

Statement of Qualifications

Design-Build Project

I-95 City of Richmond Bridge Superstructure

Replacement and Rehabilitation Bundling

City of Richmond, VA

February 2, 2021

Electronic Submittal



UPC (State Project Nos.; Federal Project Nos.)
UPC 111300 (U000-127-023, P101, R201, C501, B601; STP-BR04(287))
UPC 111294 (0064-127-022, P101, B661; NHPP-064-3(510))
UPC 113375 (0250-127-050, P101, R201, C501; NHPP-BR04(307))
UPC 113388 (0004-127-051, P101, R201, C501; NHPP-BR04(308))
7th Street Bridge
Contract ID Number: C00111300DB107



Design-Build Project
I-95 City of Richmond Bridge Superstructure
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3.2 Letter of Submittal



February 2, 2021

Mr. Joseph A. Clarke, PE, DBIA
Alternative Project Delivery Division
Virginia Department of Transportation Central Office Mail Center
1401 East Broad Street
Richmond, Virginia 23219

Dear Mr. Clarke:

Wagman Heavy Civil, Inc. (Wagman) is pleased to submit our SOQ for I-95 City of Richmond Bridge Rehab Bundling Virginia. In accordance with the Letter of Submittal requirements for Section 3.2 we offer the following additional information for review:

3.2.1/3.2.2 Authorized Representative /Point of Contact
Glen Mays, DBIA, Design-Build Project Manager
26000 Simpson Road, North Dinwiddie, VA 23803-8943
P. 804.631.0000 F. 804.733.6281
Email: gkmays@wagman.com

3.2.3 Principal Officer Information.
Gregory Andricos, PE, President & COO
3290 N. Susquehanna Trail, York, PA 17406-9754
P. 717.767.8292 J.F. 717.767.5546
Email: gmandricos@wagman.com

3.2.4 Offeror's Structure, Financial Responsibility, and Bonding Approach. Wagman Heavy Civil, Inc. is a corporation and will take financial responsibility for this project; we have no liability limitations. A single 100% performance bond and 100% payment bond shall be provided for the total Design-Build contract value.

3.2.5 Full Legal Name of Lead Contractor is Wagman Heavy Civil, Inc.; **Lead Designer** is Volkert, Inc.

3.2.6 Affiliated and Subsidiary Companies. The full legal name and address of all affiliated and/or subsidiary companies are provided on Attachment 3.2.6 in the Appendix.

3.2.7 Certificates Regarding Debarment. Certificates Regarding Debarment for the Primary firm (Attachment (a)) and the Lower Tier firms (Attachment 3.2.7 (b)) are included in the Appendix.

3.2.8 VDOT Prequalification Certifications. Wagman's VDOT prequalification number is W002, and our status is active and in good standing; the prequalification and certifications are included in the Appendix.

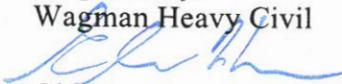
3.2.9 Evidence of Obtaining Bonding. Evidence of a letter of surety is found in the Appendix stating Wagman is capable of obtaining a performance and payment bond based on the current estimated Design-Build contract value referenced. This bond will cover the project and any warranty period.

3.2.10 Compliance with Laws and Required Registration. Current SCC Certificates, DPOR licenses, and staff licenses are included in the Appendix.

3.2.11 Achieving a Nine Percent (9%) DBE Participation Goal. Wagman is committed to achieving a nine percent (9%) DBE participation goal for the entire value of the contract.

Wagman has a long and successful history serving Virginians on numerous projects. As a single, integrated Design-Build Team, we will design and construct I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling to ensure the greatest opportunity for success, including the potential for an expediated delivery. We will build upon our existing transparent working relationship with VDOT and third-party stakeholders further promoting trust, confidence, and collaboration. Thank you for the opportunity to submit our Statement of Qualifications.

Respectfully,
Wagman Heavy Civil


Glen Mays, DBIA
Design-Build Project Manager



Design-Build Project
I-95 City of Richmond Bridge Superstructure
Replacement and Rehabilitation Bundling
City of Richmond, VA

3.3 Team Structure



Wagman has successfully been delivering multiple high-profile Design-Build (D-B) projects for VDOT in Virginia – the *I-95 Southbound CD Lanes Rappahannock River Crossing*, (and now the *Northbound Rappahannock River Crossing*) *Route 7 Widening and Bridge Rehabilitation over the DTR and DIAAH*, *Odd Fellows Interchange*, *Route 61 Bridge Replacement* and the *Route 7 and Battlefield Parkway Interchange* projects – all have and are improving conditions for the traveling public on critical commuter thoroughfares. Wagman has carefully selected individuals with the relevant expertise from a number of regionally acclaimed firms to provide the most robust Design-Build Team (DBT) for this Project. These individuals will ultimately report to the executive management of Wagman throughout construction. We also recognize the criticality of effective stakeholder and community relationships and strive to minimize impacts to the public during construction – maintaining traffic and access safely is always our highest priority. We look forward to bringing the benefits of our experience, combined expertise, and collaborative working relationship to the *I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling D-B Project*.

Our Design-Build Team



Wagman Heavy Civil, Inc. (Wagman) is the Lead Contractor of the DBT, responsible for managing all aspects of the project, including design, construction, utility coordination, right-of-way (ROW) acquisition, QA, QC, environmental compliance, safety, and public involvement and stakeholder coordination. We strategically chose team members with experience in similar projects and

experience throughout Virginia and in urban settings, to create an organizational structure that capitalizes on the strengths of each team-member firm to deliver a successful project to VDOT.

Wagman has been providing heavy civil infrastructure construction for nearly 120 years and has an extensive portfolio of providing high-quality solutions that improve operations and safety on the region's roadways. The local region is our backyard. Our team members are comfortable with the challenges presented by projects such as these *five bridges superstructure replacements in the City of Richmond*. Wagman is very familiar with ABC technology utilizing SMPT's to remove and replace bridge superstructures as on our Nursery Road project in Maryland. We intend to employ ABC methods on these Richmond bridges.



Our Lead Designer, Volkert, Inc. (Volkert) is a trusted partner and responsible for coordinating all design disciplines and overseeing all design activities throughout the life of the project. Volkert is a multidisciplinary transportation engineering firm serving local

DOTs and municipalities for 60 years, delivering roadway improvement projects with challenges similar to those anticipated on this bridge superstructure replacement and rehabilitation bundling project – improvements on high-volume roadways over I-95 with constraints such as limited ROW, complex utilities, multi-modal accommodations, and multiple stakeholders, including a heavily involved public.

Volkert has a national reputation as a leading provider of D-B best practices for complex transportation infrastructure; and brings VDOT and the DBT a collaborative and partnering approach to finding innovative and cost-effective solutions to challenges. On the *I-66* and *I-495 Northern Section Shoulder Use* D-B projects, Volkert collaborated with the Design-Builder to develop an integrated CPM schedule and work packages that allowed concurrent design and construction. On the *Harrisonburg Bridge Bundle project*, Volkert rapidly developed 100% design plans for D-B-B total bridge replacements of 5 bridges taking careful consideration of the context of that area's travelling public to accommodate simultaneous construction of the proximate bridges while maintaining reasonable multimodal movement for the public with minimal detours.

Volkert's VDOT knowledge and relationships provided opportunities for design waivers and exceptions that supported the schedule and have resulted in less impacts to the traveling public – an approach we will employ throughout this project when beneficial.

The success of these projects, and others in our respective portfolios, demonstrates the commitment of both firms to finding best-value solutions for transportation improvements through a collaborative approach – the basis of our approach and team structure for VDOT's *I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling D-B Project*. In addition, our team provides VDOT with seamless communication and coordination as we bring seasoned and locally experienced staff into a cohesive team, ready to provide an integrated effort to meet the challenges of the project. We know VDOT's infrastructure and requirements; and we know how to best use the benefits of D-B methodology to mitigate risks.

Wagman DBT Benefits

- VDOT experience
- Wagman Dinwiddie office – 30 minutes from project sites
- Multiple D-B projects delivered for VDOT
- Ability to self-perform all major work items
- Established stakeholder relationships including with utility owners
- Wagman-Volkert Shared Experience:
 - Rte 61 Bridge (Volkert QA)
 - Rte 340 (Volkert Construction services)
 - Rte 7/Battlefield (Volkert utilities design/coordination)
 - Rte 288 over Rte 60 (Volkert designed)

In an effort to bring additional D-B strength to the project, we have enhanced our team’s depth of experience and resources by adding the following subconsultants in the indicated critical disciplines

 **CES Consulting, LLC (CES) is a DBE-SWaM certified firm providing Quality Assurance Management and Utility Coordination Management**, and brings the team experience in early planning, coordination, and communication with utility providers in Virginia. In the past 6 years, CES has provided quality assurance (QA) and quality control (QC) management, project controls, safety management, quality auditing, and utility management services for 20 D-B and private-public partnerships (P3) projects in Virginia totaling \$8B in construction value.

 **Wetland Studies and Solutions Inc. (WSSI) - is providing environmental, permitting, and noise/abatement services.** WSSI brings local experience working on major transportation projects with many of the same stakeholders and regulatory agencies that will have approval of this project to negotiate a buildable project.

 **DMY, Inc. is a DBE-SWaM certified firm providing geotechnical services and reports to the DM**, bringing experience garnered from providing geotechnical engineering for numerous VDOT projects, their expertise addressing subsurface challenges found within Virginia. DMY locally from their Midlothian location has completed numerous projects for VDOT and in the City of Richmond.

 **OR Colon (ORC) is managing the ROW and land acquisition services and reports to the DM.** As a VDOT prequalified ROW acquisition firm, they will manage all areas of appraisal and appraisal review services, negotiations, acquisition of rights, expert witness testimony, and relocations. They are experienced in local, State, and Federal real estate acquisition regulations, including USPAP, Uniform Relocation Assistance & Real Property Acquisition Policies Act, the VDOT ROW & Utilities Manual of Instructions, and the Code of Virginia.

 **Precision Measurements Inc. (PMI) is a DBE-SWaM certified firm providing design survey services and reports to the DM.** Their staff brings extensive survey experience: topographic and location surveys, horizontal and vertical control surveys, boundary surveys, as-built surveys, ALTA/ACSM surveys, bathymetric surveys, ROW plats, deed and records research, utility surveys, and coordination with VDOT.

 Accumark maintains a solid foundation of highly-trained, professional employees and will excavate test holes to determine the exact horizontal and vertical location of existing utilities, a critical step to final design and early construction phases **They will report to the DM as well as provide necessary data to the LUCM in identification of utility owners within the project limits.**

 **On Point Transportation PR is a DBE-SWaM certified public relations and marketing agency.** They develop successful high-impact communications programs with VDOT to deliver project awareness for key stakeholders, the public, motorists, commuters, trucking and freight carriers, news media, community groups, environmental organizations, and others to mitigate impacts, create a positive environment of awareness, and build project support. On Point’s Richmond office has extensive experience working with VDOT Richmond District. **They will report to the DBPM as well as coordinate with VDOT.**

3.3.1 | IDENTIFICATION & QUALIFICATIONS OF KEY PERSONNEL

Wagman has assembled a team of highly qualified and locally experienced individuals, many of whom have previous experience working together in and for VDOT. Our key staff and key design firms are based in Northern Virginia and have experience with delivering roadway, traffic, utilities, ROW, and construction projects in the region to VDOT standards. The **Wagman DBT** – in particular our Key Personnel – will remain intact for the duration of the contract, providing continuity of leadership as we deliver the project. Many of our Key Personnel are replicating roles they have held on similar projects – and on Wagman D-B teams – and all bring in-depth understanding of the reporting structure of the team as outlined below. Their detailed qualifications and experience can be found in their *Attachment 3.3.1 – Key Personnel Resume Forms*.

KEY POSITION	KEY PERSONNEL	FIRM
Design-Build Project Manager (DBPM)	Glen Mays, DBIA	Wagman Heavy Civil, Inc.
Quality Assurance Manager (QAM)	Bryan Barnson, PE	CES Consulting, LLC
Design Manager (DM)	Brian Graham, PE	Volkert, Inc.
Construction Manager (CM)	David Leber, PMP, DBIA	Wagman Heavy Civil, Inc.
Lead Utility Coordination Manager (LUCM)	Matt McLaughlin	CES Consulting, LLC

3.3.2 | ORGANIZATIONAL CHART & REPORTING RELATIONSHIPS

The **Wagman DBT** structure seamlessly integrates design, construction, QA/QC, and associated disciplines such as ROW, utility coordination, environmental compliance, public involvement, and stakeholder coordination into a cohesive process. Our organizational chart shows the “chain of command” of all companies on the DBT, including individuals responsible for the disciplines proposed. It identifies major functions and defines the reporting relationships of personnel responsible for the integrated management of design, construction, and QA/QC activities. The chart further illustrates the design team’s collaborative relationships, led by the DM, and how that unit integrates with the construction team through the DBPM.

Project success starts and concludes with collaboration built upon continuous communication. From regular team meetings to issue-specific stakeholder meetings to public meetings, communication drives collaborative issue resolution from award to project delivery. During the design phase the design team seeks valuable input from the construction team as the designers develop constructible plans; and conversely the construction team enlists the perspective of the design team as challenges arise in the field. They mutually recognize the valuable perspective each brings to the design and construction on behalf of the project.

DBPM: Glen Mays, DBIA (Wagman) is VDOT’s primary point-of-contact for the Project, and is responsible for management of overall project design, construction, quality management, and construction administration for the project. As DBPM, he is responsible for meeting all contract obligations. He is empowered to answer questions and inquiries relevant to the project; and he will also coordinate any required public outreach and public meetings. Mr. Mays can bring all the team resources and full authority over all aspects of this project. Mr. Mays brings this team and VDOT his previous experience on successful D-B Projects totaling \$230M, which included similar scope elements. As such, he will achieve success on this D-B project through consistent communication and collaboration with VDOT, all members of the D-B team, and coordinate any required public outreach and public meetings, to meet or exceed contract obligations.

QAM: Bryan Barnson, PE, CCM, DBIA (CES) reports directly to the DBPM, and is responsible for overseeing construction quality. He is from a completely independent firm with no contractual relationship and no involvement in construction operations or quality control inspection and testing; and through our reporting structure he is completely independent of the design and construction teams. He will have an active role in the constructability process. Further, he will ensure that all work and materials, testing, sampling are performed in conformance with contract requirements and ‘approved for construction’ plans and specifications. He brings 26 years of construction management and project controls experience focused on transportation infrastructure. His experience includes QA, QC, and OIA (owner’s independent assurance) management of routine and complex D-B-B and D-B projects including QA and QC management of several D-B projects involving the construction of bridges.

Our goal regarding quality is to minimize or eliminate non-compliance issues prior to their occurrence - comprehensive inspection, frequent communication, well-defined documentation, and by holding point and pre-activity meetings.

DM: Brian Graham, PE (Volkert) reports to the DBPM and has overall responsibility for management of the design, and the establishment and oversight of the design QA/QC program. Mr. Graham’s role includes confirming the overall Project design (of each of the bridges) complies with the contract documents, oversight of design subconsultants, and coordination with each of the design support discipline leads shown on the Organizational Chart. As DM, he will work closely with the DBPM to develop best-value solutions; confirm consistent design plan development and coordination among design elements; and attend progress, coordination, and public outreach meetings for the project. He will also oversee establishment and implementation of the design QA/QC program, which will be followed by Volkert and all design subconsultant team members. He brings 22 years of structural design experience for VDOT and Virginia municipalities that includes the replacement of the superstructure and repair of the substructure of Arlington County’s forthcoming first transportation D-B procurement, *West Glebe Road Bridge over Four Mile Run*. Additionally, he has provided structural design and superstructure replacement design on numerous VDOT D-B projects including *MLK Expressway Extension of Elizabeth River Tunnels P3, I-581 & Elm Avenue D-B*, and *Rolling Road D-B* as well as the structural design on the D-B-B 195/Route 76 in the City of Richmond.

CM: David Leber, PMP, DBIA (Wagman) reports to the DBPM. He has responsibility for oversight of all construction activities and will be on the Project Site for the duration of construction operations. He will also review the project schedule and look-ahead schedules to ensure that equipment and personnel are efficiently utilized. Mr. Leber has nearly 20 years of construction experience. His most recent D-B experience includes serving as the Construction Manager on *VDOT's Route 7 Widening and Bridge Rehabilitation over Dulles Toll Road*, as well as the *VDOT Route 7 and Battlefield Parkway Interchange* projects. Additionally, Dave is certified by the Virginia Department of Environmental Quality (DEQ) as a Responsible Land Disturber (RLD) and holds a VDOT Erosion and Sediment Control Contractor Certification (ESCCC).

LUCM: Matt McLaughlin, CCM (CES) reports to the DBPM as well as coordinates regularly with the DM and CM. He will review, verify and coordinate the modifications of utility designs to mitigate potential conflicts. He is responsible for inspection and coordination of all utility relocation construction activities; review utility relocation designs prepared by engineers for contract relocations; and verify/coordinate design modifications, as necessary, based on field conditions and construction activities. As LUCM, he shall ensure continuity of service as per the contract documents. His 34 years of experience includes utility coordination and management for 400+ projects for VDOT, including nine years as a VDOT District Utility Construction Manager. He has established productive working relationships with the major utility providers and their procedures/requirements. He has worked with DBPM Glen Mays on *NB Rappahannock Bridge* and *SB Rappahannock Bridge/CD Roads D-B*.

Value-Added Personnel

The **Wagman DBT** includes personnel who enhance the team's expertise and ability to resolve project challenges and meet VDOT's requirements for quality, safety, budget, and schedule.

Design-Build Integrator: Scott Rhine, PE (Wagman) reports to the DBPM brings more than 25 years of design and construction experience, including project management and leadership for over \$3 billion in pursuits and execution of design-build projects throughout the United States. Scott has served as EOR for over 50 Bridge rehabilitation projects, a number using ABC methods. He is an industry proven integrated design-builder bringing added value with his extensive design build experience in seamlessly tying together the design development through construction to deliver an optimized, efficient and constructable solution for projects.

Roadway Design Lead: Jason Jiménez-Pisani, PE (Volkert) reports to the DM and brings 17 years of roadway design experience, many leading design efforts for VDOT projects. His design experience includes roadways, interchanges, interstates, pedestrian facilities, drainage, and conventional infrastructure projects. Relevant VDOT projects include the *Courtland Interchange on Route 58*, leading roadway design and TMP phasing for new interchange; and the *MLK Expressway Extension, Elizabeth River Crossing/Midtown Tunnel (D-B) P3*, where he led roadway design of one-mile, four-lane, elevated, limited-access facility.

