hill Avenue Widening and Mary Washington Boulevard Extension projects where MOT and geotechnical challenges were successfully mitigated.

- Analyzing and mitigating risks during the proposal, design, and construction phases
- Utilizing innovative designs to avoid and minimize potential impacts to the traveling public, utilities, environmental resources, and ROW acquisition requirements while maintaining the highest quality standards in design and construction
- Incorporating construction means and methods and phasing approaches into the proposal/design process and continuing through detailed construction planning and implementation
- Partnering with VDOT and project stakeholders to achieve project objectives and coordinate effectively.
- Using frequent design/construction task force and management meetings to execute our DB approach.

#### *Work History Forms (Appendix 3.4.1)*

The Work History Forms attached in Appendix 3.4.1 successfully demonstrate the qualifications, similar work experience, and unique capabilities of the overall Wagman DBT, and also highlight the experience our construction teams have gained from managing projects with similar scope and risk elements. Our Work History Forms include three significant projects along the I-95 corridor that highlight the Wagman DBT's familiarity with I-95 and the surrounding area. These projects, along with our other attached Work Histories, showcase our Team's strength to successfully manage, design, and construct this Project while minimizing and overcoming any perceived project risks.

#### **Lead Contractor Work History**

- I-95/Route 54 Bridge Replacement (Ashland)
- I-95/I-495/I-295 Interchange (Woodrow Wilson Bridge Northern Approach)
- MD 4 Bridge Replacement over MD 223

#### **Lead Designer Work History**

- I-95 at Temple Avenue Interchange Improvements DB
- I-66/Route 15 Interchange Reconstruction DB
- I-581/Elm Avenue Interchange Improvements DB



### 3.5 Project Risks

The Wagman Team has carefully considered the key elements of work for this project to develop a risk assessment strategy. In our risk assessment, we considered numerous potential risks to the Project including transportation mobility, environmental coordination, and ROW but concluded that **TMP/MOT**, **Geotechnical**, and **Dominion Raceway Park Accessibility** will be most critical to the success of this Project.

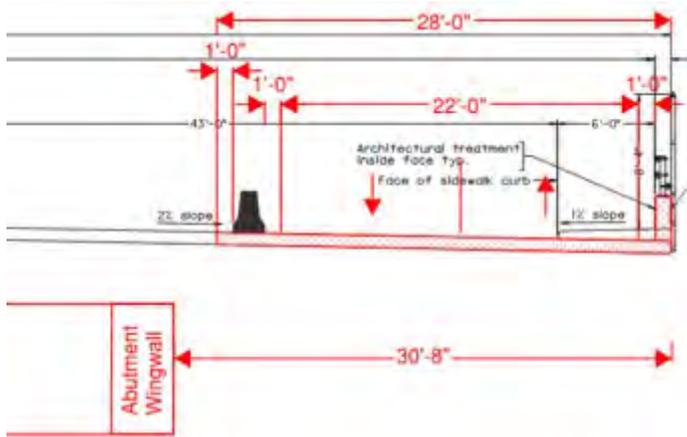
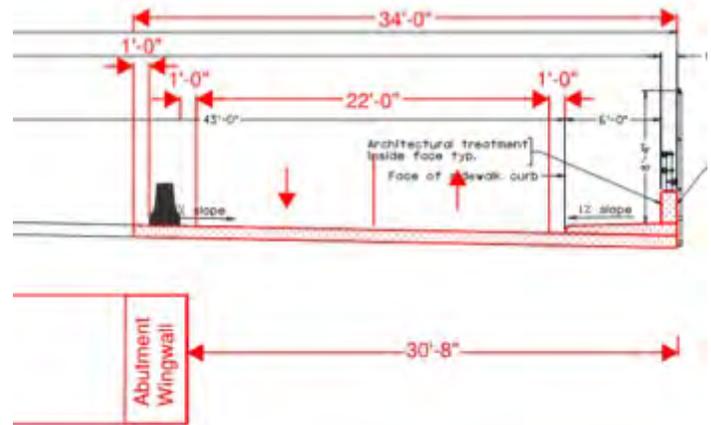
#### Risk 1: TMP/MOT

**Risk Description:** Evaluation of the design for Maintenance of Traffic (MOT) indicates risk concerns. In particular, construction of the bridge (raised profile, roughly centered about the existing roadway) may have unintended impacts to adjacent properties and phased construction with the roundabout may create traffic confusion.

**Why the Risk is Critical:** The alignment of the proposed bridge is slightly shifted to the south as compared to the existing structure, implying that the Phase 1 construction would also be to the south. However, the existing abutment wingwalls will be in conflict with the width of proposed structure needed (approximately 34 feet) to maintain traffic in Phase 2. Furthermore, the proposed grade through the ramp intersections on either end of the bridge are roughly one foot higher than existing.

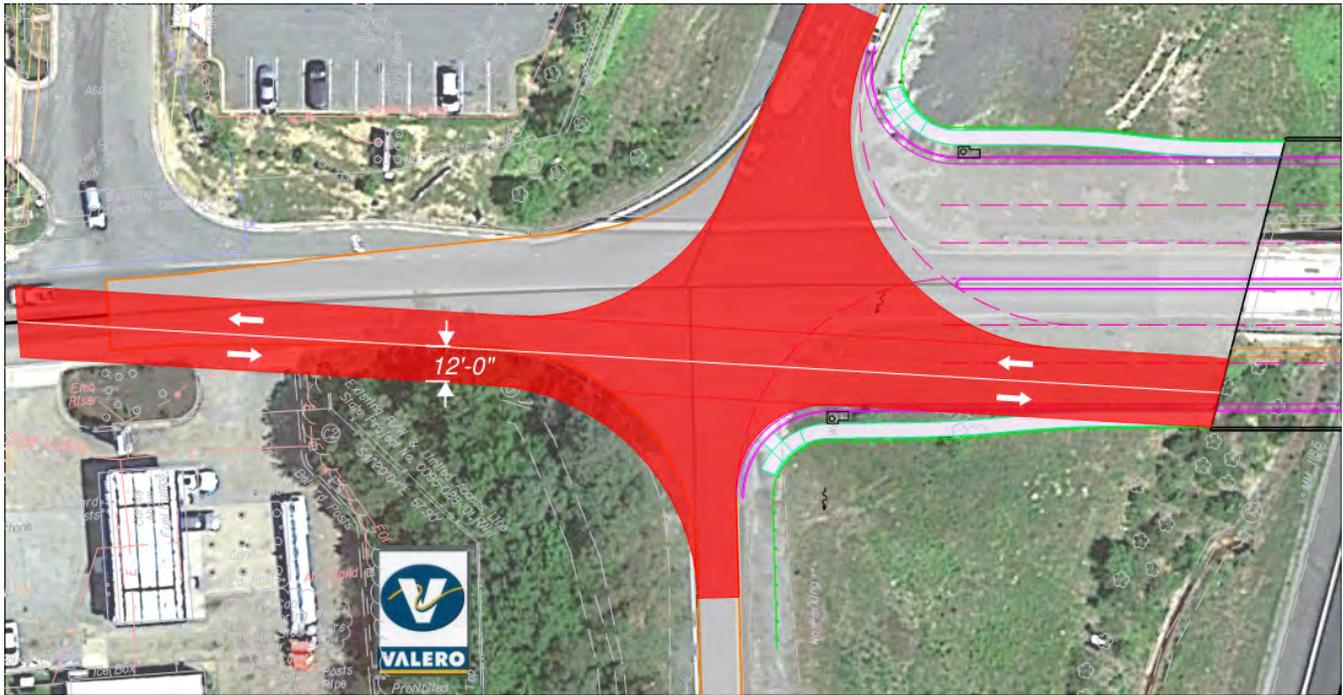


**Impacts:** Work zones and/or travel lanes will be reduced in order to phase the construction without altering the typical section. The graphic to the right shows the needed width to construct based on the finished typical section. In order to build this typical, as is, bridge construction would have to be phased on either side of the existing structure, splitting traffic and completing the middle section of the bridge in Phase 3. A simple fix, and one that was most likely intended, is to build Phase 1 of the bridge without the sidewalk as shown below.

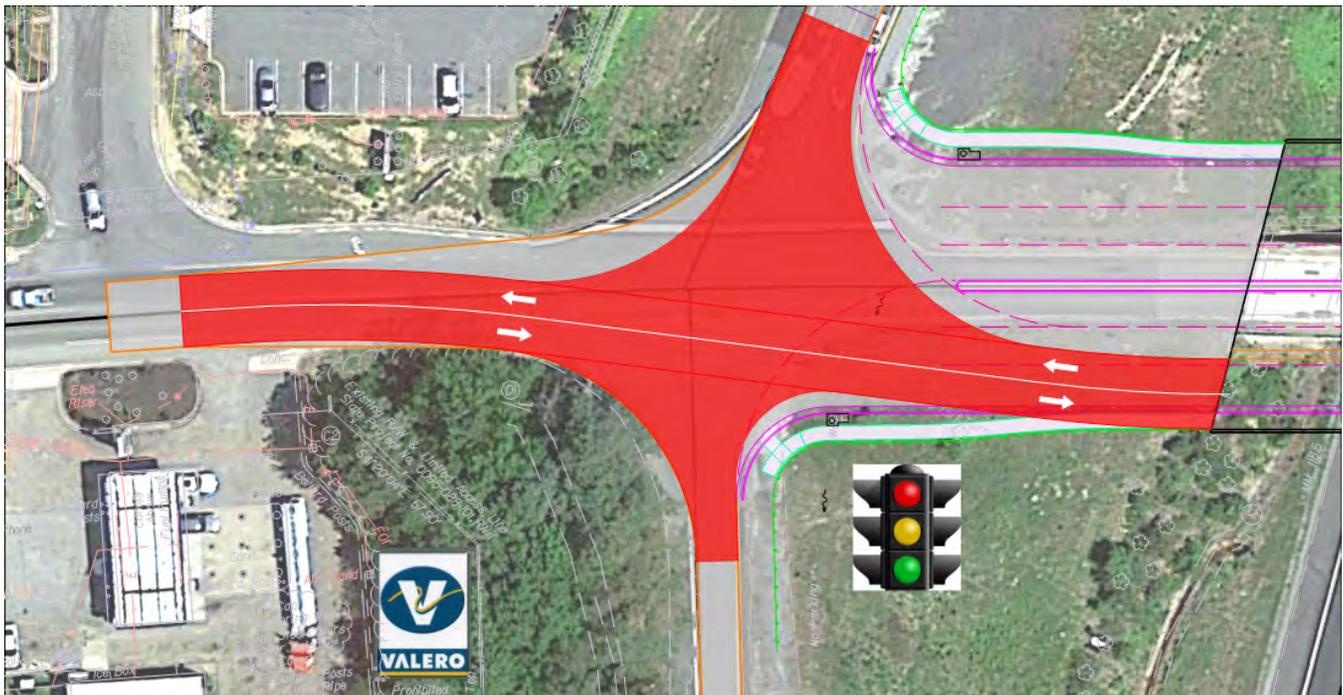


The unintended impact is the traffic shift that will encroach on the Valero gas station in the southwest quadrant. In the built condition, the additional lane on the bridge is added beyond the ramp intersection in the eastbound direction. However, in order to maintain traffic on that portion of bridge built in Phase 1, an MOT transition meeting the posted speed of 35 mph (at a minimum) must be met. A taper or shift at 35 mph is calculated as:  $S^2 \times W/60$  ( $35^2 \times 40/60 = 817$  feet). For MOT purposes, this taper can be cut in half (408.5 feet).

Unfortunately, even this reduced taper length encroaches approximately 12 feet further into the Valero property than the finished product intends (see graphic below), not to mention that the proposed intersection with the ramps to/from I-95 in the southbound direction is approximately one foot higher than existing to accommodate the proposed bridge. Additionally, construction will further restrict existing sight distance concerns at the ramp intersections.



**Mitigation Strategies:** One solution to the unintended encroachment into the Valero property would be to shift the bridge construction to the north approximately 12 feet. Unfortunately, the future impact (Route 606 widening to the west) to several businesses is not an acceptable trade-off. The better solution is to utilize reverse curves (see graphic below). Based on the Urban Low Speed (ULS) standard for 35 mph, a normal crown can be maintained on curves with radii as sharp as 510 feet. Use of this standard during temporary construction as well as in permanent construction mitigates both horizontal encroachment on Valero and vertical adjustment issues where the ramp intersections are being raised. Additionally, we will assess implementing the signal (permanent or temporary) prior to the shift to mitigate sight distance concerns.