Project Superintendent: Mike Dugan (Wagman) reports to the CM. He has over 40 years of construction experience building complex bridge structures in the Mid-Atlantic. Mike's expertise includes structural steel erection over Interstates and completion of phased superstructure elements. Recently Mike managed the Structural Steel erection on *I-95 over the Rappahannock D-B* project.

Traffic Engineering Lead: Hari Thaker, PE, PTOE, RSP (Volkert) reports to the DM. Also, on the *West Glebe Road Bridge over Four-Mile Run*, he developed the conceptual sequence of construction plans for the two lanes of traffic (one in each direction) which will be maintained throughout construction and additionally located streetlights at each corner of the bridge and on the bridge railing in accordance with appropriate Signal and Street Lighting Standards. Mr. Thaker's experience includes developing MOT plans on I-66 and I-495.

MOT Superintendent: David Creasey (Wagman) reports to the CM and collaborates with Mr. Thaker, the Traffic Engineering Lead about optimal MOT solutions to minimize impacts and disturbance to travelling public on both bridges themselves as well as I-95 highway below. He brings 12 years of heavy highway construction experience, most recently as MOT Superintendent for the successful I-95 SB Rappahannock River Crossing project coordinating and implementing MOT for highly congested interchanges of Rte. 17/I-95 and Rte. 3/I-95.

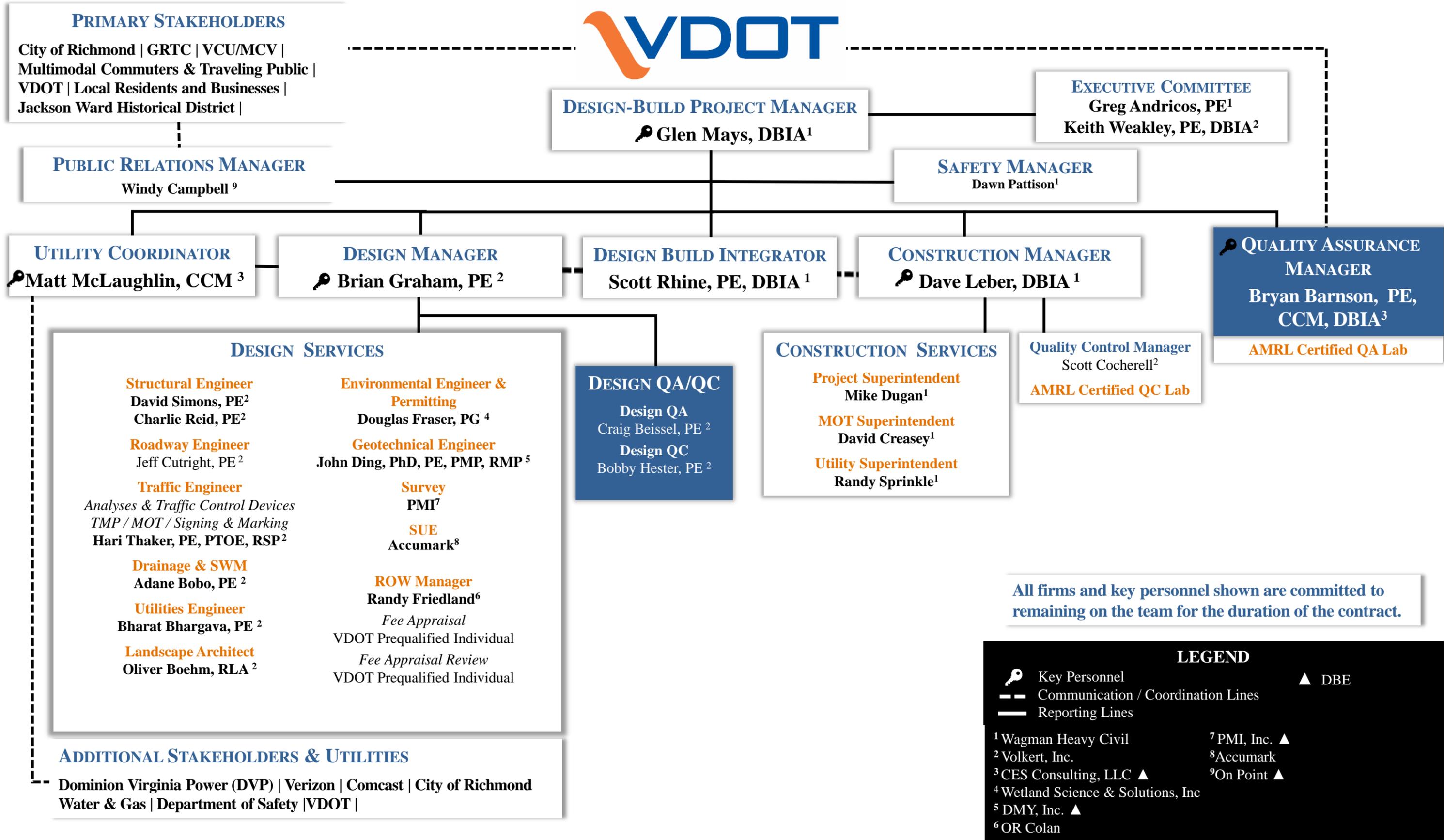
Utilities Design Lead: Bharat Bhargava, PE, (Volkert) reports to the DM. His experience includes roadway design, drainage and stormwater management (SWM) design, bridge hydraulics, utility relocation, preparation of maintenance-of-traffic (MOT) plans, and design of bicycle and pedestrian facilities for transportation infrastructure projects.

Utility Superintendent: Randy Sprinkle (Wagman) reports to the CM while also coordinating regularly with the LUCM and the Utilities Design Lead Engineer to efficiently implement utility mitigation and relocation schemes in the field and provide onsite coordination with utilities owners and contractors. Randy brings 25 years of heavy highway experience with onsite utility coordination on large complex projects.

Public Relations Manager: Windy Campbell (On Point) reports to the DBPM and will coordinate and implement public outreach activities as a liaison between VDOT, the City, the traveling public, and other stakeholders. She will provide frequent and regular updates on construction operations and their potential impacts. She will assist in the communication programs and strategies development to achieve project goals and promote the project's progress and success to all stakeholders and the public.

Safety Manager: Dawn Pattison (Wagman) reports to the DBPM and has over 15 years of construction experience with over 10 in construction safety. Dawn holds the following certifications: OSHA 10, 30, 500, 501, 511, 2225, 2264, 3095, 3015, 3115, 7505; HAZWOPER 40; Rigger/Signal- I, through I&I Sling FA/CPR/AED Instructor through the National Safety Council; Reasonable Suspicion for Supervisor Instructor through Chesapeake Regional Safety Council; VA E&S and Storm Water Management Cert.; and VDOT-Intermediate/Basic Work Zone Traffic Control Cert.

3.3 | OFFEROR'S TEAM STRUCTURE





Design-Build Project
I-95 City of Richmond Bridge Superstructure
Replacement and Rehabilitation Bundling
City of Richmond, VA

3.4 Experience of Offeror's Team





Design-Build Project
I-95 City of Richmond Bridge Superstructure
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3.5 Project Risks



Project Risks Introduction and Evaluation Process

The first step in managing risk is to identify and assess the risks according to respective severity. The Wagman DBT held a Risk Workshop modeled on the system outlined in VDOT’s Project Management Procedure PMO-15.0 “Project Risk Management” to assess/assign probability and severity to risks. All perspectives of risk were considered, the DBT collectively concentrated predominately on risks impacting the ability to deliver the project on-time, within budget, least impactful to the public, and to the quality level expected by VDOT.

The Risk Workshop identified a vast number of individual risks. These risks were evaluated by degree of impact and probability of occurrence. During discussion of these risks, the mitigation measures that the DBT could employ were explored and evaluated as well (See risk examples in table here.)

The Wagman-Volkert DBT members’ experience on numerous major D-B transportation projects have contributed to successful implementation of risk mitigation strategies identified in this section. In consideration of the risks most relevant and critical to the success of this project, our team reviewed the RFQ documents and plans, visited the respective project bridge sites, and reached out to utility owners.

After evaluating the goals of the project and all inherent risks through a comprehensive risk analysis workshop, we identified the following as the three most critical risks to be mitigated for successful project delivery:

1. **Utilities: Coordination & Management**
2. **MOT and Traffic Mobility During Construction on Multiple Downtown Bridges**
3. **Re-Use of Existing Substructure Units**

The second step the DBT employed in managing the risks was to develop strategies, specific processes or actions in order to minimize or mitigate the impacts associated with the respective risks. Risk mitigation strategies were developed for these three (3) critical project risks and additionally assessed as to the level of criticality of each of these risks on the specific bridges themselves. These have been elaborated within the risk descriptions and mitigation strategies that follow in this section. However, when responding to the RFP in a technical proposal, the DBT will develop a more detailed risk management plan for the Project that will include a risk register that includes all the risks identified during our workshop with risk factors of medium and high. This plan will include strategies to respond to each of those risks and will identify the party or individual best responsible for managing the risk. It will allow the DBT to create mitigation plans, build contingencies into the Project or adjust the Project schedule to manage the risk. Mitigation measures described below will achieve the Project goals and address the regional priorities.

The final steps in managing risk involve tracking the risk, evaluating the effectiveness of the mitigation strategies, and modifying these strategies as necessary. During delivery of the Project, our DBPM will be responsible for managing the risk on the project. The DBPM will continually track all trends associated with the risks. Risks will be reviewed and re-evaluated by the DBT and communicated monthly to VDOT until they have been mitigated or are no longer considered a risk. Mitigation strategies will be modified as necessary and new risks will be added to the register and tracked as they are identified.

Identified Risk	Risk Factor
Roadway Profile Constraints	Low
Low Bridge Clearances (all bridges)	Medium
Timeliness of Utilities Relocation	High
Foundations - proximity to existing utilities/vibration	Medium
Safety – Construction area includes overhead transmission and interstate below	High
Constrained Proximity to I-95 during erection/foundation reinforcement	Medium-High
ROW Acquisition	Low
MOT - Construction over/under live interstates (95 and 64); pedestrian access; downtown location of 5 proximate bridge work zones	High
Re-Use of Substructure: new loading conditions	Medium-High
Overhead Transmission Utilities – Relocation: Schedule, Wrong Clearance Adjustment, Ability to Raise Utilities Due to Permitting	High

Risk #1: Utilities Management

Risk Description

Coordination and management of existing utilities and potential utility relocations is critical for a successful project and will be one of the first priorities addressed in the design phase of this Design-Build Project. Utilities are vital to the public and service must be maintained throughout the construction process, however, they are elevated to the stature of critical on this Project due to the presence of a hospital, VDOT Central Offices, a major university and surrounding residents and businesses. Service *must and will be maintained* throughout the construction process. Utilities identified within the Project area are listed in the table here. Our team recognizes the potential existence of additional unmarked utilities that may service major stakeholders and may require mitigation.

The affected utility companies identified within the project area include:

- City of Richmond Water and Gas
- Dominion Energy
- Comcast
- Department of Safety
- Verizon
- VDOT

Why This Risk is Critical and How It May Impact the Project

The Wagman DBT has identified Utilities Management as one of the most critical risks involved in this *Richmond Bridges D-B Project*. Major reasons why utility coordination becomes a critical risk on design-build projects is lack of a detailed survey and as-built information on all utilities (at the current RFQ or RFP stage of procurement) and limited authority of the design-builder on the utility provider's schedule and performance. This uncertainty of available information and limited control on Utility provider's resources can potentially have major impacts on construction sequence, right of way/easements, impacts to the travelling public, project schedule and ultimately project costs. The current corridor already identified six (6) major utility owners/providers but each carrier may also carry multiple other carriers within their respective infrastructure.

While electrical and telecommunication lines run throughout the limits of the Project and will be carefully considered in the design and construction process, large diameter water and gas lines are also present, and they pose potential conflicts with the proposed Project.

We have described the specific utilities-related risks on each of the respective bridges below.

1st Street Bridge: *Wagman DBT Mitigation Strategies*

There is a Dominion Energy pole distribution system adjacent to the bridge to include a pole that is attached to the bridge. There is a watermain system that is attached to the bridge on the outside bay with manholes in the sidewalk. The gas main is attached to the bridge on the other outside bay. There are Verizon conduits and other communications conduits for the Department of Public Safety attached in the inner bays.

- Bay 1 12" Water main with manholes in the sidewalk
- Bay 4 12-3.5" Verizon conduits
- Bay 5 1-3.5" Department of Safety conduit
- Bay 6 6" Gas main

The Dominion Energy distribution pole system will have to be relocated to provide the required overhead clearance that is specified in the Overhead High Voltage Line Safety Act and is attached to the bridge. This will require easements and will have to be prioritized to be acquired early. There is a Comcast CATV system attached to the old poles and this system will have to be attached to the relocated distribution poles. The gas and the water mains are attached to the outside bays of the bridge. The mains will either be temporarily placed out of service or a temporary facility will be constructed under the other half of the bridge that is being reconstructed in the second phase. The Verizon and the Department of Public Safety communications conduits will be temporarily placed on the section of the bridge that is being reconstructed in the second phase or on a temporary pole system to cross the interstate. Both Strategies have been successfully used by the Wagman DBT on previous complex bridge reconstruction projects in Virginia.

4th Street Bridge: *Wagman DBT Mitigation Strategies*

There is an electrical duct bank system, with asbestos conduits, that are attached to the bridge in bay 8. If the system is inactive it can be abandoned, then the conduits will be removed, and the asbestos will be abated according to applicable Federal and State Laws. If the system is still active, then it will be de-energized, and a **temporary under-bridge lighting system will be provided if required**. Ultimately, a new conduit system will be installed for the Department of Safety system to resolve the conflict. Therefore, utility relocations will not be on the critical path for the rehabilitation of this bridge.

- Bay 2 3-3" Department of Safety conduits
- Bay 8 Possible abandoned electrical conduit

5th Street Bridge: *Wagman DBT Mitigation Strategies*

There is an abandoned water main attached to the first bay of the bridge which will be removed with the re-construction of the bridge. There are a 6" and a 12" gas main attached to the bridge in bay 6. In bays 3 and 4, there are electrical conduits.

- Bay 1 Abandoned 12" water main.
- Bay 3 8-5" Dominion electrical conduits
- Bay 4 Electrical conduits
- Bay 6 6" and 12" gas mains

If the gas mains cannot be temporarily disconnected, then the side of the bridge that they are attached to will be reconstructed in the second phase. New gas mains will be attached to the new bridge superstructure to allow for the existing gas mains to be removed in the second phase of the bridge re-construction. There are electrical conduits attached to the bridge in bays 3 and 4. Since there are 6 bays total, then the electric conduits will be in both phases of the bridge re-construction. If the system that is in conflict cannot be de-energized, then spare ducts will be used or installed in the side of the bridge that is being re-constructed in the second phase.

7th Street Bridge: *Wagman DBT Mitigation Strategies*

This bridge has a water main attached to the bridge in bay 1 and a gas main in bay 6. There is a Verizon conduit duct system in bay 2, Department of Safety conduits in bay 3 and multiple electrical conduits in bays 4 and 5.

- Bay 1 12" Water main
- Bay 2 16-3.5" Verizon conduit duct system
- Bay 3 3-3.5" Department of Safety conduit duct system
- Bay 4 Electrical conduits
- Bay 5 Electrical conduits
- Bay 6 6" Gas main

It is possible that the gas main can be temporarily disconnected but this will depend on the time of year restrictions. If it cannot be disconnected, then a temporary pipe will be installed in the second phase of the bridge re-construction. The same concept is true for the water main conflicts. There are multiple electrical conduits attached to bays 4 and 5, so temporary conduits will have to be installed in the second phase as well. These electrical conduits are either VDOT facilities or owned by Dominion Energy. This will be determined when the preliminary meetings are held during Technical Proposal development. The communication conduits for Verizon and the Department of Public Safety will have new conduits attached to the bays in the first phase of the bridge re-construction or temporarily attached to a pole system.

Broad Street Bridge: *Wagman DBT Mitigation Strategies*

There is a water and gas main in bay 1 and a water and gas main in bay 10 which is under the pedestrian bridge sections. The water and gas mains are all 12" pipes. There are electrical conduits in bays 6 and 9.

- Bay 1 12" water and 12" gas main
- Bay 2 6" Verizon conduit

- Bay 6 4” Electrical conduits
- Bay 9 Electrical conduits
- Bay 10 12” water and 12” gas main

It appears that there are redundant water and gas systems in this bridge so one set of pipes may be able to be temporarily disconnected when that particular phase of the bridge is re-constructed. Using phased construction, the new pipes will be placed in the new bridge superstructure to allow for the systems to be transferred from the conflicted phase. To maximize the area of bridge to be reconstructed in a phase, the pedestrian bridge additions could be left in-place to carry one set of gas and water mains. The Verizon system will either be transferred or temporarily installed on poles and electrical conduits will be placed in the early phase of the bridge re-construction to allow time to install and splice in the cables to resolve the conflict. The Wagman DBT is also considering a temporary utility/pedestrian bridge by modifying the existing bridge deck.

Wagman DBT Overall Utility Relocation Strategies

Many of these bridges have water and gas mains attached to the bridges which is the biggest challenge regarding the utility relocation efforts. The 4th Street Bridge is the exception. Different strategies will be discussed with the City of Richmond Water and Gas Departments to create an approach that will allow for the re-construction of the bridges while keeping their systems operational. To help identify mitigation strategies with the City of Richmond, the Wagman DBT will incorporate any utility time of year restrictions into our CPM project schedule. The installation of temporary pipes, possible disconnections, or constructing new mains are all options which are driven by time of year restrictions and how their systems function. The relocation of the Verizon system can create extended time to perform the splicing for large diameter copper cables. If the cables cannot be downsized, then this drives a temporary poles system or a temporary bridge attachment. The Department of Safety system is likely a fiber optic facility that normally has slack to allow for adjustments. A series of meetings will be held during technical proposal development with the affected utility companies to determine the ownership of the conduit systems and if they are active or not. The creation of realistic schedules, preplanning of resources, prioritizing land rights for needed parcels, and obtaining signed authorizations in advance will be critical to utility relocation activities for this project. As needed to protect overall schedule or budget, Wagman can self-perform installation of utility infrastructure (including conduits) across the bridges and beyond approach slabs to reduce scope of work performed by utility company resources.

In addition to installing all structure mounted utility infrastructure on VDOT’s Rte. 7 Bridge over the DTR/DIAAH, the Wagman DBT under CM Dave Leber’s direction also rephased the original sequence of construction from seven phases to four phases in order to advance the erection of the structural elements needed to support over 20 individual utility crossings allowing this fast-track project to finish ahead of schedule.