**Role of VDOT and Other Agencies:** VDOT's role includes approving the use of ULS standards during MOT, over the shoulder reviews, and approval of construction phasing and strategies.

**Risk 2: Geotechnical**

**Risk Description:** The Wagman Team has reviewed the Geotechnical Data Report (GDR) for the project, visited the project site and considered our design partner's recent experience on the nearby Fall Hill Avenue (WRA) DB project. The available borings indicate much of the site is overlain by several feet of clayey fill material. Below the fill, the site is underlain by a Terrace silty sand deposit which extends to approximately EL 220 (approximately 20 feet below existing grade) where soft clays were encountered. Although the boring logs denote this clay deposit as Potomac Group we have reason to believe it is much younger in origin. Dense sand and bedrock were encountered generally around EL 200 or approximately 40 feet below existing grade. Careful consideration of this underlying clay deposit will be pivotal in to risk of embankment settlement on the project. In addition, the GDR indicates that acidic soils are present at the project site and that there are areas of standing water in lowland areas along the alignment.

**Why the Risk is Critical:** The I-95/Route 606 Project incorporates widening of existing embankments, the relocation of Mallard Road, and construction of a new roundabout, all of which require careful geotechnical consideration during design. The risk associated with widening of the bridge approach embankment is critical to the pile design and settlement periods. If we determine that the underlying clay layer is not a heavily over-consolidated Potomac Group, it will have a tendency to settle under the new embankment loads, potentially impacting the bridge foundations. We anticipate supporting the bridge through piles bearing on rock. If settlement occurs in the overlying soils downdrag forces will develop and, for piles bearing on rock, structurally overstressing the pile is a major concern. A secondary concern related to settlement is the time duration that it takes to occur. A twenty-foot-thick layer could take in excess of a year to consolidate without mediation measures, having a huge impact to the construction schedule and sequencing.

Estimation and monitoring of embankment settlement are critical to developing an effective and economical foundation design to avoid:

- Installing undersized piles which would fail under the combination of structure and downdrag loads if under estimated.
- Schedule delays for installing final pavement can result, if consolidation time is under estimated.

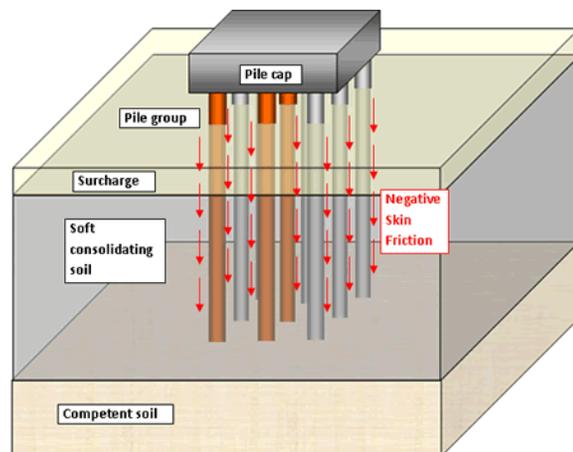
The acidic soils in the project area require careful consideration due to the fact that their leachate can inhibit vegetative growth and can be toxic to aquatic species if not encapsulated prior to release into the adjacent waterways.

The standing water in the lowland areas can have a critical impact to subgrade preparation. If surface water cannot be controlled, or it has loosened the shallow soils to a point they are not suitable as subgrade materials, they will most likely require undercutting prior to placing fill for the road. These undercutting activities increase construction time, material cost, and the number of hauling vehicles on and off the project. If the extents of unsuitable subgrade conditions are not identified early in the project, schedule overruns may result and the proper equipment and specialty subcontractors may not be available to mediate the conditions efficiently.

**Impacts:** Based on our Team's review of the data, we identified these major geotechnical issues to be considered during design and construction:

1. *Settlement of underlying clay deposit*
2. *Acidic soils in design and construction*
3. *Standing water and unsuitable subgrade soils*

Each has the potential to impact the cost, schedule, constructability, and future maintenance cost and must be managed throughout design and construction.



**Mitigation Strategies:** Based on the Wagman Team’s past experience mitigating geotechnical risk, a thorough field investigation based on a detailed geotechnical boring and testing program is required immediately. WRA will review existing geotechnical borings and testing data to determine the need to collect additional information. On WRA’s Fall Hill Avenue DB project, evaluation of the geotechnical borings program resulted in waiting periods being incorporated in to the bridge abutment designs to account for settlement and to mitigate downdrag forces on the piles. Wagman has a geotechnical division that employs engineers with experience in design and construction of many foundation elements who are extremely familiar with downdrag and over stressing piles. The construction team, Wagman geotechnical engineers, and the designers will collaborate to develop the most cost-effective solution.

*Settlement of Underlying Clay Deposit:* We anticipate placing fill to accommodate the widened alignment and reach the grades necessary to cross I-95. The amount of settlement that will occur and the time duration that it will take to occur will be carefully determined. Laboratory consolidation testing performed on undisturbed samples will confirm if the soil deposit is truly of the Potomac Group or if it is subject to consolidation settlement under the embankment loads of the project. The laboratory testing will enable us to compute the magnitude and time of consolidation.

If settlement is determined to be an issue, there are a few methods to mitigate the effect on the bridge foundation and roadway. If it is determined to be a problem, we anticipate enhancing the piles structurally by increasing their steel cross section to handle downdrag forces. Increasing the pile strength is felt to be more practical in this instance because we anticipate the settlement period to be relatively long. It would be advantageous to drive the piles and start bridge construction before the embankment has completely settled. Final pavement would be scheduled toward the end of the project after monitoring confirms that the consolidation settlements are tailing off to a point that future settlement will not be detrimental to the bridge approach. If calculations show that the settlement period is beyond the construction timeline, surcharging may be necessary to speed the settlement.

*Acidic Soils in Design and Construction:* Our Team is familiar with the geology in the region and the prevalence of acidic soils in the area. We can identify the presence of these soils through pH, and acid-base accounting tests. Impacts of acidic soils are generally addressed in design and construction by:

- Covering the suspect soil with a layer on neutral soil suitable to support vegetation.
- Mixing lime with the material for both stabilization and pH conditioning.
- Incorporating lined ditches to convey the drainage to holding basins to control run-off from acidic soils during construction.
- Proper selection of materials and construction methods for SWM elements.

*Standing Water and Unsuitable Subgrade Soils:* Due to the prevalence fine grained soils, we may encounter soft soils within subgrade cut areas of new road alignment or widening subgrades. The soft soils will need to be undercut and replaced with suitable borrow material, in order to provide stable pavement subgrades. We will mitigate these issues by performing preliminary grading to promote drainage in these low lying areas. If grading is not sufficient to allow compaction of the subgrade we will assess the time and cost impacts related to more aggressive subgrade stabilization measures, such as lime or cement mixing. Another aggressive option is to increase the proposed pavement section to support the loads transferred to the subgrade

**Role of VDOT and Other Agencies:** VDOT’s role will be to provide all existing geotechnical data during the RFP stage to allow full evaluation of the project risk and to review the final geotechnical report for the project.

### *Risk 3: Dominion Raceway Park Accessibility*

**Risk Description:** The adjacent construction and ultimate opening of the Dominion Raceway Park (DRP) will create traffic congestion that will last well beyond the completion of these roadway improvements. Patrons approaching the raceway from the north, south, or west will have to travel through the roundabout, in a U-turn fashion, and then make a right turn into the complex, potentially backing up traffic in the westbound direction of Mudd Tavern Road. At the completion of each event, the predominant traffic movement will be traffic turning right out of the complex onto Mudd Tavern Road going westbound.

**Why the Risk is Critical:** All traffic going into the complex must turn right via a single lane (albeit there are two receiving lanes), causing traffic backups on westbound Route 606. Based on the alternatives analysis provided by VDOT, the right turn peak volume going into the DRP will be approximately 500 vehicles (or one vehicle every 7.2 seconds). Furthermore, traffic leaving the complex must stop before turning right or left onto Mudd Tavern Road, which will extend the duration of the event as well as the congestion.

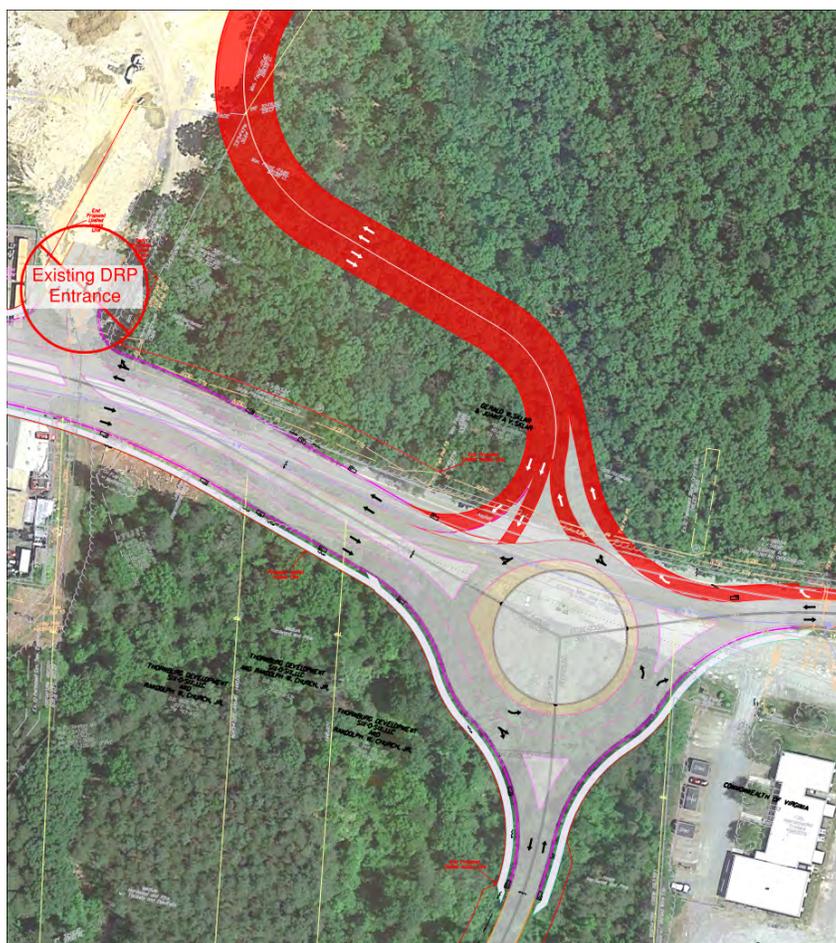
**Impacts:** The impact of these peak hour events may cause the roundabout to function improperly due to traffic backups of vehicles going to DRP in the westbound direction. Secondly, vehicles leaving the park after events will cause off-peak backups along Route 606. The end result will be added traffic congestion, and the improvements implemented by this Project will be perceived to be part of the problem.

**Mitigation Strategies:** The DRP entrance is offset approximately 450 feet west of the roundabout, creating a disjointed intersection. The best way to fix this perceived issue is to realign the intersection with the roundabout as shown below. Realignment allows for free-flowing movement from the roundabout into the access road (both from the east and west). It also allows for a free-flowing movement from the access road to westbound Route 606 heading toward the interchange. The access road would serve both the DRP and Thornburg Towne Centre East properties. Additionally, it eliminates the Access Management Waiver required due to the limited distance between the entrance and the interchange ramps.

An added challenge to this strategy deals with the Open-Space Land Act and the adjacent Sklar property where the access road would be built. The property is currently in a conservation easement under the Virginia Outdoors Foundation, a State agency. Based on our research, there are some environmental and ROW concerns over impacting this type of property – mostly associated with the timeframes it will take to acquire rights of way. However, these concerns are minor and can be dealt with through thorough planning and expedited discussions with the Foundation. Based on the Sklar property deed and the Code of Virginia, acquisition of fee simple ROW or perpetual easement can be made so long as replacement property of similar character and benefit can be provided. Our Team will either facilitate the coordination between DRP and Virginia Outdoors Foundation to encourage placement of unused/undisturbed portions of the DRP property in a conservation easement or find other suitable replacement property to meet the requirements.

To further mitigate concerns, we will develop a public relations program that specifically addresses the perceptions that surround roundabouts and the concern over acquisition of a property in a conservation easement. We anticipate conducting workshops to demonstrate the functionality of the roundabout design through interactive models of both the original design and our approach described above.

**Role of VDOT and Other Agencies:** VDOT will partner in the Public Relations program to ensure that a unified voice is presented to the public. The Team will also look to VDOT to provide support in navigating the environmental challenges associated with the proposed mitigation strategy.



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Attachment 3.1.2	SOQ Checklist
Attachment 2.10	Form C-78-RFQ Acknowledgement of RFQ, Revision and/or Addenda
Attachment 3.2.6	Affiliated/Subsidiary Companies
Attachment 3.2.7(a)	Debarment Form (Primary)
Attachment 3.2.7(b)	Debarment Form (Lower-Tier)
Attachment 3.2.8	VDOT Prequalification Evidence
Attachment 3.2.9	Evidence of Obtaining Bonding
Attachment 3.2.10	SCC and DPOR Registration Documentation
Attachment 3.3.1	Key Personnel Resumes
Attachment 3.4.1(a)	Work Histories (Lead Contractor)
Attachment 3.4.1(b)	Work Histories (Lead Designer)

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**ATTACHMENT 3.1.2**

**Project: 0606-088-653, C501 & 0606-088-622, C501, B634**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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

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

**ATTACHMENT 3.1.2**

**Project: 0606-088-653, C501 & 0606-088-622, C501, B634**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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

**ATTACHMENT 3.1.2**

**Project: 0606-088-653, C501 & 0606-088-622, C501, B634**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15- page limit?</b>	<b>SOQ Page Reference</b>
<b>Experience of Offeror's Team</b>				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
<b>Project Risk</b>				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	11

Attachment 2.10: Form C-78-RFQ  
Acknowledgement of Receipt of RFQ, Revisions, and/or Addenda

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**ATTACHMENT 2.10****COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**RFQ NO. C00105463DB89PROJECT NO.: 0606-088-653, C501 & 0606-088-622, C501, B634**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 – December 7, 2015  
(Date)
2. Cover letter of RFQ Addendum#1 – January 19, 2016  
(Date)
3. Cover letter of \_\_\_\_\_  
(Date)



SIGNATURE

2/2/2016

DATE

David W. Lyle

PRINTED NAME

Vice President, Design-Build/  
Major Pursuits

TITLE

Attachment 3.2.6: Affiliated/Subsidiary Companies of the Offeror

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Attachment 3.2.7: Certification Regarding Debarment Forms  
(a) Primary Covered Transactions  
(b) Lower Tier Covered Transactions

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**ATTACHMENT NO. 3.2.7(a)**

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**Project No.:** 0606-088-653, C501 & 0606-088-622, C501, B634

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, and declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.

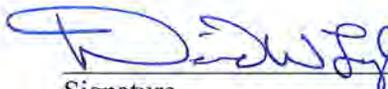
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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

 2/2/2016  
\_\_\_\_\_  
Signature Date

Vice President, Design-Build/Major Pursuits  
\_\_\_\_\_  
Title

Wagman Heavy Civil  
\_\_\_\_\_  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0606-088-653, C501 & 0606-088-622, C501, B634**

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

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

  
\_\_\_\_\_  
Signature                      Date

Assistant Director of Transportation/  
Title    General Manager, Richmond Office/Principal

Rinker Design Associates, P.C.  
\_\_\_\_\_  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

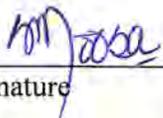
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0606-088-653, C501 & 0606-088-622, C501, B634**

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

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

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

	<u>1/26/2016</u>	<u>Principal Engineer</u>
Signature	Date	Title

Engineering & Materials Technologies, Inc. (E.M. Tech)  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0606-088-653, C501 & 0606-088-622, C501, B634**

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

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

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



Signature

2/1/16

Date

Senior Vice President

Title

Whitman, Requardt & Associates, LLP

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0606-088-653, C501 & 0606-088-622, C501, B634**

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

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

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



2-3-16

Vice President

Signature

Date

Title

DMY Engineering Consultants Inc.

Name of Firm

Attachment 3.2.8: VDOT Prequalification Certification

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Virginia Department of Transportation

Date Printed: 10/29/2015

**Prequalified Vendors Sorted By Vendor Name  
Includes All Qualified Levels As Of 10/29/2015**

12:00 AM

Page 433

- W -

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**Vendor ID:** W002

**Vendor Name:** WAGMAN HEAVY CIVIL, INC.

**Prequal Exp:** 12/31/2015

**-- PREQ Address --**

3290 NORTH SUSQUEHANNA TRAIL

YORK, PA 17406-9754

Phone: 717-764-8521

Fax: 717-764-2799

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

003 - MAJOR STRUCTURES

007 - MINOR STRUCTURES

011 - CLEARING AND GRUBBING

080 - DEMOLITION OF STRUCTURES

101 - EXCAVATING

**Bus. Contact:** BECKER, TODD EUGENE

**Email:** ESTIMATING@WAGMAN.COM

**-- DBE Information --**

**DBE Type:** N/A

**DBE Contact:** N/A

Attachment 3.2.9: Evidence of Obtaining Bonding (Surety Letter)

---

December 16, 2015

Virginia Department of Transportation  
1401 E. Broad Street  
Richmond, VA 23219

Re: A Design-Build Project  
RFQ No: C00105463DB89  
Route 606 Bridge Replacement over I-95 with 606 Improvements Project  
Spotsylvania County, Virginia  
State Project Nos: Route 606 Roadway Improvements (0606-088-653,C501), UPC 105463  
Route 606 Bridge Replacement (0606-088-622, C501,B634),UPC100829  
Federal Project Nos: Route 606 Roadway Improvements (STP-5111(272))  
Route 606 Bridge Replacement (BR-5111(237))  
Contract ID Number: C00105463DB89

Dear Sirs:

As surety for Wagman Heavy Civil, Inc., Western Surety Company , with A.M. Best Financial Strength Rating "A" and Financial Size Category "XV", is capable of obtaining 100% Performance and 100% Labor and Materials Payment Bonds in the amount of \$13,600,000 (estimated contract value) 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 projects.

Sincerely,  
Western Surety Company

By: Patricia C. Robinson  
Patricia C. Robinson,  
Attorney-in-Fact

# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**James R Gould, Joseph G Buyakowski, Alson O Wolcott Jr, Eugene M Fritz, Patricia C Robinson, Kathy R Reisinger, Donald R Wert, Individually**

of Mechanicsburg, PA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts -**

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 8th day of December, 2015.



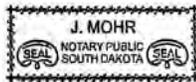
WESTERN SURETY COMPANY

Paul T. Bruffat  
Paul T. Bruffat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 8th day of December, 2015, before me personally came Paul T. Bruffat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires  
June 23, 2021



J. Mohr  
J. Mohr, Notary Public

### CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 16th day of December, 2015.



WESTERN SURETY COMPANY

L. Nelson  
L. Nelson, Assistant Secretary

**Authorizing By-Law**

**ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY**

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

Attachment 3.2.10: SCC and DPOR Information Table

---

## ATTACHMENT 3.2.10

### State Project No. 0606-088-653, C501 & 0606-088-622, C501, B634

#### SCC and DPOR Information

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

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
<b>Wagman Heavy Civil, Inc.</b>	F01989-89	Corporation	Active	3290 North Susquehanna Trail York, PA 17406	Class A Contractors	2701015887	01-31-2017
<b>Rinker Design Associates, P.C. (RDA)</b>	0227062-7	Professional Corporation	Active	9385 Discovery Blvd, Ste 200 Manassas, VA 20109	Professional Corporation (ENG, LS)	0405000502	12-31-2017
					Real Estate Appraisal Business	4008001684	02-28-2017
				927 Maple Grove Dr, Ste 105 Fredericksburg, VA 22407	Prof. Corp. Branch Office (ENG, LS)	0410000156	02-29-2016
					Real Estate Appraisal Business	4008001739	04-30-2016
				4301 Dominion Blvd, Ste 100 Glen Allen, VA 23060	Prof. Corp. Branch Office (ENG)	0410000220	02-29-2016
					Real Estate Appraisal Business	4008001801	04-30-2016
<b>Engineering &amp; Materials Technologies, Inc.</b>	04786331	Corporation	Active	7857 Coppermine Dr. Manassas, VA 20109	Business Entity (ENG)	0407005994	12/31/2017
<b>Whitman, Requardt &amp; Associates, LLP</b>	K000382-4	Limited Liability Partnership	Active	9030 Stony Point Parkway, Ste 220 Richmond, VA 23235	Business Entity Branch Office (ENG)	0411000133	02/29/2016
<b>DMY Engineering Consultants, Inc.</b>	07688955	Corporation	Active	45662 Terminal Dr, Ste 110 Dulles, VA 20166	Business Entity (ENG)	0407005631	12-31-2017



Attachment 3.2.10.1: SCC Supporting Documentation

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# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

That Wagman Heavy Civil, Inc., a corporation incorporated under the law of Pennsylvania, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on September 20, 1967; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*January 13, 2016*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

That Rinker Design Associates, P.C. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is February 24, 1982;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:  
December 31, 2015*

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

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

That ENGINEERING & MATERIALS TECHNOLOGIES, INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is January 29, 1997;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:  
February 4, 2016*

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

# Commonwealth OF Virginia



## State Corporation Commission

### CERTIFICATE OF FACT

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

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

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

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:  
July 15, 2015*



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



**DMY ENGINEERING CONSULTANTS INC.**

**General**

SCC ID: 07688955  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 9/6/2013  
 Status: Active  
 Shares Authorized: 10000

**Principal Office**

**Registered Agent/Registered Office**

WEIYI MA  
 45662 TERMINAL DRIVE  
 SUITE 110  
 DULLES VA 20166  
 LOUDOUN COUNTY      153  
 Status: Active  
 Effective Date: 9/6/2013

**Select an action**

- [File a registered agent change](#)
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- [Resign as registered agent](#)
- [File an annual report](#)
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Attachment 3.2.10.2: DPOR Supporting Documentation for Offices

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

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

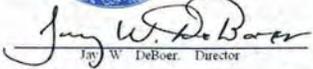
EXPIRES ON  
01-31-2017

NUMBER  
2701015887

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

WAGMAN HEAVY CIVIL, INC.  
3290 NORTH SUSQUEHANNA TRAIL  
YORK, PA 17406



  
Jay W. DeBoer, Director

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2017

NUMBER  
0405000502

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

PROFESSIONS: ENG, LS



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



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

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

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

EXPIRES ON  
02-29-2016

NUMBER  
0410000220

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

PROFESSIONS: ENG

RINKER DESIGN ASSOCIATES PC  
4301 DOMINION BOULEVARD, SUITE 100  
GLEN ALLEN, VA 23060



*Nick A. Christner*  
Nick A. Christner, Interim Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

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

EXPIRES ON  
04-30-2016

NUMBER  
4008001739

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION

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



*Nick A. Christner*  
Nick A. Christner, Interim Director

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2017

NUMBER  
0407005994

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

PROFESSIONS: ENG



ENGINEERING & MATERIALS TECHNOLOGIES, INC  
7857 COPPERMINE DR  
MANASSAS, VA 20109



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

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

EXPIRES ON  
02-29-2016

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

NUMBER  
0411000133

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

PROFESSIONS: ENG

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



*Gordon N. Dixon*  
Gordon N. Dixon, Director

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2017

NUMBER  
0407005631

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

PROFESSIONS: ENG



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



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

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

Attachment 3.2.10.3: DPOR Supporting Documentation for Key Personnel

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3.2.10.2 DPOR Documentation for Key Personnel

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

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

EXPIRES ON  
07-31-2016

NUMBER  
0402021398

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

SHAHZAD SULTAN MOOSA  
7857 COPPERMINE DR.  
MANASSAS, VA 20109

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

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

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

EXPIRES ON  
06-30-2016

NUMBER  
0402023296

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

DARELL LEE FISCHER  
14101 SPRING GATE TERRACE  
MIDLOTHIAN, VA 23112

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

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Attachment 3.2.10.4: DPOR Supporting Documentation  
for Non-APELSCIDLA Regulated Services

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3.2.10.4 DPOR Documentation for Non-APELSCIDLA Regulated Services

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

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

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION

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

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

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COMMONWEALTH OF VIRGINIA**

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Telephone: (804) 367-8500

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION

RINKER DESIGN ASSOCIATES P C  
4301 DOMINION BOULEVARD  
SUITE 100  
GLEN ALLEN, VA 23060

  
*Nick A. Christner*  
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA**

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

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION

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

  
*Nick A. Christner*  
Nick A. Christner, Interim Director

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Attachment 3.3.1: Key Personnel Resumes