Role of VDOT and Other Agencies

We anticipate VDOT will participate in design and relocation meetings with utility providers. VDOT will review and approve the relocation plans prior to start of the relocation efforts and will approve any associated permits and ROW documents. The DBT will communicate, coordinate, and manage the utility relocation efforts with the utility providers on this project from the beginning to its successful completion. The DBT will deal with any utility company that is unresponsive and VDOT will be kept apprised of the progress of the utility relocation efforts through regular meetings and reports.

Risk #2: Maintenance of Traffic & Traffic Mobility during Construction

Risk Description

Maintenance of Traffic (MOT) is always a concern on any construction project with the goal being to effectively maintain vehicular and pedestrian mobility and safely through a work zone. The risk is more pronounced when it involves bridge construction due to constrained footprint and lack of shoulder and/or other

temporary pavement widening options. This Project will have five work zones all in close proximity in a heavily travelled downtown area, on I-95 and on each bridge traversing I-95. The combination of heavily congested I-95 traffic with consistent overhead traffic on each of these downtown Richmond bridges carrying local and commuter trips, regular EMS trips serving the VCU Hospital, coupled with the introduction of potential new traffic patterns created by lane shifts and detours during construction make this a critical risk.

Why This Risk is Critical and May Impact the Project

I-95 is a major interstate for commuters travelling to or through Richmond for work or travel and reconstruction of five (5) bridges in this urban setting may temporarily increase congestion and stress for the travelling public. Continued safe and easy accessibility to and from I-95 & I-64 is vital to the success of the overall Project and it will rely on the user's and observer's perspectives. Equally important is the public's navigation of each of these downtown bridges themselves. Stakeholders will deem the project a success or failure depending on impacts to their special interests. For an owner such as VDOT, traffic operation, budget and schedule are metrics for measuring success that can be greatly diminished by traffic disruption. The traveling public and community will determine the success of the project by experiences they encounter while driving, walking, and/or biking through the work zone during construction. Having inadequate and improper MOT and communication can cause driver and stakeholder frustration, which can cause project schedule delays.

Wagman DBT Mitigation Strategies

The primary focus of the DBT is to construct the Project in a safe and timely manner. Although not an all-inclusive list, the key MOT considerations will be to maintain:

- satisfactory vehicular traffic operation,
- accessibility to motorized and non-motorized users
- develop the operational and communication strategies to inform the stakeholders about project progress, updates, incident management, and timeline throughout the Project.

We anticipate developing a Type 'C' Transportation Management Plan (TMP) that includes requisite temporary traffic control plans, Transportation Operations Plan, and Public Communications Plan. The TMP mandates coordination with VDOT, City of Richmond, Greater Richmond Transit Company (GRTC) and other stakeholders

regarding traffic pattern changes, response to accidents, incident management response, and restoring normal traffic operations. The TMP ensures coordination with the VDOT Richmond District Traffic Operations Center (TOC), Virginia State Police's (VSP) Richmond Division Emergency Communications Center, City of Richmond Traffic Management Center, and other stakeholders regarding traffic pattern changes, response to accidents, incident management response, and restoring normal traffic operations. MOT plans are developed to ensure the safety of the construction workers, motorists, pedestrians, and bicyclists who utilize the Project bridges and surrounding area not only for daily commute but also for recreational purpose. The DBT is committed to evaluating all possible scenarios for MOT to ensure construction of the individual bridges occurs in a fiscally responsible, timely, and safe manner and in a coordinative relationship of construction activities on simultaneous bridge construction. Construction personnel will be heavily involved in MOT plan(s) development to ensure constructability. Provisions will also be made for weather and scheduled events that could be expected to generate significant changes in traffic volumes and operations to the area. Wagman will employ an ATSSA and VDOT certified MOT Manager supported by a VDOT Intermediate Traffic Control certified foreman.

During construction, the Wagman DBT will develop a comprehensive workplan for every major traffic switch, detour, or major lane closure.

To mitigate the risk associated with MOT, the DBT will expedite construction activities and schedule with advance work packages and efficient phasing that will reduce the construction timeframe. ABC Methods will advance the project schedule while also limiting traffic pattern shifts, lane closures, detours, delays, and inconvenience to the public.

It is our intent to have particularly well-lit and well signed work zones to provide safe work zones for all users (construction crews and the traveling public alike) that will serve to minimize driver confusion/distraction in the constrained bridges' project footprints.

- **Lane Closures, Detours and Early Learning:** We may construct a temporary pedestrian facility at the Broad Street Bridge to allow for traffic shifts while maintaining two lanes of traffic (one in each direction) and ensuring safe work zones during allowable weekend closures. This allows a larger work area for construction, material and equipment storage, and faster project delivery. The Wagman DBT is aware of the existing hanger pin configuration in the east span and will engineer and install temporary modifications to this connection allowing the phased removal of the superstructure. Our Team will explore many Accelerated Bridge Construction Techniques (ABC) such as precast deck panels with high performance concrete closure pours, or precast segment bridges with precast deck and integral steel beams and also the use of Self-Propelled Modular Transporters (SPMT's) for larger sections of bridge superstructure replacement during a weekend closure.

Wagman was employed by Maryland State Highway Administration (SHA) for a pilot program to remove and replace the superstructure of 2 bridges over I-295 with SPMT's during weekend night closures near BWI airport.

Intermittent lane closures during non-peak hours may be needed. Detour plans specifically for EMS activities will be developed identifying alternate routes in the event these are needed. Lane closures on I-95 may be required during weekend off-peak hours to allow erection of ABC bridge elements for the Broad Street Bridge. The Wagman DBT will work with VDOT communications to develop and implement corridor notifications to inform I-95 traffic to avoid the area around Richmond and utilize I-295 to lessen the traffic impacts during implementing this form of construction. In addition, we will investigate local routes to help reroute traffic during the ABC construction of Broad Street bridge. Detailed traffic analysis will be conducted to evaluate the 'before construction/ existing' and 'during construction' conditions. Capacity constraints will be identified, and mitigation measures will be executed to avoid/minimize the traffic impacts resulting from rerouted trips along alternate routes as well as for the I-95 merging/diverging ramps. If multiple bridge construction is proposed simultaneously, we will evaluate the traffic impacts of lane closure on the surrounding roadways and intersections. For example, the N 7th Street bridge construction requires the closure of southbound traffic and trips are diverted via N 4th Street bridge. Through sound traffic analysis, it will be determined if it is a feasible scenario to simultaneously construct N 4th street and N 7th Street bridges without causing overwhelming traffic disruption.

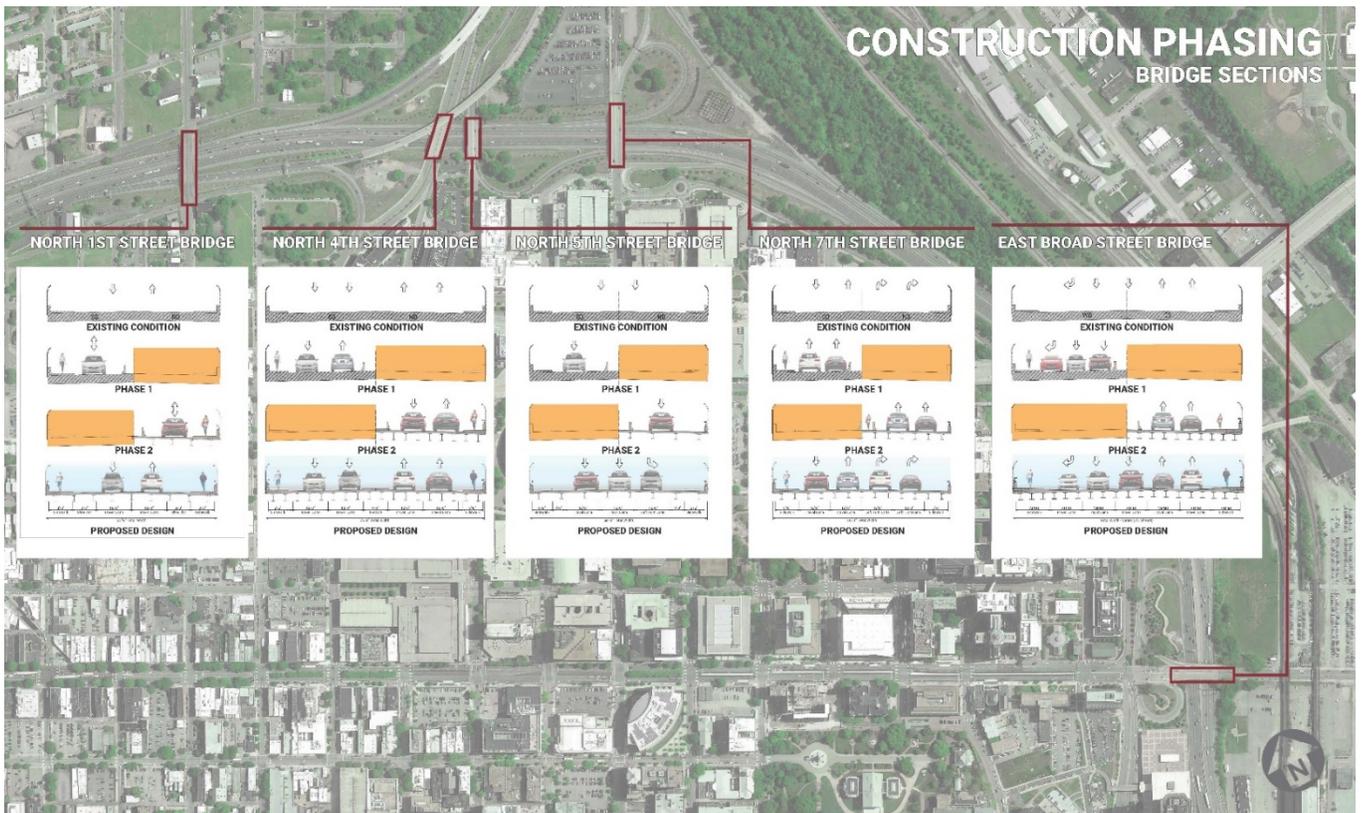
Long-term detour, traffic signal modification and signal timing/phasing modification are also key elements. Signal plans will be developed and proposed modifications to signals will be coordinated with the City and VDOT for their approval.

- **Temporary Lane Closures along I-95:** During the pier construction and superstructure replacement, temporary lane closures along I-95 will be necessary. Construction sequencing will be paramount in order to minimize traffic disruption along I-95. For weekend superstructure removal and replacement, it is anticipated that through traffic can be rerouted to I-295 through appropriate outreach and local traffic can be reduced to a single lane in each direction. The Wagman DBT will also evaluate the potential to install temporary cross overs in the median of I-95, north and south of Broad Street, such that both lanes of local traffic could be placed in the span that is not being replaced on a particular weekend eliminating the amount of standard slow roll operations coordinated with Virginia State Police. All temporary traffic control and construction entrances will be properly designated and designed to incorporate adequate deflection zones and/or pinned barrier as required.
- **Incident Management:** The ability to provide incident management and allow EMS vehicles necessary access is a critical part of the Project's MOT plan. Our Incident Management Plan's (IMP) focus is to plan for unexpected and unplanned events – accidents, emergencies, and disabled vehicles. We will incorporate temporary variable message signs within the corridor to provide real time updates and driver information; this is crucial to maintaining safe travel during the construction period. Should an incident occur, the

Wagman DBT will be able to provide the appropriate access for EMS vehicles including necessary accommodation of large vehicle sizes. Wagman routinely meets with first responders during design development on our projects, so we understand how to navigate through or around our work zones before they are put in place. Our TMP will include a detailed incident management plan to provide:

- On-call towing services to quickly respond to disabled vehicles
- Law enforcement, fire, and ambulance access to work zone during incidents
- Kick-off meeting, progress meetings and coordination with first responders and VDOT
- 24/7 contacts for emergency notification of an incident
- Coordinated Emergency Management Plan inclusive of signage
- Agency/Stakeholder contact and response matrix
- Coordination with adjacent projects
- Pre-staged detour equipment and materials
- Pre-planned messages for various types of incidents

➤ **Communications:** The DBT will work closely with stakeholders to keep them informed regarding construction activities. Public outreach as part of the TMP will be critical to minimize impacts to the motorists, pedestrians and bicyclists. Wagman conducts weekly schedule meetings to ensure all stakeholders know what to expect for the next three weeks. On a project on I-95 in Baltimore, MD, we developed hour-by-hour schedules to ensure lanes & ramps were opened on time with little disruption to the travelling public. Our direct responsibility on this Project includes posting advance Variable Message Signs (VMS) along I-95, I-64 and on roadways approaching the five bridges at 1st Street, 4th Street, 5th Street, 7th Street, and Broad Street; ground mounted signage will be provided on these and adjacent roads leading to construction activities and work zones. Proposed construction phasing is shown in the graphic below.



Proposed Construction Phasing

Role of VDOT and Other Agencies

The Wagman DBT anticipates supporting VDOT in their public outreach to ensure stakeholders are up to date with consistent project progress and traffic pattern messaging; this will enable the public and EMS to be provided with enough information in a timely manner to make educated decisions about alternate routes and/or times when delays are expected using both Department resources and social media (WAZE, Google Maps). Likewise, signage will be coordinated with VDOT to provide regional notifications on I-95, I-295, I-85, I-64, and other major corridors; as well as in advance of the respective bridges under construction as advisories (detours as necessary) for multimodal movement of vehicles, bicycles, and pedestrians in downtown area.

Risk #3: Re-Use of Existing Substructure Units

Risk Description

One of the major risks on this Project is ensuring that the existing substructure units can support the new loading conditions. According to the RFQ plans, all of the bridges on this Project will have continuous steel superstructures with the exception of Broad Street. Currently, the 4th Street bridge is the only bridge designed for continuous steel beams. The substructure for each bridge will need to be repaired or enhanced to accommodate the new superstructure and loading.

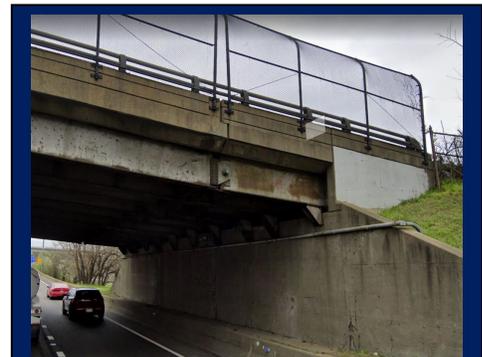
Why This Risk is Critical and How It May Impact the Project

Loading of Substructure Elements & Foundations: The 4th Street bridge is supported on prestressed concrete piles. It is assumed that these piles were designed to resist the loads from the continuous superstructure, so there should be low risk at this location. However, the 1st Street, 5th Street, and 7th Street bridges are supported by spread footings. These spread footings are founded on firm material and according to the geotechnical report, the footing bearing capacity for the spread footings at 1st Street and 5th Street is 1.5 tsf. The report does not give a capacity for the spread footings on the 7th Street bridge.

For all three bridges with spread footings, the footings are all approximately 60' long and 9'-8" wide. With such narrow footings and low bearing capacity, it will be very challenging to design the superstructure replacement in a way that does not overload these foundations. These bridges were designed with two lines of fixed bearings or 2 lines of expansions bearings at each pier. This results in a very low or zero net longitudinal temperature force because the spans expand and contract in opposite directions and the forces applied to the piers cancel each other out. If these spans are made continuous, the temperature forces will all go in the same direction from the thermal center of the structure. This additional longitudinal force along with the longitudinal forces from braking will increase overturning forces and increase the loads on the foundations. This is in addition to the increased vertical dead load and live loads that result from the effects of span continuity.

The **1st Street Bridge** and the **7th Street Bridge** were both lengthened in the past to accommodate the Ramp to I-64 East. The end spans were both lengthened from approximately 30' to 60'. Because of this, the existing pier is already supporting a span that is twice as long as it was originally designed for.

The **Broad Street Bridge** was also lengthened in the past to accommodate widening of I-95. However, the detail used for the lengthening did not increase the loads on the pier. This detail includes a cantilever span at the abutment that supports the original span with a pin connection (see graphic here).



Existing cantilever beams with pin connections used to lengthen the **Broad Street Bridge**. The condition of the anchor bolts in the back of the abutment that hold down the cantilever beams is not known so extreme care will be required when removing the existing deck and superstructure. Temporary modification to this pin connection and the existing restraints may be required to ensure the safety of the traveling public on NB I-95.

The RFQ plans indicate that the new superstructure for the **Broad Street Bridge** will be two simple spans. But the new simple span will not have this pin detail, which will increase the design span length for the pier by approximately 12'. This will result in dead and live loads that are higher than the loads the pier was originally designed for.

In addition to the higher loads that these foundations have incurred from past bridge modifications and higher loads that will be imposed from span continuity, there is also a possibility that more girder lines will be required to make the superstructure shallow enough to meet the vertical clearance requirements. The RFQ concept plans indicate that the number of beams will increase on all of the bridges and almost double on the 4th Street, 7th Street and Broad Street Bridges. These extra girder lines will increase the dead load and change the locations where the loads are applied which could result in the need for pier cap replacement or strengthening.

Substructure Repairs: The existing bridges are over 50 years old and many locations on the substructure are in need of repair. Each substructure elements will require inspections and repair procedures to ensure the ability to support the new loads. Repair limits are difficult to establish until the proper inspections are completed, and the substructure is analyzed to support the new loading.

Wagman DBT Mitigation Strategies

In order to mitigate these effects, efforts will be made to ensure that the dead loads from the proposed superstructure will not be higher than the current condition. The challenge will be evaluating the vertical and longitudinal loads. These design loads will be minimized by using the AASHTO Standard Specifications that were used for the original design. This is in accordance with the VDOT Structure & Bridge Manual (Chapter 32, File No. 32.09-5).

Additional methods to mitigate high superstructure loads include the use of lightweight concrete in the deck and sidewalks and/or in concert with efficient girder design to reduce loads from the structural steel. See examples of substructure repair on the Route 7 Widening and Bridge Rehabilitation over the Dulles Toll Road and Dulles International Airport Access Highway.

Additional Wagman DBT mitigation strategies include:

- Consider converting the piers to wall piers if the pier caps or columns are overstressed. This will also be beneficial for construction phasing.
- Reduce the bearing pressure on the existing footings by widening and/or adding micropiles. This can be done while the superstructure is removed to ensure that the dead loads from the new superstructure will be distributed to the modified portion of the foundation.
- Use bearings with low friction coefficients to reduce longitudinal forces on pier with expansion bearings.
- Early inspection and investigation to determine the extent of substructure repair.
- Keep enough resources on stand-by to address any unforeseen repairs once construction starts.