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## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>JORGE D. GAMBINI / SENIOR PROJECT MANAGER</b>
b. Project Assignment:	<b>DESIGN-BUILD PROJECT MANAGER</b>
c. Name of Firm with which you are now associated:	<b>WAGMAN HEAVY CIVIL, INC.</b>
d. Employment History: With this Firm <u>&lt;1</u> Years With Other Firms <u>15</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<p><b>Wagman Heavy Civil, 2015-Present, Senior Project Manager.</b> Mr. Gambini is a Senior Project Manager for Wagman Heavy Civil. His responsibilities include, estimating, project schedules, financial, cost control, proposal preparation, subcontractor management, safety, quality control and management. He has over 15 years of experience with project management and proven skills on local and international construction projects such as infrastructure and oil and gas pipelines. He has successfully delivered significant projects including DB, Bridges, and Highway Rehabilitation. His background includes structural and construction engineering, scope validation, constructability reviews, project plans and documentation, budget and cost control, procurement and project oversight, estimating and scheduling, value engineering proposals, and staff development and supervision. Mr. Gambini has directly managed almost all the project schedules throughout his career.</p> <p><b>HRI, Inc., 2013-2015, Project Manager.</b> As a Project Manager, Mr. Gambini managed the completion of three highly demanding time schedule projects. His responsibilities included overall construction, schedule, quality, and safety in his projects.</p> <p><b>Corman Construction, Inc., 2008-2013, Project Manager.</b> Mr. Gambini was a Project Manager for four VDOT Projects, Construction Manager for one Design-Build Project and Project Engineer for three VDOT Projects. His responsibilities included estimating DBB projects and change orders, DB proposal preparation and estimating, financial management, and supervising the quality and safety of his projects. His notable accomplishments were to successfully complete highly demanding and technical projects on time and on budget, prepare and secure approval of several value engineering proposals, as well as maintaining transparency with all stakeholders.</p> <p><b>Kelly Brothers, Inc., 2005-2008, Project Engineer.</b> As Project Engineer, Mr. Gambini engaged in challenging marine projects and bridge replacements. Among his responsibilities were the daily supervision of construction activities to ensure project delivery that met or exceeded all expectations on quality, timeliness and budget. The projects were located in environmentally sensitive areas with presence of endangered species (i.e., manatees, dolphins, mangroves) requiring following strict environmental constraints.</p> <p><b>2003-2005.</b> During this time period, Mr. Gambini moved to the United States and completed a Master's Degree in Construction Engineering and Management from North Carolina State University.</p> <p><b>Spie Capag (Cergy, France), 2001-2003, Project Controls.</b> As Project Controls, Mr. Gambini participated in two international projects under strict and highly technical specifications established by CM Firms such as Bechtel and British Petroleum. Among his responsibilities, he created and updated an as-built complex resource loaded schedule for the Antamina Mine Pipeline Construction in Peru (2000). In the Republic of Georgia (2003), Mr. Gambini organized and supervised the document control and scheduling in support of site management for the construction of the BTC Pipeline.</p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>North Carolina State University, Raleigh, NC / MCE / 2004 / Construction Engineering and Management</b> <b>Pontifical Catholic University of Peru, Lima Peru / BS / 2001 / Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>N/A</b>

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. 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 at least three (3), but no more than five (5) relevant projects\* for which you have performed a similar function.)**

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

**VDOT, Route 608 (Brooke Road) Bridge over I-95, Stafford County, VA (DBB)**

<b>Firm:</b> Corman Construction, Inc.	<b>Project Role:</b> Project Engineer	<b>Project Dates:</b> 2008-2010
--	---------------------------------------	---------------------------------

**Specific Responsibilities:** As Project Engineer, Mr. Gambini was the main point of contact with VDOT. Through his prompt communication and leadership, he avoided disputes and facilitated resolution to all conflicts enhancing the partnership with VDOT and delivering a quality product on time and on budget to all project stakeholders. Mr. Gambini was responsible for overseeing the construction of this two-phase bridge widening and rehabilitation project, to include widening the substructure, adding steel plate girders, jacking and blocking, replacing existing bearings and shotcrete repairs. The superstructure was replaced using lightweight concrete under the “VDOT End Result Specifications”. Mr. Gambini facilitated two value engineering proposals through approval. These proposals expedited construction by changing the pile foundations and the superstructure framing plan that improved local traffic and allowed wide loads during construction. Additionally, Mr. Gambini, as part of the contractor team, introduced the split pan concept for forming decks in phased bridge replacement.

**Project Relevance:** Similar to the I-95/606 Project, this project required Mr. Gambini to work with both design and construction teams to achieve the value engineering proposals. As a result, the collaboration between VDOT, the construction team, and third party stakeholders improved and allowed the project to be completed within budget and ahead of schedule.

**VDOT, Multi-Culvert Rehabilitation, Region 2 (DB)**

<b>Firm:</b> Corman Construction, Inc.	<b>Project Role:</b> DB Construction Manager	<b>Project Dates:</b> 2010-2011
--	--	---------------------------------

**Specific Responsibilities:** Mr. Gambini served as Design-Build Construction Manager (DBCM) for the replacement and rehabilitation of drainage culverts. As DBCM, Mr. Gambini successfully built upon the knowledge the team obtained during the proposal and bid preparation, to ensure a timely and accurate design and scope validation. He also lead constructability reviews, determining how means and methods would direct the design and to overcome right of way limitations. Mr. Gambini was instrumental in establishing a true partnership, and during his tenure served as primary point of contact among all team members, answering their questions on a daily basis. He was responsible for selecting and managing the vendors and subcontractors for construction. The contract scope included the replacement of one CMP and two concrete box culverts, and also the rehabilitation of six culverts using shotcrete and re-lining techniques and encompassed three VDOT districts.

**Project Relevance:** Similar to the I-95/606 project, this project required management of design, construction, budget, schedule, Quality Assurance and Quality Control. Mr. Gambini was the single point of contact between VDOT, the design team and construction team. Significant importance was placed on public safety, contractor safety and environmental safety. The project required personal and professional commitment to the DB Team and project stakeholders to achieve an expedited schedule and minimize disruptions, similar to that which we anticipate will be required on the I-95/606 Project.

**VDOT, Route 360 over Rappahannock River, Essex and Richmond Counties, VA (BID-BUILD)**

<b>Firm:</b> Corman Construction, Inc.	<b>Project Role:</b> Project Manager	<b>Project Dates:</b> 2010-2012
--	--------------------------------------	---------------------------------

**Specific Responsibilities:** Mr. Gambini was the Project Manager for the rehabilitation of a 5,604-foot bridge. His duties include management of supervision of the construction which included jacking and blocking to replace the bridge bearings, substructure and concrete girder repairs (mostly using shotcrete techniques). Additional responsibilities included oversight of the deck rehabilitation and joints replacement to meet contract requirements. Through Mr. Gambini’s detailed review of the project and the desire to reduce impacts to the traveling public, the team performed 97% of the project from barges using cranes and manlifts. Additionally, he facilitated the reduction of lane closure hours from those listed in the contract, creating a great content among local authorities and the public for the project.

**Project Relevance:** This project is similar to the I-95/606 project due to project complexities and the high profile nature of the project for the Fredericksburg District. Mr. Gambini forged a positive relationship with the District staff and local stakeholders to resolve issues before they became project roadblocks. Mr. Gambini was the single point of contact with VDOT and a driving influence in developing alternative methods of construction that allowed a safe work environment for both crews and the traveling public. Mr. Gambini again forged a positive working relationship with the Fredericksburg District based on prompt communication, accountability and positive project results. A somewhat uncommon feature of a VDOT Bid-Build project, the rehabilitative nature of this project required close collaboration with VDOT’s design staff for accomplishing the project goals in an environmentally sensitive setting.

- 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.

**N/A. Mr. Gambini is not required onsite full-time.**

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>		
a. Name & Title:	<b>SHAZ MOOSA, P.E. / QA/QC MANAGER/PRINCIPAL ENGINEER</b>	
b. Project Assignment:	<b>QUALITY ASSURANCE MANAGER</b>	
c. Name of Firm with which you are now associated:	<b>ENGINEERING &amp; MATERIALS TECHNOLOGIES, INC. (EM TECH)</b>	
d. Employment History: With this Firm <u>19</u> Years With Other Firms <u>11</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<b>Engineering &amp; Materials Technologies, Inc. (EM Tech), 2001-Present, QA/QC Manager/Principal Engineer.</b> Mr. Moosa is responsible for and in charge of all of EM Tech's DB and PPTA roadway projects as well as airport pavement construction/rehabilitation (runways, taxiways and roadways) projects. He provides and/or supervises QA/QC inspections and materials testing, geotechnical, structural, and forensic engineering services for federal, state, and local government projects involving new roadways and improvements, bridges, deep foundations, stabilization and ground improvement, sound barrier walls, earth retaining structures, slope stabilization, SWM ponds and structures, pavement construction and rehabilitation, and deep excavation supports for all EM Tech projects in the DC Metro Area.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Iowa State University, Ames, IA / MS / 1986 / Geotechnical Engineering</b> <b>Iowa State University, Ames, IA / BS / 1983 / Civil Engineering</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>1990 / Professional Engineer (PE) / #0402021398</b>	
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. <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b> * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		
<b>Truslow Road Reconstruction, Stafford County, VA (PPTA/DB)</b>		
<b>Firm:</b>	<b>EM Tech</b>	<b>Project Role:</b> Quality Assurance Manager   <b>Project Dates:</b> May 2015-June 2016 est.
<b>Specific Responsibilities:</b> As the QAM, Mr. Moosa is responsible for QC Plan review; construction QC process verification; QC inspections, materials testing results, and records accuracy checks; scheduling and conducting Progress and Hold-Point Meetings; issuing meeting minutes; reviewing and maintaining RFIs and approval records; reviewing and maintaining material submittals (Material Book) and SWPPP records; performing periodic site walk-throughs; and issuing a punch list of non-compliant items as well as reviewing and approving the contractor's payment applications. In addition, Mr. Moosa oversees EM Tech's QA Inspectors, who periodically visit the site to perform the required QA inspections and testing of construction materials and verify the E&S control measures as well as verify the placement of appropriate MOT devices and signage. Because of his vast experience, knowledge, and expertise with construction in areas underlain by problem soils, Mr. Moosa provides recommendations for methods by which the issues can be successfully addressed. Project consists of reconstructing one mile of Truslow Road between Berea Church Road and Plantation Drive. The new roadway alignment will improve safety by eliminating sharp curves and creating smoother traffic flow.		
<b>Project Relevance:</b> Similar to the I-95/606 Project, Truslow Road's reconstruction includes earthwork, embankment construction, site utilities, drainage improvements, SWM pond, evaluation and stabilization of problem soils, stabilized (lime-treated) subgrade, cement-treated base aggregate, hydraulic cement concrete curb, gutter and aprons, and bituminous concrete pavement. This project is in an area that has problematic soils (highly plastic/elastic, saturated, weak, highly resilient, etc.) and very poor subgrade conditions that require mitigation to ensure stable support for the roadway pavement		

and site improvements. The complexity of the TMP for this project, which also includes detour plans through residential neighborhoods, requires significant coordination with all parties involved, including the state and local government officials. Mr. Moosa's proactive approach to communication and coordination with team members has resulted in mitigation of traffic issues and a reduction in the frustration of adjacent property owners and the traveling public.

**Mountain View Road Safety Improvements, Stafford County, VA (DBB)**

**Firm:** EM Tech | **Project Role:** QC Manager / Project Engineer | **Project Dates:** 2014-March 2016 est.

**Specific Responsibilities:** As the QCM/Project Engineer, Mr. Moosa is responsible for every aspect of QC inspection and materials testing. He supervises EM Tech's QC Inspectors, who perform the required inspections and testing of construction materials and verify the E&S control measures, pavement markings, MOT devices and signage, and guardrail installation. Mr. Moosa also attends the Progress Meetings and Hold-Point Meetings, collects and verifies material submittals and RFIs, and coordinates information distribution to the QC, Contractor, and County/VDOT officials. Additionally, he reviews and maintains material submittals (Material Book) and SWPPP records. His vast experience, knowledge, and expertise coupled with his familiarity with the history of failures and requirements of local jurisdictions in areas underlain by problem soils, he was able to provide recommendations for methods by which construction issues could be successfully addressed, saving time and money. This project is being constructed in two phases: Phase I consists of widening 1.3 miles of Mountain View Road from west of Joshua Road to Rose Hill Farm Drive; Phase II consists of safety improvements for 0.6 miles of roadway between Mountain View High School and Rose Hill Farm Drive. The improvements are necessary to meet current VDOT standards for Urban Collector Streets (VDOT Std. GC-7) and include significant horizontal and vertical realignments to improve section widths (lane, shoulder), sight distances, and traffic flow.

**Project Relevance:** The scope of work for the Mountain View Road Safety Improvements project is similar to that of the I-95/606 Project with the inclusion of the following elements: earthwork, embankment construction, site utilities, drainage improvements, SWM ponds, evaluation and stabilization of problem soils, stabilized (lime-treated or cement-treated) subgrade, cement-treated base aggregate, hydraulic cement concrete curb, gutter and aprons, and bituminous concrete pavement. The Mountain View Road Safety Improvements project is located in an area that has problematic soils (highly plastic/elastic, saturated, highly resilient) and very poor subgrade conditions. Due to the project's location near a school, traffic volume, sharp curves, significant elevation change between the existing and new pavements, and tie-ins between two phases (performed under separate contracts), the TMP developed for this project was extremely complex, and the correct installation of traffic signs and equipment was critical.

**U.S. Route 1 North Improvements (Woodbridge), Prince William County, VA (DBB)**

**Firm:** EM Tech | **Project Role:** QC Manager / Project Engineer | **Project Dates:** 2013-June 2016 est.

**Specific Responsibilities:** As QCM/Project Engineer, Mr. Moosa is responsible for every aspect of QC inspection and materials testing to include managing EM Tech's QC Inspectors and providing remedial recommendations for complicated and significant subgrade-related issues and stabilization. His in-depth knowledge, expertise, and familiarity with the history of soil failures and requirements of local jurisdictions with construction in problem soils areas render him an invaluable resource for guidance and consultation during the stabilization of subgrades and critical slopes and the construction of retaining walls. Project consists of widening 2.1 miles of Route 1 from a four- to six-lane roadway from Neabsco Mills Road to Featherstone Road and improving the Route 1 intersections at Neabsco Mills Road and Dale Boulevard.

**Project Relevance:** The scope for this project includes elements similar to those required for the I-95/606 Project including earthwork, embankment construction, extensive slope stabilization (geogrids, steel piles), drainage improvements, box culverts, duct banks, retaining walls (concrete, segmental), subgrade assessment and stabilization (lime-treated, geotextiles), cement-treated base aggregate, hydraulic concrete curb, gutter, aprons, and sidewalks, bituminous pavement, and signal and light pole installation. The project is located in an area of problematic soils (Marine Clay, saturated, weak, uncontrolled fill, organic, etc.), high groundwater, and other poor subgrade conditions. In addition to requiring the stabilization of critical slopes and the construction of retaining walls, the site constantly requires stabilization of problem soils during pavement subgrade preparation.

**Levee Road Reconstruction, Ronald Reagan Washington National Airport (DCA)**

**Firm:** EM Tech | **Project Role:** QAM / Project Engineer | **Project Dates:** 2014-September 2015

**Specific Responsibilities:** As QAM/Project Engineer, Mr. Moosa was responsible for all QA inspection and materials testing services required, QC plan review; verification of construction QC processes; checking the accuracy of the QC inspections, testing results, and records; and supervising EM Tech's QA Inspectors. He ensured that all facets of the project were properly and professionally managed. His knowledge, expertise, foresight, and extreme attention to detail made him an invaluable resource in providing the specialized inspections and monitoring due to the project's critical nature and the specialized construction methods used. He was also frequently consulted for his opinion and guidance on difficult construction situations. The construction of over one mile of Levee Road, which runs along the outer boundary of the airport, was a significant part of the Runway 15-33 extension and Runway 4-22 safety enhancement. The project involved shifting the runways and filling-in (land reclamation) a 5¼-acre portion of the Potomac River. Prior to pavement construction, specialized ground improvement techniques were used to consolidate and stabilize the subsurface soils.

**Project Relevance:** Similar to the I-95/606 Project, the scope of this project included earthwork, embankment construction, ground stabilization (surcharging, wick drains) and improvements, drainage improvements, duct banks, subgrade stabilization (geotextiles, geogrids), cement-treated base aggregate, and bituminous pavement. A primary challenge was to construct the pavement over soft, wet, yielding alluvial soils where the proximity of the Potomac River and the associated high water table conditions were consistently challenging. EM Tech's services were provided during the hours the airport was in use, which required the knowledge of and adherence to specialized and critical traffic and safety practices.

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.

**N/A. Mr. Moosa is not required onsite full-time.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>			
a. Name & Title:	<b>DARELL L. FISCHER, P.E., DBIA / ASSISTANT DIRECTOR OF TRANSPORTATION / GENERAL MANAGER, RICHMOND OFFICE / PRINCIPAL</b>		
b. Project Assignment:	<b>DESIGN MANAGER</b>		
c. Name of Firm with which you are now associated:	<b>RINKER DESIGN ASSOCIATES, P.C. (RDA)</b>		
d. Employment History: With this Firm <u>9</u> Years With Other Firms <u>21</u> Years	Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <b>Rinker Design Associates, P.C., 2007–Present, Assistant Director of Transportation/General Manager, Richmond Office/Principal.</b> Mr. Fischer is responsible for allocating, overseeing, and managing all designs performed/managed in the Richmond Office, and all sub-consultants on those projects. Design elements managed include roadway design, hydrology/hydraulic analysis, traffic analysis and design, construction plan preparation, R/W acquisition, utility coordination/design, environmental permitting/environmental compliance, and structural design. Furthermore, his duties include development and implementation of the design QA/QC programs for design-build projects and coordination with clients to ensure goals are met and quality is achieved. Mr. Fischer is responsible for staffing projects; hiring sub-consultants; negotiating contracts with clients, contractors, and sub-consultants; and project scheduling to ensure on-time/on-budget performance. From 2007 and 2011, Mr. Fischer performed the same duties and roles for RDA’s Transportation group in the Fredericksburg Office prior to opening the Richmond Office in early 2011. <b>Johnson, Mirmiran &amp; Thompson, Inc., 2001–2007, Vice President/Branch Manager.</b> Mr. Fischer was responsible for obtaining the work, executing the work and ensuring the quality of all work produced by the Richmond Office of JMT, oversight of all disciplines of work to include: roadway, drainage, structures, survey, construction inspection and environmental. He was responsible for contractual obligations with clients and subconsultants as well as project management on many key projects. Additional responsibilities of office operations included: hiring, firing, raises, evaluations, dispute resolution, resource allocation, manpower projections and marketing.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Virginia Polytechnic Institute and State University, Blacksburg, VA / BS / 1986 / Civil Engineering</b>		
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>1992 / Professional Engineer (PE) / #0402023296</b>		
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. <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b> * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		
<b>VDOT, I-95/Temple Avenue Improvements, City of Colonial Heights, VA (DB)</b>			
<b>Firm:</b>	Rinker Design Associates, P.C.	<b>Project Role:</b>	Design Manager
<b>Project Dates:</b>	2013-2017 est.		
<b>Specific Responsibilities:</b> As Design Manager, Mr. Fischer is responsible for the design, management and QA/QC for plan elements. As the project goes to construction, Mr. Fischer will also be coordinating and addressing RFIs and Shop Drawing Reviews. Mr. Fischer’s project responsibilities include the design of interchange modifications (realignment of ramps, design of a roundabout, and roadway widening). Other responsibilities include design oversight of TMP, utility coordination/design, signal design oversight, and geotechnical analysis and coordination. He was also responsible for coordinating with the contractor, VDOT, the City of Colonial Heights, Kroger development and utility companies to ensure that the design requirements of the contract were met and to expedite the design and associated services. Coordination with			

the simultaneous development of a Kroger store provided added challenges to ensure that all public improvements aligned and could be phased according to schedule priorities that changed daily. Finally, Mr. Fischer's team developed a demo plan for two aging bridges over an abandoned railroad that were being decommissioned.

**Project Relevance:** Similar to the I-95/606 Project, this \$13.4M DB project consisted of the development of roadway widening along a roadway whose vertical alignment was being significantly adjusted. Both projects also provide for the design of on- and off-ramps to an interstate. The TMP complexity on this project required significant integration of the roadway and structural engineers, as it encompassed both temporary retaining structures and the vertical adjustment of the adjacent roadway and interchange ramp work.

**VDOT, I-581 Elm Avenue Interchange Improvements, City of Roanoke, VA (DB)**

**Firm:** Rinker Design Associates, P.C. | **Project Role:** Design Manager | **Project Dates:** 2012-2015

**Specific Responsibilities:** As Design Manager, Mr. Fischer was responsible for the design, management and QA/QC for complete roadway construction plans. Mr. Fischer's project responsibilities include the design oversight of TMP, utility coordination/design, bridge reconstruction/widening design and geotechnical analysis. He is responsible for coordinating with Allan Myers, VDOT, the City of Roanoke, and utility companies to ensure that the design requirements of the contract are being met and the design and associated services are expedited. The project scope includes the development of roadway widening along Elm Avenue, on and off-ramps for I-581/Route 220 and shoulder improvement along I-581/Route 220 approach. The TMP on this project requires significant integration of the roadway and bridge designers as it encompasses both bridge widening and the adjacent roadway work. In order to accommodate adequate taper lengths, the project design reconstructs medians and roadway beyond the project limits to simplify the construction sequencing.

**Project Relevance:** Similar to the I-95/606 Project, this \$20.4M DB project consisted of the development of roadway widening, on- and off-ramps to an interstate, and bridge replacement/widening. The TMP complexity on this project required significant integration of the roadway and bridge designers, as it encompassed both bridge widening and the adjacent roadway and interchange ramp work. This included field adjustments to simplify construction, minimize traffic disruption and an expedited schedule. As a value added feature and to accommodate adequate taper lengths, the project design reconstructed medians and roadway beyond the project limits to simplify the construction sequencing. We anticipate that the I-95 / Route 606 project will require similar dedication and commitment.

**VDOT, Rolling Road/Franconia-Springfield Parkway Interchange Improvements, Fairfax County, VA (DB)**

**Firm:** Rinker Design Associates, P.C. | **Project Role:** Design Manager | **Project Dates:** 2013-2015

**Specific Responsibilities:** As Design Manager, Mr. Fischer was responsible for the design, management and QA/QC for complete roadway construction plans. He managed and was directly responsible for the development of the interchange widening design of ramps from and to Franconia-Springfield Parkway and Fairfax County Parkway. Mr. Fischer oversaw the development of a complex TMP/MOT plan to reconstruct the loop ramp and parkway widenings that included widening to both sides of traffic. He developed drainage strategies to minimize the need for reconstructing existing facilities in excellent shape by redirecting water to a proposed SWM that provided over-management. He also successfully implemented an approach to deal with dual HUC codes on the project to satisfy current drainage criteria. Finally, Mr. Fischer and his team developed design alternatives that allowed the contractor to save money while providing VDOT the same (if not better) finished product. The interchange improvements included adding lane capacity on Fairfax County Parkway, Rolling Road, and the ramps in the northwest quadrant of the two main roads. RDA provided all roadway and traffic engineering design services while managing structural and geotechnical services.

**Project Relevance:** This DB project consisted of the design and reconstruction of the Rolling Road interchange with Fairfax County Parkway. Interchange improvements included ramp and loop reconstruction under traffic, similar to the I-95/606 Project. Additionally, Rolling Road, Fairfax County Parkway, and Franconia-Springfield Parkway were widened for capacity similar to this project. Utility and ROW avoidance allowed the project to transition from design to construction without reservation – an approach that could serve this project in expediting to completion.

**VDOT, Route 36 Improvements, Prince George County, VA (DB)**

**Firm:** Rinker Design Associates, P.C. | **Project Role:** Design Manager | **Project Dates:** 2008-2012

**Specific Responsibilities:** As Design Manager, Mr. Fischer was responsible for design management and QA/QC for complete construction plans. The project scope included the road widening and new alignment roadways, drainage design, SWM, TMP, utility coordination/design, and environmental compliance. Mr. Fischer was responsible for coordinating with the contractor, VDOT and each utility company to ensure the design requirements of the contract were met and the schedule was expedited. Environmental compliance included reanalysis and testing of the potential for naturally occurring hazard materials and VOC's, reevaluation of drainage outfalls, and creative solutions to mitigate both issues. Additionally, the TMP design required construction team coordination to implement an approach that worked with the means, methods and sequencing. The project involved approximately 2 miles of roadway widening in front of Fort Lee Military Base.