Role of VDOT and Other Agencies

VDOT will participate in design review and approval process of the most appropriate design measures to be implemented and constructed. **VDOT will review and approve limits of repair and reconstruction on all substructure units.**



Substructure repair on Rte. 7 bridges over the DTR and DIAAH performed using innovative corrosive protection and specialty concrete allowing for more repairs than VDOT had anticipated while staying within their budget.



Design-Build Project
I-95 City of Richmond Bridge Superstructure
Replacement and Rehabilitation Bundling
City of Richmond, VA

3.6 Appendices





3.1.2 SOQ Checklist

ATTACHMENT 3.1.2

Contract ID C00111300DB107

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	
Letter of Submittal (on Offeror's letterhead)				1
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 – Attachment 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix – Attachment 3.2.7(a) Attachment 3.2.7(b)
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix

ATTACHMENT 3.1.2

Contract ID C00111300DB107

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix Attachment 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appendix
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
Offeror's Team Structure				2-6
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	3
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix Attachment 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix Attachment 3.3.1

ATTACHMENT 3.1.2

Contract ID C00111300DB107

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix Attachment 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix Attachment 3.3.1
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix Attachment 3.3.1
Organizational chart	NA	Section 3.3.2	yes	6
Organizational chart narrative	NA	Section 3.3.2	yes	4-5
Experience of Offeror’s Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix Attachment 3.4.1(a)
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix Attachment 3.4.1(b)
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	7-15



2.0 Form C-78-RFQ



ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**RFQ NO. C00111300DB107PROJECT: I-95 City of Richmond Bridge Superstructure
Replacement and Rehabilitation Bundling**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 15, 2020
(Date)

2. Cover letter of _____
(Date)

3. Cover letter of _____
(Date)


SIGNATURE

02/01/2021
DATE

ANTHONY W. BEDNARIK
PRINTED NAME

VICE PRESIDENT
TITLE



3.2.6 List of Affiliated & Subsidiary Companies





3.2.7 Debarment Certifications





3.2.7(a) Primary Covered Transactions



ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Contract ID C00111300DB107

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

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

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

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

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

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

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


Signature

02/01/2021
Date

Vice President
Title

WAGMAN HEAVY CIVIC, INC.
Name of Firm



3.2.7(b) Lower Tier Covered Transactions



ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Contract ID C00111300DB107

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

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

	February 2, 2021	Senior Vice President
Signature	Date	Title

Volkert, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED
TRANSACTIONS**

Contract ID C00111300DB107

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

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

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

 _____	1/21/2021 _____	Executive Vice President _____
Signature	Date	Title

CES Consulting, LLC

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Contract ID C00111300DB107

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

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



Signature

February 2, 2021
Date

Operations Manager
Title

Wetland Studies and Solutions, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Contract ID C00111300DB107

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

	01/21/2021	President
_____ Signature	_____ Date	_____ Title

DMY Inc.

Name of Firm

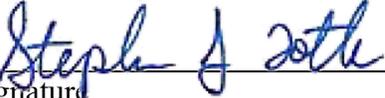
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Contract ID C00111300DB107

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

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

 Signature	January 21, 2021 Date	President Title
---	--------------------------	--------------------

O. R. Colan Associates, LLC
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Contract ID C00111300DB107

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

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

<u>Signature</u>	<u>01/21/2021</u>	<u>President</u>
<i>Alex Jertz</i>	<u>Date</u>	<u>Title</u>

Precision Measurements, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Contract ID C00111300DB107

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

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

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



01/22/2021

Vice President

Signature

Date

Title

Accumark, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Contract ID C00111300DB107

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

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



Signature

2.4.21
Date

President
Title

On Point Transportation PR

Name of Firm



3.2.8 VDOT Prequalification





Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 1/20/2021
- W -

Vendor ID: W002

Vendor Name: WAGMAN HEAVY CIVIL, INC.

Prequal Level: Prequalified

Prequal Exp: 10/31/2021

-- 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: COPPAGE IV, JOHN ROBERT

Email: JRCOPPAGE@WAGMAN.COM

-- DBE Information --

DBE Type: N/A

DBE Contact: N/A

**CERTIFICATE OF SECRETARY
OF
WAGMAN HEAVY CIVIL, INC.**

The Undersigned, being the Secretary of Wagman Heavy Civil, Inc., hereby certifies that the following Resolutions have been previously adopted by unanimous consent of the Board of Directors:

RESOLVED, that the following individuals be hereby elected to serve in the offices set forth opposite their names, until the next regularly scheduled election of officers:

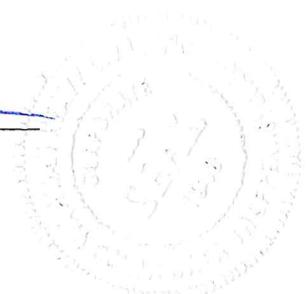
Chairman of the Board	Richard E. Wagman
Chief Executive Officer	Michael B. Glezer
President/COO	Gregory M. Andricos
Sr. Vice President	Todd E. Becker
Vice President – Design-Build/Major Pursuits, Mid-Atlantic	Anthony W. Bednarik
Vice President/General Manager, Virginia Operations	Glen K. Mays
Vice President – Geotechnical Construction Services	Edward R. Laczynski
Sr. Vice President	Joseph G. Wagman
Sr. Vice President	Lisa W. Glezer
Sr. Vice President – CFO/Treasurer	John R. Coppage, IV
Vice President/General Counsel/Secretary	Kevin J. McKeon
Assistant Secretaries	Wanda S. Turner
	Jeanie P. Jones

FURTHER RESOLVED, that Richard E. Wagman, Michael B. Glezer, Gregory M. Andricos, Todd E. Becker, Anthony W. Bednarik, Glen K. Mays, and Edward R. Laczynski are each individually authorized and empowered to execute, acknowledge and deliver such documents, instructions and papers and perform such acts as may be legally, properly and reasonably required or necessary for the purpose of procuring and executing any bids, bid bonds and contracts on behalf of Wagman Heavy Civil, Inc.

Date: January 20, 2021



Kevin J. McKeon, Secretary





3.2.9 Letter of Surety



CNA SURETY

151 N. Franklin Street
Chicago, IL 60606

January 6, 2021

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

Re: A Design-Build Project
I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling
City of Richmond, Virginia
UPC (State Project Nos.; Federal Project Nos.)
UPC 111300 (U000-127-023, P101, R201, C501, B601; STP-BR04(287))
UPC 111294(0064-127-022, P101, B661; NHPP-064-3(510))
UPC 113375 (0250-127-050, P101, R201, C501; NHPP-BR04(307))
UPC 113388 (0004-127-051, P101, R201, C501; NHPP-BR04(308))
7th Street Bridge
Contract ID Number: C00111300DB107

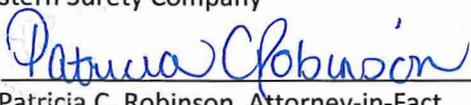
Dear Sirs:

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 \$37,000,000 (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 Project.

As always, Western Surety Company reserves the right to perform normal underwriting at the time of any bond request, including, without limitation, prior review and approval of relevant contract documents, bond forms, and project financing.

Sincerely,

Western Surety Company

By: 

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

Alson O Wolcott Jr, Robert N Striewig Jr, Eugene M Fritz, Kristen D Pedrick, Patricia C Robinson, 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 31st day of March, 2020.



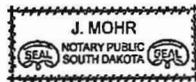
WESTERN SURETY COMPANY

Paul T. Bruflat
Paul T. Bruflat, Vice President

State of South Dakota }
County of Minnehaha } ss

On this 31st day of March, 2020, before me personally came Paul T. Bruflat, 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 6th day of January, 2021.



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.



3.2.10 SCC & DPOR Information Tables



ATTACHMENT 3.2.10

Contract ID C00111300DB107

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Wagman Heavy Civil, Inc.	F0198988	Stock Corp	Active	3290 North Susquehanna Trail, York, PA 17406	Contractor	2701015887	01/31/2023
Volkert, Inc.	F1366592	Stock Corp	Active	6225 Brandon Ave Ste 540, Springfield, VA 22150	Engineering	0407002610	12/31/2021
Volkert, Inc.	F1366592	Stock Corp	Active	6225 Brandon Ave Ste 540, Springfield, VA 22150	Engineering	0407002610	12/31/2021
CES Consulting, LLC	S3416007	LLC	Active	5269 Greenwich Rd Virginia Beach, VA 23462	Engineering	0411001331	02/28/2022
CES Consulting, LLC	S3416007	LLC	Active	23475 Rock Haven Way Suite 255, Dulles, VA 20166	Engineering	0407005783	12/31/2021
Wetland Studies and Solutions, Inc.	03826229	Stock Corp	Active	717 N Courthouse Rd Ste 101, Richmond, VA 23236	Engineering, Land Surveying, Landscape Architecture	0411001337	02/28/2022
DMY, Inc	07243892	Stock Corp	Active	14241 Midlothian Tnpk Suite 230, Midlothian, VA 23113	PC - Professional Corporation	0405001794	12/31/2021
O.R. Colan Associates, LLC	T0653610	LLC	Active	N/A (ROW Negotiations)	N/A	N/A	N/A
Precision Measurements, Inc. (PMI, Inc.)	04504361	Stock Corp	Active	629 Phoenix Dr STE 100, Virginia Beach, VA 23452	Land Surveying	0407003345	12/31/2021

ATTACHMENT 3.2.10

Contract ID C00111300DB107

SCC and DPOR Information

Accumark	04407458	Stock Corp	Active	9500 King Air Court, Ashland, VA 23005	Land Surveying	0411000864	02/28/2022
On Point Transportation PR LLC	S7190905	LLC	Active	N/A (Public Relations and Coordination)	N/A	N/A	N/A

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)

Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Wagman Construction	Glen Mays, DBIA	Richmond, VA	N/A	N/A	N/A	N/A
Volkert	Brian Graham, PE	Springfield, VA	Warrenton, VA 20187	Professional Engineer License	0402037140	06/30/2021
Wagman Construction	Glen Mays, DBIA	Richmond, VA	N/A	N/A	N/A	N/A
Wagman Construction	Dave Leber, DBIA	Richmond, VA	N/A	N/A	N/A	N/A
CES Consulting, LLC	Bryan Barnson, PE	Virginia Beach, VA	Suffolk, VA	Professional Engineer License	0402055847	12/31/2021
CES Consulting, LLC	Matt McLaughlin	Chantilly, VA	N/A	N/A	N/A	N/A



3.2.10.1 Firm SCC Registration Copies



State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Wagman Heavy Civil, Inc.	Entity ID: F0198988
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 09/20/1967	Status Date: 10/08/2010
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: PA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$2500.00

Registered Agent Information

RA Type: Entity	Locality: RICHMOND CITY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	
Name: CORPORATION SERVICE COMPANY	Registered Office Address: 100 Shockoe Slip Fl 2, Richmond, VA, 23219 - 4100, USA

Principal Office Address

Address: 3290 N Susquehanna Trl, York, PA, 17406 - 9754, USA

Principal Information

Title	Director	Name	Address	Last Updated
P/COO	No	GREGORY M. ANDRICOS	1117 WYNDHAM DR, YORK, PA, 17403 - 0000, USA	09/24/2019
SR. VP	No	TODD E. BECKER	2845 BARK HILL RD, YORK, PA, 17404 - 0000, USA	09/24/2019

State Corporation Commission Clerk's Information System

Entity Name: Volkert, Inc.	Entity ID: F1366592
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 01/21/1999	Status Date: 02/28/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: AL	Annual Report Due Date: N/A
Registration Fee Due Date: 01/31/2021	Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity	Locality: RICHMOND CITY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACTION BUSINESS IN VIRGINIA	
Name: CORPORATION SERVICE COMPANY	Registered Office Address: 100 Shockoe Slip Fl 2, Richmond, VA, 23219 - 4100, USA

Principal Office Address

Address: PO Box 7434, Mobile, AL, 36670 - 0434, USA

State Corporation Commission

Clerk's Information System

Entity Name: CES Consulting, LLC

Entity ID: S3416007

Entity Type: Limited Liability Company

Entity Status: **Active**

Formation Date: 10/14/2010

Reason for Status: Active

VA Qualification Date: 10/14/2010

Status Date: 10/14/2010

Industry Code: 70 - All professions not listed above

Period of Duration: Perpetual

Jurisdiction: VA

Annual Report Due Date: N/A

Registration Fee Due Date: Not Required

Charter Fee: N/A

Registered Agent Information

RA Type: Individual

Locality: PRINCE WILLIAM COUNTY

RA Qualification: Member or Manager of the Limited Liability Company

Name: AVTAR SINGH

Registered Office Address: 6773 LEOPOLDS TRAIL, HAYMARKET, VA, 20169 - 0000, USA

Principal Office Address

Address: 23475 ROCK HAVEN WAY, SUITE 255, DULLES,
VA, 20166 - 0000, USA

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: WETLAND STUDIES AND SOLUTIONS, INC.	Entity ID: 03826229
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 10/18/1991	Reason for Status: Active and In Good Standing
VA Qualification Date: 10/18/1991	Status Date: 12/01/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity	Locality: HENRICO COUNTY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACTION BUSINESS IN VIRGINIA	
Name: C T CORPORATION SYSTEM	Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 - 6808, USA

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: DMY Inc.	Entity ID: 07243892
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 06/14/2010	Reason for Status: Active and In Good Standing
VA Qualification Date: 06/14/2010	Status Date: 09/30/2020
Industry Code: 70 - All professions not listed above	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Individual	Locality: CHESTERFIELD COUNTY
RA Qualification: Director of the Corporation	
Name: JOHN Z DING	Registered Office Address: 14241 MIDLOTHIAN TPKE, SUITE 230, MIDLOTHIAN, VA, 23113 - 0000, USA

Principal Office Address

Address: 14241 MIDLOTHIAN TURNPIKE, SUITE 230, MIDLOTHIAN, VA, 23113 - 0000, USA

Principal Information

Title	Director	Name	Address	Last Updated
President	Yes	JOHN DING	14618 LANDER ROAD, MIDLOTHIAN, VA, 23113 - 0000, USA	07/19/2019
	Yes	JOHN DING	14618 LANDER ROAD, MIDLOTHIAN, VA, 23113 - 0000, USA	07/19/2019

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: O.R. COLAN ASSOCIATES, LLC	Entity ID: T0653610
Entity Type: Limited Liability Company	Entity Status: Active
Formation Date: N/A	Reason for Status: Active
VA Qualification Date: 05/09/2016	Status Date: 06/09/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: FL	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: N/A

Registered Agent Information

RA Type: Entity	Locality: RICHMOND CITY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	
Name: CORPORATION SERVICE COMPANY	Registered Office Address: 100 Shockoe Slip Fl 2, Richmond, VA, 23219 - 4100, USA

Principal Office Address

Address: 7005 SHANNON WILLOW RD STE 100, CHARLOTTE, NC, 28226 -
0000, USA

Principal Information

Management Structure: N/A

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: PRECISION MEASUREMENTS, INC.	Entity ID: 04504361
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 07/24/1995	Reason for Status: Active and In Good Standing
VA Qualification Date: 07/24/1995	Status Date: 08/22/2013
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Individual	Locality: CHESAPEAKE CITY
RA Qualification: Member of the Virginia State Bar	
Name: DOUGLAS W DAVIS	Registered Office Address: WYNNGATE BUSINESS PARK, 516 BAYLOR CT, CHESAPEAKE, VA, 23320 - 0000, USA

Principal Office Address

Address: 629 Phoenix Dr Ste 100, Virginia Beach, VA, 23452 - 7392, USA

Principal Information

Title	Director	Name	Address	Last Updated
President	Yes	Alexandra N. Leitz	1836 Gershwin Drive, Virginia Beach, VA, 23454 - 0000, USA	02/27/2020
Vice President	Yes	PAULINE A LEITZ	1108 SECRETARIAT WAY, CHESAPEAKE, VA, 23322 - 0000, USA	06/18/2019

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: ACCUMARK, INC. Entity ID: 04407458
Entity Type: Stock Corporation Entity Status: **Active**
Formation Date: 01/30/1995 Reason for Status: Active and In Good Standing
VA Qualification Date: 01/30/1995 Status Date: 02/07/2015
Industry Code: 0 - General Period of Duration: Perpetual
Jurisdiction: VA Annual Report Due Date: N/A
Registration Fee Due Date: Not Required Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity Locality: HANOVER COUNTY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS
IN VIRGINIA
Name: Unisearch, Inc. Registered Office Address: 7288 HANOVER GREEN DR, MECHANICSVILLE, VA, 23111 - 0000, USA

Principal Office Address

Address: 9500 King Air Ct, Ashland, VA, 23005 - 8095, USA

Principal Information

Title	Director	Name	Address	Last Updated
Vice President	No	Stanley Craig Martin	9500 KING AIR CT, ASHLAND, VA, 23005 - 0000, USA	01/14/2021
Vice President	No	Ryan Martin	9500 King Ait Ct., Ashland, VA, 23005, USA	01/03/2020

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: On Point Transportation PR LLC	Entity ID: S7190905
Entity Type: Limited Liability Company	Entity Status: Active
Formation Date: 12/08/2017	Reason for Status: Active
VA Qualification Date: 12/08/2017	Status Date: 01/11/2019
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: N/A

Registered Agent Information

RA Type: Individual	Locality: CHESAPEAKE CITY
RA Qualification: Member of the Virginia State Bar	
Name: CHRISTOPHER DAVIS	Registered Office Address: 555 Belaire Ave Ste 340, CHESAPEAKE, VA, 23320 - 4686, USA

Principal Office Address

Address: 5269 GREENWICH ROAD, SUITE 101, VIRGINIA BEACH, VA, 23462 - 0000, USA

Principal Information

Management Structure: N/A



3.2.10.2 Firm DPOR Registration Copies





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Community Associations

File a Complaint

Records & Documents

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Advanced License Search

Disciplinary Action Search

License Details



Name	WAGMAN HEAVY CIVIL INC
License Number	2701015887
License Description	Contractor
Firm Type	Corporation
Rank ⓘ	Class A
Address	3290 NORTH SUSQUEHANNA TRAIL, YORK, PA 17406
Specialties ⓘ	Highway / Heavy (H/H)
Initial Certification Date	1976-10-29
Expiration Date	2023-01-31

The license information in this application was last updated at Tue Jan 19 02:50:18 EST.



Department of Professional and Occupational Regulation

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Disciplinary Action Search

License Details

Related Licenses



Name	VOLKERT INC
License Number	0407002610
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	6225 BRANDON AVE STE 540, SPRINGFIELD, VA 22150
Initial Certification Date	1983-07-29
Expiration Date	2021-12-31

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411001275

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

SSIONS: ENG



VOLKERT INC
283 CONSTITUTION DR STE 303
VIRGINIA BEACH, VA 23462



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

e verified at <http://www.dpor.virginia.gov>

: REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2021

NUMBER

0407005783

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

PROFESSIONS: ENG



CES CONSULTING LLC
23475 ROCK HAVEN WAY
SUITE 255
DULLES, VA 20166



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION

NUMBER: 0407005783 EXPIRES: 12-31-2021

PROFESSIONS: ENG

CES CONSULTING LLC
23475 ROCK HAVEN WAY
SUITE 255
DULLES, VA 20166



(FOLD)

COMMONWEALTH of VIRGINIA

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

EXPIRES ON

02-28-2022

NUMBER

0411001331

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

PROFESSIONS: ENG



CES CONSULTING LLC
5269 GREENWICH RD
VIRGINIA BEACH, VA 23462



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR AP/LS/CID/LA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001331 EXPIRES: 02-28-2022
PROFESSIONS: ENG
CES CONSULTING LLC
5269 GREENWICH RD
VIRGINIA BEACH, VA 23462



(FOLD)

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

DPOR-PC (02/2017)

PATENTS 5,197,795 5,240,189

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
12-31-2021

NUMBER
0407003355

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

PROFESSIONS: ENG, LS, LA



WETLAND STUDIES AND SOLUTIONS INC
5300 WELLINGTON BRANCH DR
STE 100
GAINESVILLE, VA 20155



Mary Eroz-Vaughan
Mary Eroz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407003355 EXPIRES: 12-31-2021
PROFESSIONS: ENG, LS, LA
WETLAND STUDIES AND SOLUTIONS INC
5300 WELLINGTON BRANCH DR
STE 100
GAINESVILLE, VA 20155



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2021

NUMBER

0405001794

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

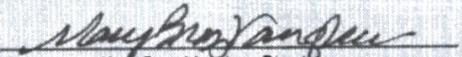
PROFESSIONS: ENG



DMY INC
14241 MIDLOTHIAN TNPK
SUITE 230
MIDLOTHIAN, VA 23113



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


Mary Broz-Vaughan, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
02-28-2022

NUMBER
0411000245

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

PROFESSIONS: LS



PRECISION MEASUREMENTS INC
1047 TECHNOLOGY PARK DRIVE
GLEN ALLEN, VA 23059



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APPLSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000245 EXPIRES: 02-28-2022
PROFESSIONS: LS
PRECISION MEASUREMENTS INC
1047 TECHNOLOGY PARK DRIVE
GLEN ALLEN, VA 23059



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411000864

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

PROFESSIONS: LS



ACCUMARK INC
9500 KING AIR COURT
ASHLAND, VA 23005



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

NUMBER: 0411000864 EXPIRES: 02-28-2022

PROFESSIONS: LS

ACCUMARK INC
9500 KING AIR COURT
ASHLAND, VA 23005



(FOLD)

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

DPOR-PC (02/2017)

RECEIVED
FEB 03 2020
ET: *(Signature)*



3.2.10.3 Key Personnel DPOR Registration Copies





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Forms & Applications

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License Search

Advanced License Search

Disciplinary Action Search

License Details



Name	GRAHAM, BRIAN CHRISTOPHER
License Number	0402037140
License Description	Professional Engineer License
Rank	Professional Engineer
Address	WARRENTON, VA 20187
Initial Certification Date	2003-06-10
Expiration Date	2021-06-30

The license information in this application was last updated at Tue Jan 19 02:50:18 EST.

License Lookup [legal disclaimer](#)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
12-31-2021

NUMBER
0402055847

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



BRYAN SCOTT BARNSON
105 SAINT ANDREWS DR
SUFFOLK, VA 23435



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR AP/ELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402055847 EXPIRES: 12-31-2021

BRYAN SCOTT BARNSON
105 SAINT ANDREWS DR
SUFFOLK, VA 23435



(FOLD)

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

DPOR-PC (02/2017)



3.3.1 Key Personnel Resume Forms



ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.												
a. Name & Title: Glen Mays, DBIA, Vice President/General Manager												
b. Project Assignment: Design-Build Project Manager												
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Wagman Heavy Civil, Inc.												
d. Employment History: With this Firm <u>5</u> Years With Other Firms <u>31</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): Wagman Heavy Civil, Inc. Start Date: 2014 End Date: Present Position: Vice President/General Manager — VA Operations. Responsibilities: Company officer with principal responsibility for civil operations in Virginia including: safety, quality control, estimating, engineering, and construction for Design-Build and conventional projects. In this capacity Mr. Mays reports directly to the President/COO of Wagman Heavy Civil and leads a team of over 100 construction professionals including: managers, engineers, estimators, surveyors, administrators, and field personnel. Mr. Mays has over 35 years of experience in the management of heavy civil projects ranging from \$5M to over \$200M. These projects include VDOT, Design-Build, and major interstate projects. Granite Construction Company Start Date: December 2010 End Date: 2014 Position: Design Build Project Manager Responsibilities: Primary Point of Contact (POC) with principal responsibility for overseeing all design and construction efforts from proposal through final acceptance, including Quality Control for \$45M FDOT Design Build Project on I-75. Hubbard Construction Start Date: 2009 End Date: 2010 Position: Tampa Division Manager Responsibilities: Division Manager responsible for all aspects of civil work on a \$110M urban highway Design-Bid-Build financed project for FDOT in Tampa. Skanska USA Civil Start Date: 2008 End Date: 2009 Position: Senior Project Manager Responsibilities: Senior Project Manager responsible for the civil work on the \$214M Tampa Interchange project being performed via a Joint Venture with Flatiron. Cherry Hill Construction, Inc. Start Date: 1994 End Date: 2008 Position: Design Build Project Manager, Projects Director, Division Manager Responsibilities: Mr. Mays had 13 years of experience in estimating, managing, and administering numerous projects inclusive of conventional bid-build and Design-Build for various private and public clients including VDOT and Maryland State Highway Administration.												
Summary of Relevant Experience <table><tr><td>DBPM experience</td><td>Delivered \$100M of Design-Build</td><td>VDOT Compliant QA/QC</td></tr><tr><td>36 Years Construction Mgmt.</td><td>Developed/managed complex TMP</td><td>OSHA 10/30</td></tr><tr><td>Interstate Widening/Interchanges</td><td>Integrated Utility/ROW Mgmt.</td><td>Public Outreach/Coordination</td></tr><tr><td>Complex MOT (Interstate)</td><td>Coordination with Mega Projects</td><td></td></tr></table>	DBPM experience	Delivered \$100M of Design-Build	VDOT Compliant QA/QC	36 Years Construction Mgmt.	Developed/managed complex TMP	OSHA 10/30	Interstate Widening/Interchanges	Integrated Utility/ROW Mgmt.	Public Outreach/Coordination	Complex MOT (Interstate)	Coordination with Mega Projects	
DBPM experience	Delivered \$100M of Design-Build	VDOT Compliant QA/QC										
36 Years Construction Mgmt.	Developed/managed complex TMP	OSHA 10/30										
Interstate Widening/Interchanges	Integrated Utility/ROW Mgmt.	Public Outreach/Coordination										
Complex MOT (Interstate)	Coordination with Mega Projects											
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Military Institute, Lexington, Virginia / BS / 1983 / Civil Engineering												
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2019 / Design-Build Institute of America (DBIA) / D-2872 2018 / Virginia DEQ Responsible Land Disturber / RLD10897												
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)												

VDOT I-95 Southbound CD Lanes - Rappahannock River Crossing Design Build, Stafford County, VA (\$114.7 million)

Name of Firm: Wagman Heavy Civil, Inc.

Project Role: Design-Build Project Manager

Beginning Date: November 2018

End Date: May 2022

Specific Responsibilities: As Design-Build Project Manager (DBPM), Mr. Mays is responsible for the overall design and construction of this \$114M project that includes construction of approximately six miles of new interstate roadway, a major bridge structure over the Rappahannock River, as well as three additional bridge structures over US Route 17. Involved with the project since the pursuit phase, Mr. Mays is leading an integrated Design-Build team to successfully achieve project goals. He is responsible for ensuring that the team meets or exceeds Quality Assurance/Quality Control project requirements. Mr. Mays is the primary point of contact for VDOT and all third-party stakeholders. He coordinates with adjacent projects including the I-95 Express Lanes Fredericksburg Extension project and the I-95 Safety Improvements at Route 3 project. Mr. Mays also leads the team's public outreach efforts to effectively communicate with the numerous stakeholders.

Similarities to Richmond Bridges DB

Design-Build

Complex Interstate MOT (I-95)

Coordination-Adjacent Projects

Major Bridge Structure

Permitting/Environmental

Utility Relocation Coordination

Coordinated TMP with Mega Projects

Complex Interchange MOT (I-95/US 17)

Stakeholder Coordination

VDOT I-95 Northbound Rappahannock River Crossing, Stafford County, VA (\$107.5 million)

Name of Firm: Wagman Heavy Civil, Inc.

Project Role: Design-Build Project Manager

Beginning Date: May 2020

End Date: May 2024

Specific Responsibilities: As Design-Build Project Manager (DBPM), Mr. Mays is responsible for the overall design and construction of this \$107M project that includes construction of approximately five miles of new interstate roadway, a major bridge structure over the Rappahannock River, as well as one additional bridge structure over US Route 17. Involved with the project since the pursuit phase, Mr. Mays is leading an integrated Design-Build team to successfully achieve project goals. He is responsible for ensuring that the team meets or exceeds Quality Assurance/Quality Control project requirements. Mr. Mays is the primary point of contact for VDOT and all third-party stakeholders. He coordinates with adjacent projects including the I-95 Express Lanes Fredericksburg Extension project. Mr. Mays also leads the team's public outreach efforts to effectively communicate with the numerous stakeholders.

Similarities to Richmond Bridges DB

Design-Build

Complex Interstate MOT (I-95)

Coordination-Adjacent Projects

Complex Interchange MOT (I-95/US 17)

Permitting/Environmental

Utility Relocation Coordination

Coordinated TMP with Mega Projects

Major Bridge Structure

Stakeholder Coordination

VDOT Route 54 over I-95, Hanover, VA (\$8 million)

Name of Firm: Wagman Heavy Civil, Inc.

Project Role: Project Executive

Beginning Date: May 2014

End Date: November 2015

Specific Responsibilities: Project Executive responsible for the removal, replacement and widening of the existing Route 54 bridges over I-95 in Ashland, Virginia. The new bridge is a dual bridge carrying Route 54 east and west bound over Interstate 95. The dual bridge was combined into one structure that is 220-ft long and 97-ft wide. Originally the bridges were to be replaced using three traffic phases. Through coordination and cooperation with VDOT and their consultants, WRA and McCormick Taylor, Wagman and their traffic engineering consultant redesigned the traffic phasing to two phases, reducing impacts to the traveling public, accelerating the schedule and reducing cost to VDOT by \$400K. The Wagman redesigned traffic management plan incorporated temporary traffic signals to efficiently control traffic through this interstate interchange. Wagman was responsible for maintenance and protection of traffic on a busy corridor of I-95 north of Richmond. Wagman also reconstructed and widened the bridge approach roadway, which included significant drainage improvements. The project was centrally focused on safety, environmental best practices, and schedule and was successfully completed through teamwork and coordination between both Wagman and VDOT.

Similarities to Richmond Bridges DB

Interstate MOT

Roadway Construction

Major Bridge Structure

Phased Construction

Pedestrian MOT

Utility Relocation Coordination

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

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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Bryan Barnson, PE, CCM, DBIA - Senior Project Manager
b. Project Assignment: Quality Assurance Manager
c. Name of all Firms with which you are employed at the time of submitting SOQ.: CES Consulting LLC
d. Employment History: With this Firm <u>5</u> Years With Other Firms <u>4</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): <u>CES Consulting LLC</u> Start Date: 2015 End Date: Present Position: Construction Manager/QAM/Design Project Manager In his time with CES Consulting, Mr. Barnson is currently serving as the DB QAM for the Skiffes Creek DB Project (part-time), has served as the VDOT Construction Manager on the I-64 Segment II Widening Design-Build Project, as well as serving as a VDOT Project Manager for the Hampton Roads District Structure and Bridge Office. While serving in these roles, Mr. Barnson developed extensive experience managing key aspects of VDOT design-bid-build and design-build projects from the Preliminary Engineering stage through Construction. He has been able to tackle complex issues through each phase of construction having had experience managing both the design and construction side of projects. Examples of typical work items Mr. Barnson manages include project submittal review as an owner (VDOT) representative to include coordination with VDOT Hampton Roads District disciplines (Structure & Bridge, Materials, Traffic Engineering, Environmental), Quality Assurance (QA) plan development for unique roadway items (CCPRM/FDR), Coordination/scheduling of office engineers/inspection staff, review of project documentation ensuring conformance with the minimum requirements for VDOT Design Build projects, coordination of IA/VST inspections/testing, review of complex MOT implementations, coordination of MOT/Work activities with localities/stakeholders, review and processing of design build pay applications, and facilitating VDOT project environmental inspections. <u>Skanska USA Civil Southeast, Inc.</u> Start Date: 2011 End Date: 2015 Position: Project Engineer/Superintendent While employed with Skanska, Mr. Barnson progressively garnered boots on the ground experience managing large scale Design-Build, and Design Bid-Build heavy civil construction sites. As both a Project Engineer and Superintendent, Mr. Barnson was tasked with managing Quality, Safety, and Environmental risks. He has gained exposure in a leadership capacity in activities including pile driving, concrete placement, formwork design, crane lifting and rigging, quality control/assurance testing, and environmental risk mitigation. Summary of Relevant Experience VDOT Design-Build QAM Bridges and Structures VDOT Compliant QA/QC 10 Years Construction Mgmt. Developed/managed complex TMP OSHA 10/30 Interstate Widenings/Interchanges Integrated Utility/ROW Mgmt. Extensive utilities coordination
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Military Institute (Lexington, VA) / B.S. Civil Engineering / 2011
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2017 / Professional Engineer / Virginia – No. 55847 2016 / Certified Construction Manager (CMAA) 2016 / DBIA
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) VDOT Skiffes Creek Design Build Project, Williamsburg, VA (\$24.5M) Name of Firm: CES Consulting LLC Project Role: Quality Assurance Manager Beginning Date: February 2020 End Date: October 2022 Specific Responsibilities: Mr. Barnson is serving as the QAM for this \$24.5 million roadway and bridge design build project. He is responsible for developing the overall Quality Management System Plan for the design and construction phases of the project. The project is currently in the design phase and Mr. Barnson is working with the design integration team to ensure that all design submittals are following the approved Design Quality Management Plan and

carries out periodic (minimum monthly) audits to ensure adherence to the plan. He is also working with the team to ensure that all technical requirements stipulated in the contract are followed and adopted in the design. He is currently working with the Design Manager to develop the project's Inspection and Testing Plans for each Approved for Construction Plan set in conformance with section 5.4 and 5.5 respectively of the July 2018 VDOT QA/QC Manual. He is also developing the project's Construction Quality Management Plan, ensuring processes and procedures are set up in advance for use when the construction operations start.

Similarities to Richmond Bridges DB

Design-Build QAM	Adjacent Interstate Roadway	Coordinated TMP
Bridge Structure	Permitting/Environmental	Utility Relocation Coordination

VDOT I-64 Segment II Widening Design Build Project, James City Co., York Co, Newport News, VA (\$138M)

Name of Firm: CES Consulting LLC	Project Role: Consultant Construction Manager
Beginning Date: January 2016	End Date: November 2019

Specific Responsibilities: Mr. Barnson has been vital to the successful project delivery for the \$138M I-64 Widening Segment II design-build project serving as the Consultant Construction Manager as VDOT representative. This project extends the 3 lane section of I-64 from roughly mile marker 248 to mile marker 241 of which includes the addition of 12' wide travel lanes and 12' wide shoulder lanes within the existing median space, and the repair and widening of 9 existing bridges. In his role, Mr. Barnson has taken a key leadership position within the VDOT team structure, managing all facets of the project including quality, safety, environmental, project/document controls, and public relations.