**Project Relevance:** This DB project consisted of widening of two primary routes (Route 36 and Route 144) that provide access to the Fort Lee military base. These capacity improvements included both shoulder and curb and gutter construction through different portions of the project as may be required for the I-95/606 Project. Improvements also included the reconfiguration of the intersection of the two primary roads to minimize/eliminate inadvertent vehicular access to Fort Lee and to more efficiently direct traffic – innovative thinking that will be applied to this Project. Other project features included construction of several SWM facilities and a coordinated signal system of five new signals. A key to success was the minimization of utility impacts and efficient relocation of those that could not be avoided.

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.

**N/A. Mr. Fischer is not required onsite full-time.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>ROBERT (BOB) ROSENCRANCE / CONSTRUCTION MANAGER</b>
b. Project Assignment: <b>CONSTRUCTION MANAGER</b>
c. Name of Firm with which you are now associated: <b>WAGMAN HEAVY CIVIL, INC.</b>
d. Employment History: With this Firm <u>8</u> Years With Other Firms <u>16</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <b>Wagman Heavy Civil, Inc., June 2007-Present, Construction Manager.</b> Mr. Rosencrance is currently a construction manager for Wagman, and for projects that he is assigned to, is responsible for managing all field operations on the project including labor, equipment, subcontractors and material deliveries. He is responsible for the project schedule, budget, productions and design changes. He is also responsible for project quality control and quality assurance teams. Presently, he is working as the Construction Manager on the Route 1 Widening project at Fort Belvoir in Fairfax County, Virginia and currently has three construction engineers, one general superintendent, two construction superintendents, and eight foremen reporting to him. Mr. Rosencrance has held the following positions within Wagman as he continually advances in his career: Construction Manager (2015-Present), DB Coordinator (2013-2015), Construction Manager (2011-2013), and Assistant Construction Manager (2007-2011). <b>The Lane Construction Corporation, October 2006-June 2007, Construction Engineer.</b> As Construction Engineer, Mr. Rosencrance was responsible for managing various projects at Dulles International Airport. He developed construction estimates, negotiated contracts, solicited quotations from suppliers and subcontractors, negotiated subcontract agreements and purchase orders, organized delivery of materials and services to job sites, and performed cash flow analysis and cost to complete calculations. <b>American West Construction, LLC, May 2006-October 2006, Construction Engineer.</b> As Construction Engineer, Mr. Rosencrance was responsible for developing civil construction estimates with Heavy Bid software. He solicited quotations from suppliers and subcontractors. He organized delivery of materials and services to job sites. He managed grading projects as well as the Union Reservoir Pumpback Pipeline project. <b>Stantec Consulting, Ltd., February 2004-May 2006, Civil Designer.</b> As Civil Designer, Mr. Rosencrance assisted in the design of civil and development projects and coordinated with project engineers to develop construction documents for public improvements, which included streets, sidewalks, parking lots, utility design and mini roundabout design. He performed preliminary cost analyses for commercial and residential projects, provided CAD support to members of the urban development team, performed quantity takeoffs for commercial projects, and created and compared topographic data using civil design software. <b>Nolte Associates, Inc., 2001-February 2004, CAD Coordinator/Draftsman.</b> As CAD Coordinator/Draftsman, Mr. Rosencrance assisted the design team to develop civil plans for development and transportation projects. He worked closely with designers to develop alternatives and ultimately final design documents, utility design and mini roundabout design. He performed preliminary cost analysis for commercial and residential projects, provided CAD support to members of Urban Land team, performed quantity takeoffs for commercial projects, and created and compared topographic data using civil design software.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>Colorado State University, Fort Collins, CO / BS / 2006 / Construction Management</b> <b>Luzerne County Community College, Nanticoke, PA / AAS / 1999 / Construction Management</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #: <b>2013 / VDOT Erosion and Sediment Control Certification (ESCC) / # 3-00283</b> <b>2013 / Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) / # RLD03076</b> <b>2015 / Intermediate Work Zone Traffic Control Training and Flagger Certification / # 051714755</b>

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

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

**FHWA-EFLHD/VDOT, US Route 1 Improvements Fort Belvoir (DB) VA-OEA-US 1(1), Fairfax, VA (DB)**

**Firm:** Wagman Heavy Civil | **Project Role:** Construction Manager | **Project Dates:** July 2013-Fall 2016 est.

**Specific Responsibilities:** As Construction Manager, Mr. Rosencrance is responsible for planning and directing all construction activities per plans and specifications. He coordinates weekly construction planning meetings with all project stakeholders and is currently planning work for multiple crews in various disciplines including earthwork, storm drain installation, maintenance of traffic, water and sanitary sewer utility installation, and roadway and bridge construction. He performed constructability reviews of construction documents during the design process and provided technical insight to complex construction issues.

**Project Relevance:** Similar to the I-95/606 Project, this \$69M DB project consisted of the development of roadway widening along a roadway whose vertical alignment was being significantly adjusted and capacity was being increased. Both projects include a high volume of traffic and the development of the TMP on this project required significant integration of the roadway and structural engineers and construction personnel to resolve issues similar to the I-95/606 project. The US Route 1 project encompassed both temporary retaining structures and the vertical adjustment of the adjacent roadway and coordination with Fort Belvoir. Unsuitable soils (Potomac clays) created challenges similar to the possible geotechnical issues on the I-95/606 Project.

**FHWA-EFLHD, Delaware Water Gap Emergency Slide Repair, Delaware Water Gap National Recreation Area, Pike County, PA (DBB with Design Element – permanent tie-back)**

**Firm:** Wagman Heavy Civil | **Project Role:** Construction Manager | **Project Dates:** July 2012-November 2012

**Specific Responsibilities:** Mr. Rosencrance managed the construction of the emergency roadway slide repair project in Delaware Water Gap National Recreation Area for Federal Highway. The project consisted of 24” diameter drilled shafts with concrete encased soldier piles, permanent tie-backs and precast concrete lagging panels and over 1,200 linear feet of complete roadway reconstruction. Mr. Rosencrance was responsible for the project budget and schedule. He created and maintained the project construction schedule and ensured the project was completed on time and under budget. This project required the contractor to complete the design of the permanent tie-back wall. The schedule was extremely compressed; the roadway was closed due to a slope failure requiring the emergency repair and the local stakeholders were subjected to a 20-mile detour until the work could be completed. Mr. Rosencrance performed all subcontractor and supplier buy out for project and ensured a safe work environment for all workers and site visitors.

**Project Relevance:** Similar to the I-95/606 Project, the Delaware Water Gap project dealt with geotechnical issues such as slope failures and reconstruction and widening of an existing roadway. Both projects also provided for the design of on- and off-ramps to an interstate. The TMP complexity on this project required significant integration of the roadway and structural engineers, as it encompassed both temporary retaining structures and the vertical adjustment of the adjacent roadway and interchange ramp work.

**MSHA, Intercounty Connector (ICC MD 200), Contract A (DB), Montgomery County, MD (DB)**

**Firm:** Wagman Heavy Civil | **Project Role:** Asst. Construct. Mgr. | **Project Dates:** June 2007-February 2011

**Specific Responsibilities:** Mr. Rosencrance planned, monitored, and managed field operations including earthwork, concrete flat work, asphalt paving, road base installation and aggregate delivery for the entire project and erosion and sedimentation coordination during construction phases. He worked with the project superintendents to coordinate, plan, schedule and execute major work activities. He selected subcontractors and suppliers for assigned roadway work and managed the subcontractors when on site. He reviewed construction documents for technical direction, offered feedback on constructability, and documented field design changes with project design staff and project stakeholders. He coordinated subcontractor, supplier and survey activities, and also coordinated 3D modeling of earthwork operations and conducted earthwork quantity reports with GPS data utilizing Trimble software. He provided plan quantities for construction estimates and tracked quantities for work assignments.

**Project Relevance:** Similar to the I-95/606 Project, this \$464M DB project consisted of earth moving operations, drainage, maintenance of traffic, and construction of bridges over limited access highway. Wagman constructed two interchanges and reconstructed one existing interchange. This project also included Quality Control, Quality Assurance, ROW acquisition, and a robust public outreach program. Mr. Rosencrance directed QC elements associated with the roadway construction, attended public outreach meetings, and worked with the owner on an ATC that required ROW acquisition. Part of this project required reconstitution along an existing Interstate with complex traffic phasing and switches.

- 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.

**1) FHWA-EFLHD/VDOT, US Route 1 Improvements Fort Belvoir (DB) VA-OEA-US 1(1), Fairfax, VA**

**Role:** Construction Manager (CM) | **Anticipated Duration:** July 2013-Fall 2016

Attachment 3.4.1(a): Lead Contractor Work History Forms

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**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>I-95/Route 54 Bridge Replacement (Ashland)</b>  Location: <b>Hanover County, VA</b>	Name: Whitman, Requardt & Associates, LLP (WRA)	Name of Client/ Owner: VDOT, Richmond District Phone: 804-524-6000 Project Manager: Shane Mann, PE Phone: 804-524-6433 Email: <a href="mailto:Shane.Mann@VDOT.Virginia.gov">Shane.Mann@VDOT.Virginia.gov</a>	MM/YYYY 12/2015	MM/YYYY 11/2015 (Actual)	\$8,412	\$8,041	\$8,041 (General Contractor responsible for entire contract)

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION
<ul style="list-style-type: none"> <li>Reconstruction of interchange bridges in multiple construction phases</li> <li>Demolition of existing structure in phases while maintaining safety of the existing structure</li> <li>Working on and maintaining traffic along I-95</li> <li>Reconstruction of bridge approaches</li> <li>Coordination with VDOT Public Outreach and Regional Traffic Operations Center</li> <li>New stormwater management facilities (ditches, bioswales, BMPs)</li> <li>Complex traffic switches within an interstate interchange</li> <li>Construction of a phased bridge pier in narrow median of I-95</li> <li>Raised intersecting roadway grade</li> <li>Widening of approach roadway including sidewalk for pedestrians and bicyclists</li> </ul>	<p>This project involved the removal, replacement and widening of the existing Route 54 bridges over I-95 in Ashland, Virginia. The existing bridge was a dual bridge carrying Route 54 east- and westbound, which was combined into one structure 220 feet long and 97 feet wide. Originally, the bridges were to be replaced using three traffic phases. Through coordination and cooperation with WRA, McCormick Taylor, and VDOT, Wagman redesigned the construction of the new bridge to two phases, reducing impacts to the traveling public, accelerating the schedule and reducing cost to VDOT. This required a complete redesign of the project traffic management plan. Wagman was responsible for maintenance and protection of traffic on a busy corridor of I-95 north of Richmond. Route 54 is a significant arterial for Hanover County. The Route 54/I-95 Interchange is a convenient waypoint for travelers to stop, eat and rest. All work was accomplished without impact to local businesses and economy.</p> <p>Wagman converted an antiquated four-span, two-structure interchange into a two-span, one-structure interchange eliminating piers on the outside shoulder and building a new pier in a narrow I-95 median. The new bridge and approaches were raised to provide additional clearance on I-95. New stormwater pipe and structures were provided to carry all stormwater to newly constructed stormwater management retention facilities and bioswales. Drainage was improved along Route 54 plus both shoulders and median of I-95. Wagman designed and constructed support of excavation to reconstruct the phased piers along I-95 and phased abutments on Route 54. Wagman drove the piles for the new foundations, which was extremely complex due to the close proximity of the existing bridge, existing foundations, I-95 traffic, and Route 54 traffic. Wagman coordinated with local stakeholders and cooperated with the local businesses to minimize impacts. Phased demolition of the existing structures over I-95 was accomplished with brief traffic stoppages. The demolition and the erection of new girders involved coordination with VDOT's Public Outreach group and Regional Traffic Operations Center to minimize impacts to the traveling public and to inform the commuters and truckers traveling along I-95. Erosion and sedimentation and stormwater management was vital to avoid impacts to existing Waters of the US.</p>
<b>EVIDENCE OF SUCCESSFUL RISK MITIGATION STRATEGIES</b>	
<ul style="list-style-type: none"> <li>Collaboration with VDOT and the Designer allowed the team to <b>redesign the traffic and construction phasing, which shortened the schedule, reduced cost, and minimized impacts to the traveling public.</b></li> <li>Demolition of an existing structure in phases and maintaining safety of the existing structure requires sound construction engineering and constructability reviews by field personnel to ensure the safety of the workers and traveling public.</li> <li>Construction of deep foundations adjacent to an existing structure (and under the structure) required expertise in geotechnical engineering. With Wagman's in-house geotechnical engineering capabilities, we developed a deep foundation construction plan and support of excavation to allow construction with minimal impact to the existing structure.</li> <li>Coordination with both local businesses and local governmental agencies such as Hanover County and Town of Ashland was critical to overall project success for all involved parties.</li> </ul>	