Similar to the requirements of the Quality Assurance Manager role, Mr. Barnson was actively managing every aspect related to Quality for this design build project. This included responsibilities such as:

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

Similarities to Richmond Bridges DB

Design-Build	Interstate Roadway	Coordination with Adjacent Projects
Major Bridge Structure	Permitting/Environmental	Utility Relocation Coordination
Coordinated TMP	Engineered Causeway	Stakeholder Coordination

VDOT Structure and Bridge Department, Suffolk, VA

Name of Firm: CES Consulting LLC	Project Role: Consultant Design Engineer/Project Manager
Beginning Date: July 2015	End Date: July 2017

Specific Responsibilities: As Consultant Design Engineer and Project Manager, Mr. Barnson worked very closely with the VDOT staff reviewing and developing upcoming bridge projects for adherence to current VDOT and applicable standards and specifications. He also reviewed plans for constructability and has designed multiple bridges for reconstruction. Responsibilities included development of ASD, RAAP, and SAAP contracts valued from \$500K to \$15M. Projects included: Bridge Structural Steel Painting, District Wide General Bridge Maintenance (overlay, patching, beam repairs, etc.), VDOT Hired Equipment Contracts, District Wide Bridge Washing, 64/664 Interchange Epoxy Overlay, Hampton Roads Moveable Bridge Tenders Contract, and Design reconstruction of "SS-8" bridges (Steel Beam with Timber Deck Superstructure Bridges, ADT < 750); his role included:

- Coordinated and personally conducted preliminary field inspection to verify existing bridge conditions
- Formulated design plans and coordinate approval of District Structure and Bridge Engineer
- Bridges reconstructed include Rt. 651 over Moore's Branch and Rt. 629 over Fountain's Creek (Greensville County)
- Coordinated with VDOT Environmental in document/permit acquisition
- Coordinated with VDOT Hampton Roads Construction Division in CTDR development
- Served as PE Project Manager - up to five projects/UPCs; managed PE/CN cost estimates
- Developed VDOT Hired Equipment contracts for the Hampton Roads Structure and Bridge

Similarities to Richmond Bridges DB

Bridge Structures	Interstate Roadway	Coordination with Adjacent Projects
Coordinated TMP	Permitting/Environmental	Utility Relocation Coordination

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

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

ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.															
a. Name & Title: Brian Graham, PE – Assistant Vice President & Structural Manager															
b. Project Assignment: Design Manager															
c. Name of all Firms with which you are employed at the time of submitting SOQ.: Volkert, Inc.															
<p>d. Employment History: With this Firm <u>22</u> Years With Other Firms <u>0</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> <p><u>Volkert, Inc.</u> Start Date: 1999 End Date: Present Position: Assistant Vice President & Structural Manager Mr. Graham is responsible for Volkert’s structural engineering projects throughout the Mid-Atlantic region notably for VDOT and urban Arlington County. He manages design and quality control, verifying that projects are completed in compliance with the local, State, and federal standards and regulations. His designs focus on durability, low maintenance, safety, and economy.</p> <ul style="list-style-type: none"> • He has worked on 100+ bridge projects involving the design and development of rehabilitation, widening, or new design plans, as well as special provisions and estimates, per AASHTO, Federal, and VDOT Design Standards. • His experience includes the design and analysis of bridges, retaining walls, signal pole foundations and other highway structures, and the management and development of construction documents. • He provided construction administration support including review, verification and modification of designs based on field conditions. • His projects have involved dismantling and removing portions of existing structures, erecting bridge girders, and superstructure and substructure repairs. • He investigates the conditions of existing bridges; develops the scope for bridge rehabilitation projects; and provides technical guidance. • Through his VDOT staff augmentation work he reviews structural plans and designs prepared by others. <p>Summary of Relevant Experience</p> <table border="0"> <tr> <td>Design-Build DM experience</td> <td>Delivered \$200M of Design-Build</td> <td>Interstate Widening/Interchanges</td> </tr> <tr> <td>22 Years Structures</td> <td>Integrated Utility/ROW Mgmt.</td> <td>Public Outreach/Coordination</td> </tr> <tr> <td>Bridges and Structures</td> <td>Bridge Bundle Design</td> <td></td> </tr> </table>			Design-Build DM experience	Delivered \$200M of Design-Build	Interstate Widening/Interchanges	22 Years Structures	Integrated Utility/ROW Mgmt.	Public Outreach/Coordination	Bridges and Structures	Bridge Bundle Design					
Design-Build DM experience	Delivered \$200M of Design-Build	Interstate Widening/Interchanges													
22 Years Structures	Integrated Utility/ROW Mgmt.	Public Outreach/Coordination													
Bridges and Structures	Bridge Bundle Design														
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Virginia, Charlottesville, VA / Bachelor of Science / 1999 / Civil Engineering															
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2003 / Professional Engineer / 0402037140															
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>VDOT I-581/Elm Avenue Interchange D-B, Roanoke, VA (\$20M)</p> <table border="0"> <tr> <td>Name of Firm: Volkert, Inc.</td> <td>Project Role: Lead Structural Engineer</td> </tr> <tr> <td>Beginning Date: Aug 2012</td> <td>End Date: March 2016</td> </tr> </table> <p>Specific Responsibilities: Mr. Graham designed superstructure replacement and substructure widening of two bridges that carry Elm Avenue over busy interstate and active railroad. The design converted a 200-foot-long, four-lane urban highway structure over I-581 to a six-lane bridge with sidewalks and pedestrian-scale lighting. One new pier in median was added to existing layout to convert three spans of simple steel girders to a four-span, continuous and jointless steel-girder bridge to meet current vertical clearance criteria and contributes to future low maintenance. The design of the second bridge converted a 150-foot-long four-lane urban highway structure to a seven-lane bridge over Norfolk Southern Railroad tracks with sidewalks and pedestrian-scale lighting. Simple-span concrete box beams were replaced with three-span, continuous, weathering steel girders. Deck extensions and buried approach slabs were used on both bridges to eliminate joints at abutments, reduce maintenance, and minimize traffic disruptions. Quickly modified the design of one pier during construction to accommodate unforeseen geologic variations and avoided costly impacts to the construction schedule.</p> <p>Similarities to Richmond Bridges DB</p> <table border="0"> <tr> <td>Lead Structural Engineer on Design-Build project</td> <td>Freeway/INT TMP/MOT</td> <td>Permitting/Environmental</td> </tr> <tr> <td>Coordination with Adjacent Projects</td> <td>Superstructure Replacement</td> <td>Signals/Overhead Signs/Lighting</td> </tr> <tr> <td>Public Outreach/Stakeholder Coordination</td> <td>Hydraulics</td> <td>Utility Relocation Coordination</td> </tr> </table>			Name of Firm: Volkert, Inc.	Project Role: Lead Structural Engineer	Beginning Date: Aug 2012	End Date: March 2016	Lead Structural Engineer on Design-Build project	Freeway/INT TMP/MOT	Permitting/Environmental	Coordination with Adjacent Projects	Superstructure Replacement	Signals/Overhead Signs/Lighting	Public Outreach/Stakeholder Coordination	Hydraulics	Utility Relocation Coordination
Name of Firm: Volkert, Inc.	Project Role: Lead Structural Engineer														
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Lead Structural Engineer on Design-Build project	Freeway/INT TMP/MOT	Permitting/Environmental													
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Public Outreach/Stakeholder Coordination	Hydraulics	Utility Relocation Coordination													

VDOT & Elizabeth River Crossings, LLC, Martin Luther King Expressway Extension, Elizabeth River Crossings/MidTown Tunnel, (D-B) P3, Portsmouth, VA (\$210M)

Name of Firm: Volkert, Inc.

Project Role: DM on Design-Build segment

Beginning Date: Oct 2010

End Date: November 2016

Specific Responsibilities: As a subconsultant to the P3 Design Manager, Mr. Graham led Volkert's multi-disciplinary design as the DM of the MLK Expressway Extension, a significant DB portion of the Elizabeth River Crossings/MidTown Tunnel P3 project. The project included a one-mile, four-lane, elevated, limited-access facility (urban principal arterial) including two new urban interchanges, one interchange modification, two bridge widenings, interstate widening, side road improvements, new SWM facilities, a new urban plaza, and a complex Type C TMP to maintain more than 70,000 motorists per day.

- Coordinated bridge, roadway, retaining wall, drainage, SWM, and landscape design.
- Designed a soldier-pile wall to facilitate the widening of I-264.
- Coordinated the design of 18 EPS and MSE walls to provide a cost-effective alternative to bridge construction and to preserve existing properties.
- Participated in Bridge Concept Study of steel, prestressed-concrete, and retaining wall alternatives.
- Led the bridge design that involved the development of plans, special provisions, cost estimates, and load ratings
 - Designed preliminary bridge layout, piers, girders, and prestressed-concrete piles for the mainline.
 - The final design included 45 steel and prestressed-concrete spans, with pier locations and span lengths avoid conflicts with the CSX railroad, and accommodates future tracks.
- Managed construction phase services including
 - 321 shop drawing reviews
 - Responses to 785 RFIs
 - Resolution of field issues

Similarities to Richmond Bridges DB

DM on Design-Build project segment

Complex Interstate (I-64) TMP/MOT

Permitting/Environmental

Coordination with Adjacent Projects

Urban bridge and interchange

Signals/Overhead Signs/Lighting

Public Outreach/Stakeholder Coordination

Utility Relocation Coordination

Route I-195/Route 76/Ramp S Interchange, Phase I, Richmond, VA, VDOT (\$15.7 million)

Name of Firm: Volkert, Inc.

Project Role: Lead Structural Engineer

Beginning Date: Sept 2015

End Date: May 2021

Specific Responsibilities: Mr. Graham managed the repair / rehabilitation / replacement concept study to determine the most feasible long-term corrective action for bringing a structurally deficient bridge up to current standards. The bridge is 610 feet in length and consists of six curved steel girder spans and five fracture-critical steel straddle bent caps integral with the superstructure. The structurally deficient, fracture-critical cantilevered bearing seats were of critical concern.

- **Phase 1** involved an evaluation of the existing structure and a detailed alternative analysis based on the methodology outlined in Chapter 32 of the *Structure and Bridge Manual*. The study of the existing structure included safety inspection, deck evaluation, lab testing, and condition data trends. Evaluated seven repair, rehabilitation and replacement alternatives involving life-cycle cost analysis, traffic impact analysis, and a project-specific scoring matrix. Based on the study results, the most feasible solution for bringing the bridge up to current standards is to replace the superstructure using staged construction. Prior to the start of Phase 2, Volkert designed emergency repairs for the cantilevered bearing seats with the most advanced deterioration. This task was completed on an accelerated schedule to provide additional redundancy until the permanent solution could be implemented.
- **Phase 2** included preliminary and final design of the selected rehabilitation alternative. Conducted extensive analyses of the two-column pier substructures to determine the extent to which joint elimination would be possible using link slabs and deck slab extensions. A three-dimensional system approach was applied, using STAAD finite element modeling to account for load distribution to columns of differing heights and stiffnesses, considering the effects of potential column strengthening and bearing replacement. A sequence of construction was developed to maintain two lanes of traffic at all times during rehabilitation of the structure which includes replacement of all cantilevered bearing seats, temporary support and jacking operations, hydro-demolition and high early strength latex modified concrete overlay of Spans 1 – 3, deck replacement of Spans 4 – 6, and miscellaneous substructure repairs. An innovative combination of overhang replacement and deep hydro-demolition in spans 1 – 3 was applied to allow replacement of the existing substandard concrete parapet and sound wall attachment full length of the bridge while reducing demolition costs. The anticipated dead load deflections were calculated during deck replacement of spans 4 – 6, using DESCUS to consider the effects of horizontal curvature, partial composite deck slabs during staged construction, and transverse deflection of steel bent caps. The final design includes significant repairs to critical infrastructure while allowing the bridge to continue functioning throughout construction as an important artery for the City of Richmond.

Similarities to Richmond Bridges DB

Lead Structural Engineer

Complex Interstate TMP/MOT

Permitting/Environmental

Coordination with Adjacent Projects

Utility Relocation Analysis

Signals/Overhead Signs/Lighting

Public Outreach/stakeholder coordination Superstructure Replacement Alternatives

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

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

bridge spanning the Dulles Toll Road (DTR) with a complex network of shared use pathways, utility coordination and relocation, ROW acquisition, maintenance of traffic, Noise Wall installation and roadway construction in a very heavily congested urbanized region of Northern Virginia.. Mr. Leber worked day and night to execute a MOT phasing plan which reduced the number of construction phases from seven to four; thereby reducing the overall project schedule by approximately seven months and significantly reducing costs and impacts to the traveling public and stakeholders. Experience is with present firm: Wagman Heavy Civil, Inc. and the project was substantially completed May 2018.

Similarities to Richmond Bridges DB

CM on Design-Build project	Urban	Bridge Structure
Coordination with Adjacent Projects	Substructure Repair	Utility Relocation on structure
Coordinated TMP	Replaced structure with superstructure	Stakeholder Coordination

Maryland State Highway Administration I-270 at Watkins Mill Road Interchange Project, Gaithersburg, MD (\$84M)

Name of Firm: Wagman Heavy Civil, Inc. Project Role: Construction Manager
 Beginning Date: May 2017 End Date: June 2020

Specific Responsibilities: Mr. Leber was the Project Manager for this Interchange Project on I-270 in Gaithersburg MD which was bid as an A+B contract with a substantial incentive to complete the project ahead of schedule. He managed the project that provided a new connection from Watkins Mill Road to Northbound and Southbound I-270. He managed the construction of 14 new structures, a 5-span bridge over 10 lanes of existing I-270 and a Tributary to Seneca Creek, a 2-span bridge on the off-ramp, 3 culverts, and numerous MSE and Cast-in-Place Walls. Mr. Leber coordinated with Utility owners to relocate major utilities; over a mile of 48” Waterline and 16” Sewer line. He managed an environmental team that required the complete reconstruction of the Tributary to Seneca Creek that spans the entire length of the project. Mr. Leber worked very closely with the Owner and the owner’s representatives to resolve constructability issues in a timely fashion. On this fast-tracked project. He developed the project CPM schedule and was responsible for communicating the plan to the team and ensured the project was progressing as scheduled. Mr. Leber worked closely with the project team in developing work plans for upcoming activities and was responsible for the overall project safety, quality, environmental compliance, and costs. He coordinated with the Owner in numerous public outreach events with local stakeholder groups and HOA’s in the surrounding communities. Value engineering saved the owner \$2M on a redesign of a retaining wall along the shoulder of I-270.

Similarities to Richmond Bridges DB

CM on steel bridge over Interstate	MOT on Interstate Roadway	Permitting/Environmental
Coordination with Adjacent Projects	TMP	Signals/Overhead Signs/Lighting
Public Outreach/stakeholder coordination	Urban	Utility Relocation Coordination

Maryland Transportation Authority I-95 Bridge Rehabilitation and Joint Replacement, Baltimore, MD (\$51M)

Name of Firm: Wagman Heavy Civil, Inc. Project Role: Construction Manager
 Beginning Date: November 2013 End Date: October 2015

Specific Responsibilities: Mr. Leber was the Construction Manager for this heavily traveled (180,000 ADT) project on I-95 in Baltimore MD which includes rehabilitation and reconstruction of an existing concrete bridge deck on 28 structures. The work is completed in 15 phases with multiple work zones in each phase; the work progressed in multiple phases while maintaining traffic on this heavily traveled section of I-95 in Baltimore just south of a major river crossing (Ft. McHenry Tunnel). He was responsible for developing schedules and work plans for project specific requirements. He supervised and coordinated all subcontract activities; ensured the work was performed per contract requirements and all QA/QC compliance; communicated and enforced safety plans; and, performed buyout and contract negotiations for all subcontractors and suppliers. As the Construction Manager on this urban project, Mr. Leber was responsible for all quality control and contract compliance. In addition, he performed cost and revenue forecasting and reported and negotiated all contract administration with the owner. He also had direct responsibility for compliance with stringent environmental regulations. In addition to project oversight, he was also responsible for coordination with MDTA, the Stadium Authority, the motoring public and other stakeholders to ensure that lane closures and other activities impacting the motoring public were properly planned and executed. The project was substantially completed by October 2015 meeting all early completion incentive and milestone dates.

Similarities to Richmond Bridges DB

CM on rehabilitation project	ABC Techniques	Major Bridge Structures
Substructure Repair	Complex MOT/multiple phases	Utility Relocation Coordination
Overhead signs/Lighting	CPM schedule	Construction QA/QC

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Current assignment – Construction Manager, Route 7 & Battlefield Interchange. Project will be complete by November of 2021**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Matt McLaughlin, CCM - Director of Utility Management Services
b. Project Assignment: Lead Utility Coordination Manager
c. Name of all Firms with which you are employed at the time of submitting SOQ.: CES Consulting, LLC
d. Employment History: With this Firm <u>7</u> Years With Other Firms <u>27</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): Mr. McLaughlin has coordinated utility work for 400+ projects in Northern Virginia and resolved utility conflicts with minimal impacts and disruptions to utility services. As a former VDOT Northern Virginia District Utility Construction Manager and as a consultant, he has coordinated well over 200 lane miles of utility relocations and recommended strategies for reducing relocation cost, conflicts, and right-of-way impacts and has mitigated delays, saving agencies time and additional costs.
<u>CES Consulting, LLC</u> Start Date: December 2013 End Date: Present Position: Director of Utility Management Services Mr. McLaughlin provides utility management services, coordinating with utility providers; conducting constructability, biddability, relocation plan, and cost estimate reviews; resolving utility conflicts during design and construction; monitoring and documenting horizontal / vertical locations of the relocated utilities; conducting utility field inspections and administering documentation; and creating as-built plans. He reviews relocation plans prepared by design engineers to verify and modify designs, as necessary, based on construction activities and field conditions.
<u>VDOT Northern Virginia District</u> Start Date: December 2000 End Date: 2013 Position: District Utility Construction Engineer Managed the district-wide utility construction program including reviews and approvals of utility relocation plans and estimates; coordination and inspections of utility relocations; resolution of utility conflicts; development of policies, procedures, and field protocols, and a utility mapping system that uses advanced technologies to create electronic as-built plans. He also developed the utility phasing concept, which allows for concurrent right-of-way acquisition while the utilities are being relocated.
Summary of Relevant Experience Design-Build experience Extensive utilities coordination VDOT Compliant QA/QC 34 Years Construction Mgmt. Integrated Utility/ROW Mgmt. OSHA 10/30 Interstate Widening/Interchanges Bridges and Structures Public Outreach/Coordination
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Northern Virginia Community College, Manassas, VA / AS / 2000 / Construction Management
f. Active Registration: Year First Registered/Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)
VDOT I-95 Southbound CD Lanes - Rappahannock River Crossing Design Build, Stafford County, VA (\$114.7 million) Name of Firm: CES Consulting, LLC Project Role: Utility Coordinator Beginning Date: January 2018 End Date: May 2022 This congestion-relief mega-project on I-95 involves adding 3 new SB general-purpose lanes in the median between Route 17 and Route 3 including a new bridge over the Rappahannock River; converting 3 existing lanes into collector-distributor lanes for local traffic accessing Route 17 and Route 3; replacing Route 17 overpasses; constructing a new commuter parking lot; and ITS and signal upgrades. All utility relocations were performed with no schedule impacts. <ul style="list-style-type: none">• Coordinated utility relocations; ITS installations; and removal of in-active utilities with 10 utility providers• Facilitated Preliminary Utility Field Inspection and UFI meetings• Determined the most cost-effective strategies for installing a new conduit system around the bridge foundation and under I-95; undergrounding communication fiber; adjusting pole heights to avoid issues with the future northbound widening• Established a protection-in-place protocol to protect utilities that were not in conflict



3.4.1 Work History Forms





3.4.1(a) Lead Contractor



ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Route 7 Widening and Bridge Rehabilitation over the Dulles Toll Road and Dulles International Airport Access Highway (D-B) Location: Tysons Corner, VA	Name: Rinker Design Associates (Civil) & Whitman, Requardt & Associates, LLP (Structural)	Name of Client/ Owner: VDOT, NOVA District Phone: 703-259-1940 Project Manager: Arif Rahman Phone: 703-259-1940 Email: md.rahman@vdot.virginia.gov	05/2018	05/2018	\$39,887	\$42,200 – Due to Owner-Approved Change Orders	\$42,200