**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
<b>Name: I-95/I-495/I-295 Interchange, Inner Loop Local &amp; Inner Loop Express (DBB)</b>  <b>Location: Prince George's County, MD</b>	Name: Johnson, Mirmiran & Thompson, Inc. (JMT)/Whitman Requardt & Associates, LLP A Joint Venture	Name of Client/ Owner: Maryland State Highway Administration Phone: 410-357-1000 Project Manager: Shirlene Cleveland, PE (formerly MD SHA Administration Project Director WWB) Phone: 703-713-2084 Email: shirlene.cleveland@vdot.virginia.gov	MM/YYYY 05/2009	MM/YYYY 11/2009 Actual (due to change orders and Owner-granted time extensions)	\$93,187	\$105,839 Final (due to change orders and owner-directed changes in scope)	\$105,839 (General Contractor responsible for entire contract)

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION	
<ul style="list-style-type: none"> <li>DB elements (VE)</li> <li>Survey/ROW</li> <li>Structures and Bridges</li> <li>Environmental</li> <li>Geotechnical</li> <li>Hydraulics</li> <li>TCD/TMP – High ADT</li> <li>Noise Walls</li> <li>Utility Coordination/ Relocation</li> <li>Public Involvement</li> <li>Context Sensitive Solutions</li> <li>QA/QC</li> <li>Interchange Construction</li> <li>Third Party Coordination</li> <li>Overall Project Mgmt.</li> <li>Interstate/Roadway Widening</li> <li>Similar Size Project</li> <li>Dirt Flow Management</li> </ul>	<p>Wagman was the Lead Contractor for the reconstruction and widening of 1.34 miles of I-95/I-495 Inner Loop Local and Express Lanes; 1.21 miles of I-95/I-495 Outer Loop Express; portions of I-295 northbound and southbound; and construction of 11 associated ramps. The Project required reconstruction and relocation of an interchange on an interstate. Wagman constructed eight bridges that included both steel and concrete girders, 11 retaining walls that included CIP walls, MSE walls and wire walls with a CIP veneer, and 440,000 CY of roadway excavation. Settlement and consolidation was an issue, therefore over 561,000 LF of wick drains were installed, geotechnical instrumentation installed and monitored, with a five-month waiting period for consolidation and placement of lightweight foam concrete for backfill. Additionally, the project consisted of 16,800 LF storm drainage, 131,500 LF steel piles were driven and 17,000 SF temporary support of excavation was installed. A temporary bridge (contractor design) was installed for haul road access using temporary geosynthetic walls at the abutments. Extensive traffic control was needed to widen and reconstruct Mainline I-95/I-495/I-295. The project included extensive landscaping, irrigation, signing, lighting, and ITS work. Erosion and sediment control work was critical with work being performed adjacent to the Potomac River along with environmental sensitivity due to a bald eagle nesting area. The Woodrow Wilson Memorial Bridge carries an AADT of over 150,000 vehicles.</p> <p>Wagman successfully utilized the DB process to redesign structural elements to provide the owner \$2M of value engineering savings. Wagman and WRA collaborated to redesign the bridge approach and bridge foundation for the structure over the I-495 Capital Beltway. The bridge was to be constructed in an area where the existing soils were very poor. Deep foundations were used to extend beyond the poor soil conditions into better material. This structure and approach carried a shared use path along the Potomac River, over the Washington Beltway and onto the Main Woodrow Wilson Bridge Structure and connected with the shared use project on Wagman's I-95/I-495 and MD 210 project shared use paths, allowing pedestrians and bicyclists safe access. During construction WRA worked with Wagman on value engineering proposals to reduce cost and schedule. The redesign of the approach fill using</p>	  
<p>geofoam and deep bridge foundations resulted in owner savings of \$2M.</p> <p><i>This project received awards from MDQI (Award of Excellence, Partnering Bronze Award) and the Northern Virginia Transportation Alliance. This project is a finalist in the 2015 MDQI Awards of Excellence for the Modal Award over \$5 Million category. The project also maintained an "A" rating from the Owner through multiple construction phases for E&amp;S controls during construction.</i></p>		
EVIDENCE OF SUCCESSFUL RISK MITIGATION STRATEGIES		
<ul style="list-style-type: none"> <li>Construction of new structures over I-95 required significant coordination and communication efforts with SHA and involved complex MOT plans and sequences along the Interstate.</li> <li>Coordination with an adjacent development (National Harbor) created unique challenges similar to what we may encounter with Dominion Raceway Park.</li> <li>Development of geotechnical solutions to redesign the bridge approach and deep foundations to mitigate construction issues associated with soft, compressible, and unsuitable soils. This collaboration between Wagman and WRA improved schedule and reduced costs.</li> </ul>		

**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>MD 4 Bridge Replacement over MD 223</b>  Location: <b>Prince George's County, MD</b>	Name: Whitney, Bailey, Cox, & Magnani, LLC	Name of Client/ Owner: Maryland State Highway Administration Phone: 410-545-0800 Project Manager: Jason D. Pollock Phone: 410-545-8318 Email: jpollock@sha.state.md.us	MM/YYYY 09/2015	MM/YYYY 02/2015 Actual (7 months early)	\$18,464	\$21,317 (Change orders by Owner and additional work)	\$21,317 (General Contractor responsible for entire contract)

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION
<ul style="list-style-type: none"> <li>Adjacent to major land development project</li> <li>Roadway Widening &amp; Reconstruction</li> <li>Structures/Bridges</li> <li>Public Involvement</li> <li>New signalization of existing intersections</li> <li>TMP &amp; MOT Sequencing</li> <li>Geotechnical (Deep Foundations)</li> <li>Reconstruction of bridges over heavily traveled roadway in multiple phases</li> <li>Raising grade of new bridge to increase clearance</li> <li>Driving pile adjacent to existing structures and traffic</li> <li>Substantial support of excavation and a deficient structure during construction</li> </ul>	<p>This \$18M project for the Maryland State Highway Administration included the complete reconstruction of dual two-span bridges carrying MD Route 4 over MD Route 223. Demolition of the existing bridges as well as construction of the new bridge structures were performed by Wagman. The project included significant excavation, drainage, base, and asphalt paving to construct new roadway approaches to the bridges. Four miles of patching, grinding, and asphalt overlay along Maryland Route 4 improved the heavily-deteriorated driving surface. The project also included new street lighting, upgraded signalized interchanges, guardrail installation, stormwater management facility construction, signage, and landscaping. Careful planning, scheduling and phasing, including overnight traffic switches) were all required. There were restricted work areas in the early phases of the project. Wagman also needed to maintain the heavily-deteriorated existing roadway surface through the harsh 2013/2014 winter months during construction.</p> <p>The project was built in 5 phases, which reduced impacts to the traveling public via 5 overnight traffic switches. Nighttime transitions between phases minimized disruption to a major DC East-West corridor. The coordination between the SHA public outreach team, the project inspection staff, and the Wagman project team was essential to ensure the quick and safe execution of pattern changes. Phase 1 consisted of shoulder improvements needed to upgrade existing shoulders to accommodate the project's future traffic phasing. The existing asphalt and subbase was removed and graded aggregate base and an improved asphalt package was placed. Traffic was shifted onto this newly modified shoulder in order to construct Phase 2, which began with the demolition of the median portion of the existing bridge. The inside portions of eastbound and westbound Route 4 over MD 223 Bridge were then reconstructed. A temporary roadway was placed to allow traffic to be moved from the outside to the median lanes. Another traffic switch moved the project into Phase 3, which entailed demolition and construction of the outside portions of eastbound and westbound Route 4. Phases 4 and 5 consisted of restoration of the permanent open median, stormwater management construction, and improvement of 4 miles of the Route 4 driving surface.</p> <p>Due to the phasing of the project, the result was limited work areas. In order to maximize the restricted work zones, a support of excavation system was engineered along the phase line. The shoring system enabled the construction team to build the substructure including piling, footers, abutment stems, wingwalls and pier columns and caps. For the duration of the project, Wagman was responsible for maintaining five miles of MD 4 roadway. This created numerous challenges because the road was deteriorated prior to the start of the project and the harsh winter caused further weakening of the riding surface. Constant pothole repair crews were dispatched to maintain the road surface through the winter months. As soon as the temperatures allowed, the road was milled, patched and resurfaced.</p> <p>The project faced a variety of challenges that threatened the flow of traffic through the interchange area. Additionally, the project team faced the complication of a rapidly deteriorating existing road surface that required extensive unforeseen repairs that threatened the overall ability to succeed on the project. The initial project stages were performed in tight work zones with limited access. However, these restricted areas facilitated the flow of traffic through the interchange area. Additionally the project team faced the complication of a rapidly deteriorating existing road surface that required extensive unforeseen repairs that were performed in a manner outside the normal sequencing. These repairs were completed without impacting the overall project schedule. In order to maximize work area as well as the available travel lanes, numerous small support of excavation systems were designed and installed by Wagman.</p> <p><i>This project is a finalist in the 2015 MDQI Awards of Excellence for the Modal Award over \$5 Million category.</i></p>
<b>EVIDENCE OF SUCCESSFUL RISK MITIGATION STRATEGIES</b>	
<ul style="list-style-type: none"> <li>Existing structures were structurally deficient, and support of the structure and structure foundations was critical during demolition and construction.</li> <li>Stormwater runoff was designed for quantity and quality, so extensive bio-swales and grass swales were constructed along the highway as BMPs.</li> <li>Coordination with the Owner and third party stakeholders mitigated impacts to the traveling public during major traffic switches.</li> <li>Effective partnering allowed the project to be completed early, beating the schedule by 7 months.</li> </ul>	



Attachment 3.4.1(b): Lead Designer Work History Forms

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**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-95 at Temple Avenue Interchange Improvements DB</b>  Location: <b>City of Colonial Heights, VA</b>	Name: Allan Myers VA, Inc.	Name of Client.: VDOT Phone: 804-663-4188 Project Manager: R. Shane Mann, P.E. Phone: 804-720-4229 Email: shane.mann@vdot.virginia.gov	MM/YYYY 12/2017	MM/YYYY 12/2017 est.	\$13,368	\$13,368	\$1,364

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION
<ul style="list-style-type: none"> <li>• Design-Build</li> <li>• Roadways</li> <li>• Interchanges</li> <li>• Environmental</li> <li>• Geotechnical</li> <li>• ROW</li> <li>• Hydraulics</li> <li>• Stormdrain and SWM</li> <li>• Demolition of Structures</li> <li>• Pedestrian Accommodations</li> <li>• Retaining Walls</li> <li>• Traffic Control Devices</li> <li>• Signs, Sign Structures, and Foundations</li> <li>• Transportation Management Plan</li> <li>• Traffic Maintenance and Management</li> <li>• Utilities</li> <li>• Stakeholder Coordination</li> <li>• Public Involvement/Communications</li> <li>• QA/QC</li> <li>• Survey</li> </ul>	<p>Rinker Design Associates, P.C. (RDA) provided professional engineering services from their Richmond Office serving as the Lead Designer for the I-95 at Temple Avenue Interchange Improvements (I-95/Temple) DB project for VDOT. This \$13M DB project will reconstruct the I-95 interchange at Temple Avenue to relieve congestion, enhance public safety, operations and capacity, and accommodate forecasted traffic demand in the project area. The selected design incorporates a roundabout at the intersection of the I-95 off-ramps and Temple Avenue. The roundabout design was chosen to ensure a continuous flow of traffic allowing queuing to be significantly reduced. Additionally, the interstate off-ramps were shifted to the west in order to add capacity and improve geometry. The drainage design was also completely redone to efficiently convey storm water to the adjacent Old Town Creek. As the Lead Designer for the project, RDA's responsibilities include:</p> <ul style="list-style-type: none"> <li>• Interchange/Roadway Design</li> <li>• Overall Project Design Management &amp; QA/QC</li> <li>• Public Involvement</li> <li>• Utility Relocation</li> <li>• Right of Way Acquisition Services</li> <li>• Environmental Permitting &amp; NEPA Document Update</li> <li>• Signage &amp; Marking Plan Design</li> <li>• Drainage Design (Stormwater Management &amp; BMP Analysis, Erosion Control Plans, Local Drainage Design, Culvert Design, Outfall Analysis)</li> <li>• Subconsultant Oversight &amp; Management (Geotechnical Analysis and Design, Structural Analysis, Traffic Analysis &amp; TMP Design, Signal Design)</li> </ul> <p style="background-color: #0056b3; color: white; padding: 2px;"><b>RELEVANT PROJECT ELEMENTS TO I-95/606 PROJECT</b></p> <p><b>Roundabout Design:</b> Similar to the proposed I-95/606 Project, the I-95/Temple DB project reconstruction has been designed incorporating a roundabout. Due to an adjacent development (Kroger) that will be built at the same time as the I-95/Temple DB project, the roundabout lane configurations had to be increased and adjusted. A westbound bypass lane along with free-flowing right turn movements (eastbound to the I-95 ramps, and from the ramps to eastbound Temple Avenue) were incorporated into the design.</p> <p><b>Transportation Management Plan:</b> Similar to the I-95/Route 606 Project, the redesign of the I-95/Temple DB interchange improvements requires intensive TMP development to phase the roundabout construction in a manner that is functional and clear to the traveling public. In order to educate and allow the public to get used to the roundabout, temporary striping and lane configurations are being implemented. These temporary measures will allow drivers to get used to the movements of a roundabout prior to permanent measures being implemented.</p> <p><b>Roadway Widening:</b> Like the I-95/606 Project, the I-95 at Temple Avenue DB Project included widening of a heavily traveled roadway where residential and commercial access will be maintained at all times. Both project deal with the potential impact to a gas station in order to achieve better traffic flow and functionality.</p> <p><b>Bridge Demo:</b> Similar to the proposed I-95/606 Project, the I-95 at Temple Avenue DB Project required a systematic demolition plan to remove the bridge carrying the traffic from the local roadway network to the interchange with I-95. In the case of this project, two bridges were being removed; however, instead of replacing them, fill was placed over an abandoned railroad bed beneath.</p> <p><b>ROW Acquisitions:</b> Similar to the proposed I-95/606 Project, this project impacts commercially valuable property. Of particular similarity is the impact to a gas station whose access rights will be altered due to encumbrance by proposed limited access lines.</p>