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

	<p>SCOPE/PROJECT DESCRIPTION. This \$42.2M design-build project for the Virginia Department of Transportation reconstructs and widens the structurally deficient Route 7 bridge over Dulles Toll Road and the Dulles International Airport Access Highway from four lanes to six lanes. Limited clearances within Metropolitan Washington Airports Authority's (Airports Authority) right-of-way required the design and installation of permanent foundations using micropiles to widen the existing bridge piers between Dulles Toll Road and the Dulles Access Highway. The project also includes a 10' wide shared-use path for pedestrians and bikes to travel in each direction. This path incorporates grade separated crossings, including two pedestrian bridges and three tunnels.</p> <p>Route 7 has an annual average daily traffic (AADT) volume of 60,000 per day while the Dulles Toll Road has an AADT of 65,000 per day. Additionally, Route 7 is an important bicycle and pedestrian link across the Dulles Toll Road. This project required a complex Traffic Management Plan to safely manage these high traffic volumes and accommodate pedestrian traffic. Multiple shifts of Route 7 were required in order to construct the new bridge in phases while maintaining traffic at all times. Lanes were temporarily closed only during off-peak periods. Daily coordination was required with the Airports Authority, VDOT, Airports Authority's noise wall construction project, and the Silver Line project to ensure smooth and efficient operation of both the Dulles Toll Road and the Dulles International Airport Access Highway.</p> <p>Over 80% of this project was constructed on the Airports Authority's property through agreements with VDOT. Design and Construction of this project involved close coordination with the Airports Authority to ensure that the project limits were within the Airports Authority's approved property limits and that portions of the final construction that become Airports Authority property exceeded their construction standards. Airports Authority facilities that were designed and constructed as part of this project include roadway lighting, bridge protection barrier, bridge substructure, grading for future CD lanes, and overhead sign structures.</p>	<p>RICHMOND BRIDGES STAFF EXPERIENCE</p> <ul style="list-style-type: none"> ▪ Greg Andricos ▪ Jerry Whitlock ▪ Dawn Pattison ▪ David Leber
	<p>DEDICATION TO AND SUCCESSFUL ACHIEVEMENT OF ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY, AND WORKMANSHIP. Due to overall excellence in quality of craftsmanship, technical challenges, difficulty of execution, and aesthetics, the Heavy Construction Contractor's Association awarded the DBT the <i>2018 Award for Excellence in Infrastructure</i>.</p> <p>IMPLEMENTING AND MAINTAINING AN EFFECTIVE QUALITY ASSURANCE AND QUALITY CONTROL PLAN DURING DESIGN AND CONSTRUCTION. This project included an extremely aggressive schedule for both design and construction that was mitigated using the "rolling Design-Build" method for all structures work on the project. An effective QA/QC program was essential to the success of the project and helped avoid delays due to rework. Daily communication between all members of the QA/QC team was maintained throughout construction to ensure that work met or exceeded quality requirements. Weekly QA/QC meetings were held to discuss and resolve any issues. Two-week look-ahead schedules were used to monitor and adjust QA/QC resources as needed based on work loads and work shifts.</p> <p>USE OF INNOVATIVE DESIGN SOLUTIONS AND CONSTRUCTION TECHNIQUES THAT REDUCE FUTURE MAINTENANCE. Use of micropile foundations minimized impacts to the adjacent pavement during construction of the bridge substructure. Other innovative design efforts led to a joint elimination over a pier in one of the pedestrian overpasses, which improves the long-term maintenance concerns.</p> <p>RELEVANT AND VERIFIABLE EVIDENCE OF GOOD PERFORMANCE. The most notable enhancement included by the Design Build Team (DBT) in the low price proposal was the mitigation of potential utility delays and compression of the project schedule. The construction phasing of the bridge replacement was reduced from seven phases to four phases by adjusting the bridge alignment and constructing the northern widening in the first phase concurrent with the interior widening. This also allowed the DBT to provide a corridor for the utilities to relocate eight months ahead of the RFP documents. The DBT also self-performed construction of the new utility duct bank to mitigate potential schedule impacts by utility construction crews. Additionally, the new bridge piers, which were tightly constrained within the narrow median of the Dulles Toll Road and Dulles International Airport Access Highway, were self-performed using specialty geotechnical foundations. These foundations included drilled shafts, top down tieback walls, and micropiles. These innovative design and construction techniques minimized lane shifts and helped reduce the number of construction phases. The DBT also accommodated a politically active and litigious home owners association, whose right-of-way was required for construction of a new noise barrier, by developing an alternate design concept that eliminated the need to install poles and ground wires in a heavily used recreation area. Through Wagman's MBE-DBE outreach program, the DBT was able to incorporate 12% of small, local and disadvantaged business participation in the project, greatly exceeding the 7% contractual goal. During construction, this Route 7 D-B project held the highest CQIP score in the commonwealth.</p>	<p>SIMILARITIES TO RICHMOND BRIDGES</p> <ul style="list-style-type: none"> ▪ Design-Build ▪ Roadway ▪ Survey ▪ Right-of-Way ▪ Specialized foundations ▪ Hydraulics ▪ TCD/TMP ▪ Permitting/Environmental ▪ Utility Coordination/Relocation ▪ Public Involvement/Comm. ▪ Context Sensitive Solutions ▪ Third-Party Coordination ▪ QA/QC and CEI ▪ Overall Project Mgmt.
	<p>SIMILAR RISKS RICHMOND BRIDGES CONNECTOR</p> <p>Risk #1 Utilities: An alternate design was developed for overhead high voltage power lines requiring relocation to eliminate the need for pole and ground wire installation in a popular recreation area. Bridge phasing was adjusted to allow utility relocations on the bridge to occur eight months early.</p> <p>Risk #2: MOT/Stakeholder Coordination: The DBT coordinated with multiple stakeholders and adjacent projects and interstate & primary roads (I-495 (offramps to DTR WB), coordinate with Jones Branch Multimodal (ped), Silver line, WMATA, Shared use path, Rte 7 over DTR/DIAAH) to develop innovative MOT phasing while remaining agile with numerous permanent design features. This ultimately resulted in the incorporation of both aerial and underground pedestrian structures, balancing the needs of pedestrians and bicyclists with increased vehicular throughput. Furthermore, public outreach and coordination of ROW with an adjacent homeowners' association was required to facilitate construction of a new noise barrier.</p> <p>Risk #3: Substructure Considerations: Innovative solutions and several specialty pieces of equipment were used to self-perform the substructure reuse including a compact drilling rig and custom discharge assembly for offsite disposal of drill cuttings, rebar repair and corrosion protection for existing, and specialty concrete repair mixes for repair of the existing foundation.</p>	

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: I-95 Southbound CD Lanes Rappahannock River Crossing (Design-Build) Location: Stafford, VA	Name: Johnson, Mirmiran & Thompson, Inc.	Name of Client/ Owner: Virginia Department of Transportation Phone: 540-372-3549 Project Manager: Robert Ridgell, PE Phone: 540-372-3549 Email: robert.ridgell@vdot.virginia.gov	05/2022	05/2022	\$101,608	\$114,736 – Due to Owner Directed Change Orders	\$114,736

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

	<p>SCOPE/PROJECT DESCRIPTION. This \$114M design-build project for the Virginia Department of Transportation constructs six miles of three new southbound general-purpose lanes in a notoriously congested Fredericksburg area. The lanes are added to the existing median of I-95, and the existing southbound lanes will be converted to a collector-distributor road between Route 3 and Route 17. The project includes four bridges; a new 1,200-foot-long, 100-foot-high bridge over the Rappahannock River for the new general-purpose lanes in the median, a new bridge over Route 17 for the general-purpose lanes, and two replacement bridges for the existing I-95 crossings of Route 17. The project connects with the planned southern extension of the Express Toll Lanes from Northern Virginia.</p> <p>This project required a complex Traffic Management Plan to safely manage the high traffic volumes of I-95, Rt 17 interchange and the Rt 3 interchange. Through design refinement the Wagman DBT was able to reduce the MOT phasing on Rt 17 to one phase during construction of the new I-95 overpass bridges. We also reduced impact to I-95 GP traffic by working with VDOT to construct the large buildups required to divert the interstate traffic during reconstruction of the GP bridges over weekend periods as opposed to the months long effort to build up in 2" increments one lane at a time. The DBT also worked with stakeholders to implement and maintain a coordinate pedestrian MOT scheme for trail & river users during construction of the Rappahannock River Bridge. This included portages, temporary pedestrian bridges, widening of existing City infrastructure, and dedicated pedestrian routes through the construction zone.</p> <p>The project has required coordination with the following agencies, FHWA, VDOT, EPA, Department of Environmental Quality, US Army Corps of Engineers, Virginia Marine Resources Commission, Virginia Department of Game and Inland Fisheries, City of Fredericksburg, Stafford County, and Spotsylvania County. The project also involves extensive coordination with three other major construction projects that overlap construction limits with this project.</p>	<p>RICHMOND BRIDGES STAFF EXPERIENCE</p>
<p>The Wagman DBT along with VDOT conducted an active public involvement campaign for the project. The public involvement includes a series of Pardon Our Dust (POD) public meetings that occurred at each major switch in traffic during construction to inform citizens what to expect and how to navigate the construction work zones. These included in virtual; POD meetings to address concerns stemming from the COVID-19 pandemic. Stakeholders coordinated with to date, include homeowners concerned about noise walls, environmental groups such as Friends of the Rappahannock, river and trail user groups and utility companies. In addition the Wagman DBT implemented detailed coordination with local first responders to ensure they had access to Interstate crossovers within the project limits, improved access to local training facilities, coordinate access to the work sites in case of emergency, coordinate site specific training for both first responders and Wagman personnel, coordination of MOT with first responders, and final design reviews specifically for first responders. Other activities include monthly newsletters, project website, and social media notifications.</p> <p>IMPLEMENTING AND MAINTAINING AN EFFECTIVE QUALITY ASSURANCE AND QUALITY CONTROL PLAN DURING DESIGN AND CONSTRUCTION. This project included an extremely aggressive schedule for both design and construction that was mitigated using an Early Works Package for drainage erosion & sediment control, clearing and earthwork. An effective QA/QC program was essential to the success of the project and helped avoid delays due to rework. Daily communication between all members of the QA/QC team was maintained throughout construction to ensure that work met or exceeded quality requirements. The Wagman DBT partnered with VDOT on this project to implement the use of PlanGrid software to ensure timely comprehensive collaboration among the project team. This allowed up to the minute collaboration in addition to our weekly QA/QC meetings held to discuss and resolve any issues. Four-week look-ahead schedules were used to monitor and adjust QA/QC resources as needed based on workloads and work shifts.</p> <p>RELEVANT AND VERIFIABLE EVIDENCE OF GOOD PERFORMANCE. The project has required significant public engagement with many stakeholders including recreational users of the river. The Fredericksburg Trails Alliance has reported publicly on their website. "We met the ... [Wagman]Team back on May 21, 2018 at the jobsite... they have exceeded our expectations and have really done an amazing job by doing everything that they said they would do and more." The project team has turned what was considered a risk to the project during procurement to a project benefit through building strong stakeholder relationships. TDue to our QA/QC efforts the project currently holds the highest CQIP score in the state at 97.2%</p>	<ul style="list-style-type: none"> ▪ Greg Andricos ▪ Glen Mays ▪ Randy Sprinkle ▪ Matt McLaughlin ▪ Mike Dugan ▪ David Creasey 	<p>SIMILARITIES TO RICHMOND BRIDGES</p> <ul style="list-style-type: none"> ▪ Design-Build ▪ Roadway ▪ Survey ▪ Right-of-Way ▪ Specialized foundations ▪ Hydraulics ▪ TCD/TMP ▪ Permitting/Environmental ▪ Utility Coordination/Relocation ▪ Public Involvement/Comm. ▪ Context Sensitive Solutions ▪ Third-Party Coordination ▪ QA/QC and CEI ▪ Overall Project Mgmt.
<p>SIMILAR RISKS RICHMOND BRIDGES CONNECTOR</p> <p>Risk #1 Utilities: Alternative designs were developed that eliminated all but one (1) utility conflict with the project. The Wagman DBT also coordinated with Dominion Energy and Cox Cable to relocate their facilities that were in conflict with existing I-95.</p> <p>Risk #2: MOT/Stakeholder Coordination: The DBT coordinated with multiple public and private stakeholders, adjacent projects and primary roads (Rt 3 Safety Improvements, Express Lanes Fredericksburg Extension, Chatham Bridge Replacement, I-95 NB RRC & multiple smaller Rt 1 and Rt 17 construction projects, Friends of the Rappahannock, Fredericksburg Trails Alliance, Stafford County, Spotsylvania County & City of Fredericksburg) to develop innovative construction phasing minimizing disruptions to the traveling public using Interstate shifts, temporary traffic signals, and pedestrian detours. The Wagman DBT worked with VDOT to reduce the time required for I-95 diversion installation from over a month to one overnight shift. Specific coordination with first responders.</p>		

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Route 54 over I-95 Location: Hanover, VA	Name: Whitman, Requardt and Associates, LLP	Name of Client/ Owner: Virginia Department of Transportation Phone: (804) 752-5538 Project Manager: Keith Rider Phone: (804) 752-5538 Email: Keith.rider@vdot.virginia.gov	11/2015	11/2015	\$8,412	\$8,048 *Cost went down due to re-evaluating and minimizing construction phasing and traffic plans.	\$8,048

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.



SCOPE/PROJECT DESCRIPTION. This project was the removal, replacement and widening of the existing Route 54 bridges over I-95 in Ashland, Virginia. The new bridge is a dual bridge carrying Route 54 east and west bound over Interstate 95. The dual bridge was combined into one structure that is 220-ft long and 97-ft wide. Originally the bridges were to be replaced using three traffic phases. Through coordination and cooperation with VDOT and their design consultants, WRA and McCormick Taylor, Wagman retained an independent consultant (Whitney, Bailey, Cox & Magnani) to redesign the traffic phasing to two phases, reducing impacts to the traveling public, accelerating the schedule and reducing the overall construction cost to VDOT by \$400K. Wagman's redesigned traffic management plan incorporated temporary traffic signals to efficiently control traffic through this interstate interchange. Wagman was responsible for maintenance and protection of traffic on a busy corridor of I-95 north of Richmond. Wagman also reconstructed and widened the bridge approach roadway, which included significant drainage improvements

Wagman designed and constructed the support of excavation to reconstruct the phased piers along I-95 and phased abutments on Route 54. Wagman's Geotechnical Group drove the piles for the foundation, which was complex construction due to the close proximity of the existing bridge and existing foundations. Wagman coordinated with local stakeholders and cooperated with the local businesses to minimize impacts. Phased demolition of the existing superstructures over I-95 was accomplished with ramp-to-ramp detours and brief slow roll operations during non-peak hours. Replacement of the substructure units involved selective demolition as elements of the existing foundations and abutments were incorporated into the new bridge. The demolition and the erection of new girders involved close coordination with VDOT's Public Outreach group to minimize impacts to the traveling public

and to inform the commuters and truckers travelling along I-95. Erosion and sedimentation and stormwater management was vital to avoid impacts to existing Waters of the US.

This project required significant 3rd party stakeholder coordination. The Town of Ashland and Hanover County depend heavily on this interchange not only for local mobility but for tax revenue generation with I-95 travelers. Reduced or restricted access would have significant negative consequences to local and "out of town" travel. Safe, seamless Maintenance of Traffic was critical to the project success. The project VE to reduce construction phases significantly improved traffic flow and immediately eliminated a traffic conflict point that had been responsible for multiple serious accidents before the project started. Wagman's construction team also closely coordinated with several significant adjacent projects, often operating and scheduling traffic control operations with multiple projects. This coordination helped create a safer travel corridor for the traveling public.

This project is very similar to the Richmond Bridges D-B project in that it required phased construction to allow for continuous unimpeded traffic flow from one side of I-95 to the other side of I-95 through the heavily travelled corridor of Route 54 through the Town of Ashland. Wagman performed complex traffic switches and detours along I-95 and at the Rt. 54 Interchange. Temporary signals were installed to direct traffic safely to and from I-95 through the ramps and loops at the Rt. 54 Interchange. Also, similar was the substructure work and selective demolition in a very narrow median on I-95 that required innovative construction techniques and detailed work plans. The existing bridge pier was removed in its entirety; however, we had to preserve the existing foundations and install new foundations on both sides of the existing pier within a very narrow corridor along I-95. Wagman's Geotechnical Group designed a shoring system to perform the new foundation work safely, while at the same time, allowing access for heavy equipment to drive new piles, form and pour new concrete footers.

RICHMOND BRIDGES STAFF EXPERIENCE

- Glen Mays, DBIA
- Greg Andricos, PE

SIMILARITIES TO RICHMOND BRIDGES

- | | |
|--|--|
| <ul style="list-style-type: none"> ▪ Working on Interstate (I-95) ▪ Reconstruction of Bridge Approaches ▪ Demolition of Existing Structure while Maintaining Safety of Existing Structure ▪ Survey ▪ Right-of-Way ▪ Specialized foundations ▪ Hydraulics ▪ TCD/TMP | <ul style="list-style-type: none"> ▪ Permitting/Environmental ▪ Utility Coordination/Relocation ▪ Public Involvement/Comm. ▪ Context Sensitive Solutions ▪ Third-Party Coordination ▪ QA/QC and CEI ▪ Overall Project Mgmt. ▪ Coordination of Public Outreach Program ▪ Coordination with Adjacent Projects |
|--|--|

SIMILAR RISKS RICHMOND BRIDGES CONNECTOR

Risk #1 Utilities: Coordination with existing utilities and detailed planning allowed Wagman to safely perform all construction without any disruption to service.

Risk #2: MOT: Collaboration with VDOT and the Designer allowed the team to re-design the traffic and construction phasing improving the schedule, reducing cost, and minimizing impacts to the traveling public.

Risk #3: Substructure Considerations: 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 safety of the workers and traveling public.

Constructing deep foundations adjacent to an existing structure (and under the structure) requires expertise in geotechnical engineering. With Wagman's in-house geotechnical engineers, the team developed a foundation construction plan and support of excavation that allowed construction with minimal impact to the existing structure.



3.4.1(b) Lead Designer



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date	e. 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)
					Original Contract Value	Final or Estimated Contract Value	
Name: Martin Luther King, Jr., Expressway Extension, Elizabeth River Crossing / Midtown Tunnel (D-B) P3 Location: Portsmouth, VA	Name: SKW Constructors (Skanska, Kiewit, Weeks Marine Joint Venture)	Name of Client: Elizabeth River Crossing, LLC & VDOT Phone: (757) 932-4400 Project Manager: Jeff Sullivan Phone: (757) 673-9483 Email: jeff.sullivan@kiewit.com	10/2012	11/2016	\$210,000	\$210,000	\$11,922

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.