**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-581 at Elm Avenue Interchange Improvement DB</b> Location: <b>City of Roanoke, VA</b>	Name: Allan Myers VA, Inc. (formerly American Infrastructure-VA, Inc.)	Name of Client.: VDOT Phone: 540-378-5038 Project Manager: Robert Phlegar, P.E. Phone: 540-378-5038 Email: r.phlegar@vdot.virginia.gov	MM/YYYY 06/2015	MM/YYYY 06/2015	\$20,400	\$20,400	\$1,507

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \* For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION
<ul style="list-style-type: none"> <li>• Design-Build</li> <li>• Roadways</li> <li>• Bridges/Structures</li> <li>• Interchanges</li> <li>• Environmental</li> <li>• Geotechnical</li> <li>• ROW</li> <li>• Hydraulics</li> <li>• Stormdrain and SWM</li> <li>• Demolition of Structures</li> <li>• Pedestrian Accommodations</li> <li>• Retaining Walls</li> <li>• Traffic Control Devices</li> <li>• Signs, Sign Structures, &amp; Foundations</li> <li>• Transportation Management Plan</li> <li>• Utilities</li> <li>• Stakeholder Coordination</li> <li>• Public Involvement/Communications</li> <li>• QA/QC</li> <li>• Survey</li> </ul>	<p>The project consisted of a four-lane divided highway, urban minor arterial typical section (GS-6) with curb and gutter, and raised median (1,200 linear feet); six-lane divided highway, freeway/other principal arterial (GS-5), median barrier. As the lead designer, RDA provided complete design services and/or coordination for roadway and bridge designs for 0.3 miles of widening and reconstruction on Elm Avenue to include the replacement of two bridges (one over I-581 and the other over the Norfolk Southern Railroad). These services were performed out of RDA's Richmond and Manassas offices. The project also included reconstruction of all four ramps to provide additional capacity and better traffic flow. Finally, the project included guardrail replacement along I-581 to current standards along with the replacement of a 60-inch pipe crossing with an 84-inch pipe (originally designed using micro-tunneling technology).</p> <p style="background-color: #0056b3; color: white; padding: 2px;"><b>RELEVANT PROJECT ELEMENTS TO I-95/606 PROJECT</b></p> <p><b>Roadway:</b> The I-581/Elm Avenue Interchange Improvements project provided add capacity on Elm Avenue, increased deceleration lengths on the I-581 ramps, and additional capacity on the ramps from I-581 to Elm Avenue. The I-581 Elm Avenue Interchange Improvements project has similar scope elements to the I-95/606 project including: roadway widening, interstate ramp reconstruction/extension, work in high volume ADT's, and complex MOT/TMP. Our team increased capacity and efficiency of the interchange and eliminated significant backups on the interstate.</p> <p><b>Drainage:</b> The design implemented strategies to incorporate existing drainage in good condition into the proposed drainage solution to reduce costs and continually maintain drainage capacity throughout construction. We worked with VDOT to resolve unknown/buried debris encountered during the tunnel boring operation for the 84" pipe under I-581/Route 220.</p> <p><b>Bridge and Structures:</b> Existing structures over I-581 and the NS Railroad were reconstructed and/or widened to provide additional capacity along Elm Avenue and clearance over the interstate. Both structures provided for pedestrian movements along Elm Avenue. Additionally, a sign bridge was designed mid-span on the bridge over I-581 at the center pier to provide bi-directional signage.</p> <p><b>Maintenance of Traffic:</b> To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Completing construction on I-581 prior to shifting traffic eliminated future phases and reduced traffic impacts. Additionally, this simplified MOT plan helped to minimize confusion and accidents associated with heavy congestion – similar to what is anticipated on the I-95/606 project due to the Dominion Raceway Park.</p> <p><b>Environmental:</b> RDA designed around impacts and obtained the required water quality permits ahead of construction.</p> <p><b>Right of Way:</b> Right of Way was negotiated and acquired by our team for the project improvements. Properties that did not immediately settle agreed to Right of Entries in order to allow construction to begin – an approach that may be useful in our negotiations on the I-95 / Route 606 project. Another similarity, although not a total take, was the impact to a gas station adjacent to the widening of Elm Avenue.</p> <p><b>Utilities:</b> As a result of design innovations, many of the anticipated utilities were avoided. Those that could not be avoided worked with RDA and the contractor to stage their relocations around on-going construction.</p> <p><b>Public Outreach/Involvement:</b> Our team met with emergency responders and the public, as we will on the I-95/606 project, to address concerns. These meetings included the Pardon Our Dust meeting but also encompassed several other meetings to belay concerns over congestion. Ideas and strategies gleaned from these meetings were used to ensure mitigation measures were integrated into our MOT/TMP design.</p> <p style="background-color: #0056b3; color: white; padding: 2px;"><b>SUCCESSFUL RISK MITIGATION STRATEGIES</b></p> <ul style="list-style-type: none"> <li>• Although Elm Avenue is a more heavily-congested corridor, both projects deal with access management issues that will have a major part in the success of the project – this project utilized coordinated signals and median curb to manage the situation, while the I-95/606 Project has an opportunity to achieve access management through a roundabout.</li> <li>• This project, similar to the I-95/606 Project, treated MOT and TMP as a living document – we, the designers, designed the phasing in accordance with standards of practice and then observed the implementation to recommend refinements and changes that would improve safety and constructability. A critical component of TMP is flexibility. Analyzing each phase of the MOT (as required) and observing the phasing implemented in the field allows the designer to adjust the sequencing to develop a better functioning work zone.</li> <li>• Similar to the I-95/606 Project, this project reconstructed the bridge over an interstate (I-581 in Roanoke). The bridge construction phasing was reevaluated in the field to reduce lane widths and eliminate a phase of construction, which allowed the project to accelerate the schedule.</li> </ul>



**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-66/Route 15 Interchange Reconstruction DB</b> Location: <b>Prince William County, VA</b>	Name: The Lane Construction Corporation	Name of Client.: VDOT Phone: 703-259-2960 Project Manager: Christiana Briganti-Dunn, P.E. Phone: 703-259-2960 Email: christiana.briganti@vdot.virginia.gov	MM/YYYY 09/2015	MM/YYYY 12/2017 est.	\$36,194	\$36,194	\$2,570

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

Similar Scope of Work:	SCOPE/PROJECT DESCRIPTION		
<ul style="list-style-type: none"> <li>• Design-Build</li> <li>• Roadways</li> <li>• Bridges/Structures</li> <li>• Interchanges</li> <li>• Environmental</li> <li>• Geotechnical</li> <li>• ROW</li> <li>• Hydraulics</li> <li>• Stormdrain and SWM</li> <li>• Demolition of Structures</li> <li>• Pedestrian Accommodations</li> <li>• Retaining Walls</li> <li>• Traffic Control Devices</li> <li>• Signs, Sign Structures, and Foundations</li> <li>• Transportation Management Plan</li> <li>• Traffic Maintenance and Management</li> <li>• Utilities</li> <li>• Stakeholder Coordination</li> <li>• Public Involvement/Communications</li> <li>• QA/QC</li> <li>• Survey</li> <li>• Project Management and Coordination with other Active Construction Projects within the Vicinity of the Project Site</li> </ul>	<p>Rinker Design Associates, P.C. (RDA) provided professional engineering services from their Manassas Office serving as the Lead Designer for LANE's I-66/Route 15 Interchange Reconstruction D-B project for VDOT. This \$36M D-B project will reconstruct the I-66/Route 15 Interchange to relieve congestion, enhance public safety, operations and capacity, and accommodate forecasted traffic demand in the project area. RDA designed the reconstructed interchange as a Diverging Diamond Interchange (DDI), the third of its kind in the Commonwealth of Virginia, to best accommodate the projected traffic volumes as well as critical pedestrian movements in the interchange area. The selection of the DDI alternative was the result of extensive analysis by RDA to find an interchange design that would best accommodate traffic demand, reduce the project footprint and environmental impacts, improve constructability and shorten overall construction duration when compared with previously considered alternatives, and reduce overall project cost. As the Lead Designer for the project, RDA's responsibilities include:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• Interchange/Roadway Design</li> <li>• Overall Project Design Management &amp; QA/QC</li> <li>• Public Involvement</li> <li>• Utility Relocation Coordination &amp; Design</li> <li>• Right of Way Acquisition Services</li> <li>• Transportation Management Plan Design</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• Signage &amp; Marking Plan Design</li> <li>• Drainage Design (Stormwater Management &amp; BMP Design, Erosion Control Plans, Local Drainage Design, Culvert Design, Outfall Analysis)</li> <li>• Subconsultant Oversight &amp; Management (Structural Design, Environmental Permitting &amp; NEPA Document Update, Traffic Analysis &amp; IMR Update, Signal Design)</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• Interchange/Roadway Design</li> <li>• Overall Project Design Management &amp; QA/QC</li> <li>• Public Involvement</li> <li>• Utility Relocation Coordination &amp; Design</li> <li>• Right of Way Acquisition Services</li> <li>• Transportation Management Plan Design</li> </ul>	<ul style="list-style-type: none"> <li>• Signage &amp; Marking Plan Design</li> <li>• Drainage Design (Stormwater Management &amp; BMP Design, Erosion Control Plans, Local Drainage Design, Culvert Design, Outfall Analysis)</li> <li>• Subconsultant Oversight &amp; Management (Structural Design, Environmental Permitting &amp; NEPA Document Update, Traffic Analysis &amp; IMR Update, Signal Design)</li> </ul>
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**RELEVANT PROJECT ELEMENTS TO I-95/606 PROJECT**

**Innovative Interchange Design:** The I-66/Route 15 Interchange reconstruction has been designed as a DDI. The I-95/606 project will have roundabout integrated with the functionality of the interchange. The parallel between these two projects is the innovative thought process that has to be used to ensure that practicality and functionality are not overlooked.

**Transportation Management Plan:** Similar to the I-95/606 Interchange, the I-66/Route 15 Interchange required a well thought-out TMP to construct the modifications in a constricted work zone with high traffic volumes. RDA developed the TMP in coordination with the contractor's construction team to ensure constructability while maintaining acceptable traffic operations, including access to the adjacent commercial developments.

**Roadway Widening:** Like the I-95/606 Project, the I-66/Route 15 project included widening of heavily traveled roadways where access issues were addressed and maintained at all times.

**ROW Reductions:** By introducing a DDI to this interchange and through design efficiencies, our Team was able to condense ROW by reducing impacts and eliminating two total parcel takes – saving VDOT over \$500K. The I-95/Rt 606 project will have similar benefits, especially with design efficiencies anticipated and envisioned.