SCOPE: Volkert managed engineering and design of the Martin Luther King (MLK) Expressway (US 58) Extension a one-mile, four-lane, elevated, limited-access, urban principal arterial, and a significant component of the \$2.1B Elizabeth River Crossing PPTA project. In addition, this specific \$210M project component included design of two new urban interchanges at I-264 and High Street, modifications to the London Boulevard interchange, an urban plaza, two bridge widenings on I-264, the widening of I-264 to add auxiliary lanes, side road improvements, retaining walls, and new stormwater management facilities. While WSP was the lead designer of the overall P3 project, Volkert led the multidisciplinary design team on this standalone D-B roadway corridor element directly providing project management; roadway design; traffic, structural, and hydraulic engineering design; landscape architecture design; and construction phase services. In addition, Volkert developed the design of two new interchanges at I-264 and High Street; two bridge widenings on I-264; the widening of I-264 to add auxiliary lanes; modifications to the London Boulevard interchange; side road improvements; an urban pedestrian plaza; retaining walls; and new stormwater management (SWM) facilities.

INNOVATIVE DESIGN TECHNIQUES: Volkert utilized a context sensitive design approach to minimize impacts to the traveling public and the local historic elements (including a cemetery, Calvary Baptist Church, and the Prentiss Park neighborhood). The design maintained connectivity between neighborhoods with pedestrian friendly amenities; provided streetscape enhancements and an urban plaza on High Street to serve as a gateway into the historic district; and incorporated aesthetic treatments on and under the bridges. Connectivity to the existing pedestrian paths on the north side of the project enhanced the project and improved safety for residents using the improved signalized crossing.

ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY, WORKMANSHIP: Volkert's design used not only met budget but in some areas was able to result in significant cost savings:

- The use of hybrid plate girders saved approximately \$700,000.
- Revision of one span arrangement from a three-span to a two-span unit, and elimination of one line of pre-stressed concrete girders and one pier saved approximately \$300,000.
- Fiberglass reinforced plastic deck drainage system reduces the amount and size of equipment needed.
- A segment of the project incorporates 18 EPS and MSE walls as a cost-effective alternative to bridge construction, reduced the project footprint and minimized ROW impacts. In addition, the lightweight EPS retaining walls decrease the load on the highly compressible underlying soils, reducing settlement.

STORMWATER MANAGEMENT: The design of the BMP SWM facilities complied with the performance criteria of the Chesapeake Bay TMDL, and maximized the available space for SWM facilities while minimizing impacts to an aging and over-taxed storm drain system.

TRAFFIC ENGINEERING: This complex project required detours to accommodate long-term partial and full lane and ramp closures at two interchanges along the mainline of I-264. Volkert conducted traffic analyses to determine the impact of the detour on the surrounding roadway network, including analyses of 21 intersections under pre-construction and detour conditions. This involved crash, ramp, LOS, delay and back-of-queue analyses using Synchro as well as signal optimization. The study also evaluated mitigation measures including signal phasing and time

optimization to accommodate the impacts. As a result of the study, Volkert developed a Type C TMP including a Temporary Traffic Control Plan and Traffic Operations Plan designed to maintain traffic for the 70,000 vehicles per day along I-264 while meeting the construction schedule.

QA/QC PLAN: The design team developed a project specific quality control plan that was strictly followed during all phases of design. A QA/QC Certification form was signed by the Discipline Manager and the Project Manager for every submittal to validate that the requirements of the plan were met.

CONSTRUCTION PHASE SERVICES: During construction, Volkert assisted the Contractor with resolution of conflicts in the field, conducted 321 shop drawing reviews, and responded to 785 RFIs (addressed within 24 hours of receipt).

ON-TIME & WITHIN BUDGET COMPLETION: The project was designed on an extremely fast-track, progressing from 30% roadway plans to RFC 100% drawings within a span of approximately 10 months..

RICHMOND BRIDGES STAFF EXPERIENCE

- | | |
|---------------------------|----------------------------|
| ▪ Brian Graham, PE | ▪ Jason Jimenez-Pisani, PE |
| ▪ Hari Thaker, PE, PTOE | ▪ Charlie Reid, PE |
| ▪ Keith Weakley, PE, DBIA | ▪ David Simons, PE |

SIMILARITIES TO RICHMOND BRIDGES

- | | |
|------------------|----------------------------|
| ▪ Bridge Design | ▪ Permitting/Environmental |
| ▪ Roadway Design | ▪ Utility Coordination |
| ▪ Geotechnical | ▪ Third-Party Coordination |
| ▪ TCD/TMP | ▪ Overall Project Mgmt. |

SIMILAR RISKS TO RICHMOND BRIDGES

Risk #1: Stakeholder Coordination: The design of the MLK Expressway was heavily influenced by the various stakeholders on the project. The mainline bridge crossed over 16 CSX tracks. Early coordination for clearance requirements and requirements for pedestrian fencing was critical to the project schedule. Span arrangements were set to avoid the need for crash walls and above ground footings were used to minimize excavation around the tracks. The project site also had many historic elements, including a cemetery, the Calvary Baptist Church, and the Prentiss Park neighborhood. During final design, a new portion of the cemetery was discovered and the alignment of the mainline had to be modified. Volkert was able to adjust the alignment in a way that had minimal impacts on the design that had been performed to date and the project remained on schedule.

Risk #2: MOT: This complex project required detours to accommodate long-term partial and full lane and ramp closures at two interchanges along the mainline of I-264. Volkert conducted traffic analyses to determine impact of the detours on the surrounding roadway network, including analyses of 21 intersections under pre-construction and detour conditions. As a result of the study, Volkert developed a TMP including a Temporary Traffic Control Plan (TTCP) and Traffic Operations Plan (TOP) designed to maintain traffic for the 70,000 vehicles per day along I-264 while meeting the construction schedule.

Risk #3: Substructure Considerations: Due to the highly compressible soils in the area, the anticipated settlement around the abutment fill locations caused significant downdrag forces on the piles. In order to reduce these forces, Volkert developed a sequence of construction that delayed the construction of the abutments until after the required waiting period for settlement to occur. This reduced the number of piles required which reduced the overall project cost. Volkert also utilized lightweight backfill and EPS blocks to mitigate the settlement issues on the project.

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. Contract Completion Date	e. 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)
					Original Contract Value	Final or Estimated Contract Value	
Name: : I-581/Elm Avenue Interchange Design-Build Project Location: Roanoke, VA	Name: American Infrastructure, Inc.	Name of Client: American Infrastructure, Inc. Phone: (804) 290-8500 Project Manager: Ben Bushey Phone: (671)721-0754 Email: ben.bushey@americaninfrastructure.com	Design 05/2013 Construction 03/2016	Design 05/3013 Construction 03/2016	\$20,445	\$20,750	\$688

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.



CONSTRAINED PROJECT FOOTPRINT IN THE HEART OF ROANOKE:

I-581 is Virginia's most heavily travelled road west of Richmond. Mobility and accessibility improvements at the interchange with Elm Avenue benefit the entire region by reducing congestion at the interchange and improving traffic flow on I-581. This was accomplished with cost-effective modifications to widen ramps and bridges, and extend turn lanes. The design-build team constructed these modifications within a constrained project footprint while maintaining traffic on the bridges. Modifications and improvements also included the lane additions to both off-ramps from I-581, reconstruction of all four interchange ramps, retaining walls, utility relocations, signal and lighting upgrades, signs and pavement markings, new drainage structures, and stormwater management facilities.

STRUCTURAL DESIGN FOCUSED ON DURABILITY, LOW MAINTENANCE AND ECONOMY:

As the structural designer responsible for the rehabilitation of two bridges within the interchange, Volkert served as a key subconsultant member of the design-build team – Lead Structural Engineer. Working from offices in Springfield, VA Volkert developed the cost-effective bridge rehabilitation design with a focus on durability, low maintenance, and economy. In addition, they developed a sequence-of-construction for both bridges allowing construction to advance as efficiently as possible.

Bridge rehabilitation consisted of superstructure replacements and substructure widenings of two bridges over I-581 and active Norfolk Southern Railroad tracks to add turn lanes, extend left-turn lanes, and correct the substandard vertical clearance. The design converted a 200-foot-long, four-lane urban highway structure over I-581 to a six-lane bridge with sidewalks and pedestrian-scale lighting. One new pier in the median was added to the existing layout to convert three spans of simple steel girders to a four-span, continuous and jointless steel-girder bridge to meet current vertical clearance criteria. Converting the bridge to a jointless structure contributes to future low maintenance and economy. The design of the second bridge converted a 150-foot-long four-lane urban highway structure to a seven-lane bridge over the Norfolk Southern Railroad tracks with sidewalks and pedestrian-scale lighting. Simple-span concrete box beams were replaced with three-span, continuous, weathering steel girders.

EVIDENCE OF GOOD PERFORMANCE: Volkert met an extremely compressed schedule for the original design of both bridges, and delivered the project foundation re-designs within an extremely quick turnaround time as well..

DESIGN WAIVERS: Volkert's in-depth knowledge of VDOT design standards coupled with long-term relationships in the District bring value to the team especially when schedule is critical. On the Elm Avenue project the designers obtained waivers for a temporary condition on the bridge (delayed sidewalk installation) and no pier protection for the railroad bridge.

COMPLEX SUBSURFACE CONDITIONS: Deck extensions and buried approach slabs were used on both bridges to eliminate joints at the abutments, reduce maintenance, and minimize traffic disruptions. Due to varying subsurface conditions, including pinnacle rock as deep as 100 feet, the widening of the piers is supported by drilled shaft foundations and widening of abutments are supported by driven steel H piles.

MEETING AN EXPEDITED SCHEDULE: On-time substantial completion was achieved despite numerous unforeseen issues. Volkert's initial designs of the bridges rehabilitations were completed on an accelerated schedule of less than three months, and the entire project was designed within ten months. Also key to meeting the schedule was Volkert's effective sequence-of-construction and the transportation management plans which accounted for high-volume, high-speed traffic on the interstate below, traffic volumes on Elm Avenue, and time and closure restrictions.

RICHMOND BRIDGES STAFF EXPERIENCE

- Keith Weakley, PE, DBIA
- Brian Graham, PE
- David Simons, PE
- Charles Reid, PE

SIMILARITIES TO RICHMOND BRIDGES

- Bridge Design
- Roadway Design
- Survey
- Geotechnical
- Pedestrian accommodations
- TCD/TMP over interstate
- Permitting/Environmental
- Utility Coordination
- Third-Party Coordination
- Context Sensitive Solutions
- Construction over Interstate Traffic
- Retaining Walls

SIMILAR RISKS TO RICHMOND BRIDGES

Risk #1: Stakeholder Coordination: One of the major stakeholders on this project was NS Railway. Due to the constraints of the existing bridge and roadway profile, meeting the standard railroad clearance requirements would have added significant cost to the project. Volkert was able to work with NS Railway to gain approval for a substandard vertical clearance of 22'-5". Volkert was also able to gain approval to eliminate crash walls for the widened piers based on the fact that the original piers were not protected. This resulted in significant savings to the project schedule and cost.

Risk #2: MOT: The development of the sequence of construction plan and transportation management plan took into account the high-volume, high-speed traffic on the interstate below as well as time and closure restrictions. Two lanes of traffic were maintained in each direction by employing four stages of construction for both bridges. A temporary pedestrian sidewalk was utilized to maintain pedestrian connectivity in this urban area. Volkert's sequence of construction and MOT plan was key to meeting the accelerated construction schedule.

Risk #3: Substructure Considerations: In order to account for the higher loads from a continuous superstructure and to reduce the vertical clearance, Volkert was able to add a new pier in the center of I-581 and convert three spans of simple steel girders to a four-span, continuous and jointless steel-girder bridge. The widened piers were supported by drilled shaft foundations to account for the unknowns of karst geology. The design accounted for differential deflections and load transfer between the existing and widened substructure units.

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. Contract Completion Date	e. 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)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-195 Southbound Lanes over Route 76, CSX Railroad, & Ramp S Location: Richmond District, VA	Name: Virginia Department of Transportation (VDOT)	Name of Client: VDOT Phone: (757) 932-4400 Project Manager: Adam Brooks Phone: (804) 524-6117 Email: adam.brooks@VDOT.Virginia.gov	3/2021	5/2021 (est.)	\$15,700	\$9,127 Scope modified by Owner	\$2,600

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.



The southbound Downtown Expressway (Route 195) over Powhite Parkway (Route 76), the CSX Railroad tracks & Ramp S, is a triple lane structure that was in poor condition and has been deemed a high priority for reconditioning.

SCOPE: Volkert thoroughly studied the rehabilitation, replacement, and repair alternatives, and developed innovative, best-value plans for the selected option. H&H provided comprehensive condition evaluation of the steel box beam straddle girders, part of their Phase I support. The team worked together to determine whether rehabilitation or replacement is required and to identify the most cost-effective and feasible solutions for providing a structurally sound bridge that meets current standards. Scope of work involved:

- An in-depth, hands-on bridge inspection
- A deck evaluation to identify deteriorated conditions
- Assessment of existing foundation condition and capacity
- Asbestos inspections and testing
- Preliminary roadway geometry to achieve vertical clearances
- Review of subsurface conditions
- Conceptual development and analyses of rehabilitation, replacement, and repair options
- Key stakeholder coordination
- Development of preliminary cost estimates
- Life-cycle cost analyses
- Assessment of traffic, ROW, and utility impacts.

Due to the bridge’s two-column piers and steel pier caps, MOT and staged construction options were thoroughly investigated during Phase I of the project. Phase I necessitated Synchro modeling and analyses in determining the most feasible and effective sequence-of-construction (SOC) and TMPs to minimize any potential traffic impacts.

Prior to the start of Phase II (design services), a routine scheduled NBIS inspection was conducted by Volkert’s safety inspection team.

The team discovered vertical displacements in a cantilevered bearing seat for girder one at pier five, as well as other areas of deterioration, which required an immediate plan of action.

The displacements were of sufficient concern that VDOT entrusted Volkert to design emergency repairs to the damaged cantilevered bearing seats within an accelerated schedule of 2.5 months and conduct construction phase services (under Volkert’s Statewide Structure & Bridge On-Call Contract. Volkert developed repair plans to repair/reinforce the damaged cantilevered bearing seat. Volkert performed an evaluation to determine the appropriate repair method for the beam ends and cantilevered beam seats. A preliminary concept was presented for discussion prior to the advancement of design plans. Once a repair option was selected, Volkert performed all design related services for repairs or replacement of the damaged members and developed the repair plans and cost estimates.

Additional services also included the development of MOT plans and a TMP to complement emergency repairs of the bridge elements. The plans provided for a lane closure during each phase of construction. A detour plan through the City of Richmond was developed to allow for required ramp closures and repairs on the span above.

Upon completion of the emergency repairs, VDOT selected the bridge rehabilitation alternative, and Volkert began to develop the preliminary and final design (Phase II of this Project #4 described herein).

Volkert conducted extensive analyses of the two-column pier substructures to determine the extent to which joint elimination would be possible through the use of link slabs and deck slab extensions. A 3D-system approach was applied, using STAAD finite element modeling to account for load distribution to columns of differing heights and stiffnesses, considering the effects of potential column strengthening and bearing replacement. A SOC was developed to maintain two lanes of traffic at all times during rehabilitation of the structure. The SOC includes replacement of all cantilevered bearing seats; temporary support and jacking operations; hydro-demolition and high early strength latex modified concrete overlay of spans 1 – 3; deck replacement of spans 4 – 6; and miscellaneous substructure repairs.

An innovative combination of overhang replacement and deep hydro-demolition in spans 1 – 3 was applied to allow for the replacement of the existing substandard concrete parapet and sound wall attachment full length of the bridge while reducing demolition costs. The anticipated dead load deflections were calculated during the deck replacement of spans 4 – 6, using DESCUS to consider the effects of horizontal curvature, partial composite deck slabs during staged construction, and transverse deflection of steel bent caps. The final design includes significant repairs to critical infrastructure while allowing the bridge to continue functioning throughout construction as an essential artery for the City of Richmond. During final design, Hardesty & Hanover developed the design of the innovative rehabilitation of the straddle bents, to support the curved steel girder superstructure.

Volkert is currently providing construction administration services (Phase III), which includes responding to RFIs, participating in the preconstruction meeting, and reviewing shop drawings submitted by the Contractor.

RICHMOND BRIDGES STAFF EXPERIENCE

- | | |
|----------------------------|---------------------------|
| ▪ Brian Graham, PE | ▪ Keith Weakley, PE, DBIA |
| ▪ Jason Jimenez-Pisani, PE | ▪ Charlie Reid, PE |
| ▪ Hari Thaker, PE, PTOE | |

SIMILARITIES TO RICHMOND BRIDGES

- | | |
|------------------------------|----------------------------|
| ▪ Bridge Design | ▪ Permitting/Environmental |
| ▪ On-Site Safety Inspections | ▪ Utility Coordination |
| ▪ Multi-Modal Corridor | ▪ Third-Party Coordination |
| ▪ Geotechnical | ▪ Overall Project Mgmt. |
| ▪ TCD/TMP | ▪ Cost Estimating |

SIMILAR RISKS TO RICHMOND BRIDGES

Risk #1: Utilities: An existing gas line that was attached to the east side of the bridge introduced a significant risk to the project schedule. Through extensive coordination with the utility owner, Volkert developed a Sequence of Construction and MOT plan that allowed the Contractor to work on the west side of the bridge in Phase 1 while the gas line remained in service. Delaying the repairs on the east side of the bridge until phase 2 allowed the Contractor to work adjacent to the gas line during the window when it was permitted to be temporarily shut down.

Risk #2: MOT/Stakeholder Coordination: Volkert’s MOT plan was developed in coordination with the various stakeholders on the project including the Richmond Metropolitan Transportation Authority and the City of Richmond. Lane closures and detours were designed to avoid directing traffic away from the tolling facilities. Volkert coordinated with VDOT and the City of Richmond for all detour routes through the City of Richmond, including historic Carytown. Temporary signals were recommended along the detour routes to mitigate traffic disruptions in the downtown area. CSX was another major stakeholder that required extensive coordination for clearance requirements and access to the fracture critical straddle bents that were inside of CSX R/W.

Risk #3: Substructure Considerations: Volkert conducted extensive analyses of the two-column pier substructures to determine the extent to which joint elimination would be possible through the use of link slabs and deck slab extensions. A 3D-system approach was applied to account for load distribution to columns of differing heights and stiffnesses, considering the effects of potential column strengthening and bearing replacement.

WAGMAN

General Construction | Heavy Civil | Geotechnical

VOLKERT

UPC (State Project Nos.; Federal Project Nos.)
UPC 111300 (U000-127-023, P101, R201, C501, B601; STP-BR04(287))
UPC 111294 (0064-127-022, P101, B661; NHPP-064-3(510))
UPC 113375 (0250-127-050, P101, R201, C501; NHPP-BR04(307))
UPC 113388 (0004-127-051, P101, R201, C501; NHPP-BR04(308))
7th Street Bridge
Contract ID Number: C00111300DB107