



Statement of Qualifications



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

Contract ID No. C00111300DB107

Due: February 2, 2021 at 4:00 PM
Electronic Submission





Attachment 3.1.2 SOQ Checklist and Contents



in association with



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	Att. 3.1.2
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Att. 2.10
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	Letter-Pg 1
Offeror's point of contact information	NA	Section 3.2.2	yes	Letter-Pg 1
Principal officer information	NA	Section 3.2.3	yes	Letter-Pg 1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	Letter-Pg 1
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	Letter-Pg 1
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Att. 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Att. 3.2.7
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Att. 3.2.8
Evidence of obtaining bonding	NA	Section 3.2.9	no	Att. 3.2.9

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
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Att. 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Att. 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Att. 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Att. 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	n/a
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Letter-Pg 1
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 2 – 4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Att. 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Att. 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Att. 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Att. 3.3.1
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.4	no	Att. 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 4

ATTACHMENT 3.1.2

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STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Organizational chart narrative	NA	Section 3.3.2	yes	Page 3
Experience of Offeror's Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Att. 3.4.1
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Att. 3.4.1
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 8 - 15



Attachment 2.10 Acknowledgement of RFQ, Revision and/or Addenda



in association with



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**

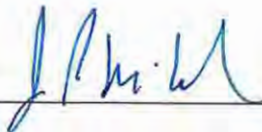
Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this 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 RFQ Questions and Answers - January 12, 2020
(Date)

3. Cover letter of _____
(Date)



SIGNATURE

January 25, 2021

DATE

James P. McNelis

PRINTED NAME

President

TITLE



3.2 Letter of Submittal



in association with



February 2, 2021

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

RE: I-95 City of Richmond Bridge Superstructure
Replacement and Rehabilitation Bundling
Design-Build | C00111300DB107

3.2 Letter of Submittal

Dear Mr. Clarke:

Joseph B. Fay Co. (Fay) is pleased to submit to VDOT our response to your Request for Qualifications (RFQ) for the above-mentioned project. Fay provides exceptional quality in each and every project we construct. Our core values focus on working safely while providing solutions to our customers. With Wallace Montgomery (WM) as our Lead Designer, Fay offers VDOT a Team experienced in design-build with a shared approach to partnering and integrating innovative solutions, and a proven track record of delivering successful transportation infrastructure projects on time and within budget.

3.2.1 Full Legal Offeror Name and Address: Joseph B. Fay Co., 6711 Baymeadow Drive, Suite A1, Glen Burnie, MD 21060

3.2.2 Point of Contact:

Greg Yavicoli, PE, Operations Manager
6711 Baymeadow Drive, Suite A1
Glen Burnie, MD 21060
(P) 410.424.3380; (F) 410.760.1985
(E) gyavicoli@jbfayco.com

3.2.3 Principal Officer:

James P. McNelis, President
Nova Tower 1, Ste 301, One Allegheny Square
Pittsburgh, PA 15212
(P) 410.424.3380
(E) jmcnelis@jbfayco.com

3.2.4 Joseph B. Fay Co., a corporation, will be the sole proposer/entity with whom VDOT will directly contract; will undertake the financial responsibility and has no liability limitations. Our corporate structure includes: James P. McNelis, President; Kevin Rihn, Secretary; Kurt Karanovich, Vice President; Ryan Surrena, Vice President; and Clint Filges, Vice President.

3.2.5 The Lead Contractor for the project will be Joseph B. Fay Co. and the Lead Designer will be Wallace, Montgomery & Associates, LLP.

3.2.6 Joseph B. Fay Co's affiliated companies are reported on Attachment 3.2.6 provided in the Appendix. Wallace, Montgomery & Associates, LLP has no affiliated or subsidiary companies.

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

3.2.8 Joseph B. Fay Co. is currently Prequalified with VDOT, vendor number **F204**. A copy of our prequalification certificate is included as an attachment to this Letter.

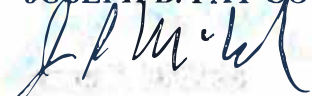
3.2.9 A surety letter stating the Joseph B. Fay Co is capable of obtaining a performance and payment bond based on the current estimated contract value, along with which bonds will cover the project and any warranty periods, is provided as Attachment 3.2.9 in the Appendix.

3.2.10 All required DPOR licenses and SCC registration information is provided as Attachment 3.2.10.

3.2.11 Our Team is committed to achieving the 9% DBE participation goal for the entire contract value.

The signature below affirms that the information supplied in this proposal is true and accurate to the best of our knowledge. VDOT is hereby authorized to confirm all information contained in this proposal. We are excited for this opportunity and confident that our Team will complete this project on time and within budget.

Sincerely,
JOSEPH B. FAY CO.



James P. McNelis
President





3.3 Offeror's Team Structure



in association with



The Fay Design-Build Team

The Joseph B. Fay Co. (Fay) Design-Build Team (DBT) was assembled with the sole intention of joining established, well-respected firms that have proven success working together on design-build (DB) projects that are similar to the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Project. **Fay** has partnered with **Wallace Montgomery (WM)** as Lead Designer, **Bowman Consulting, Ltd. (BC)** for Utility Coordination, and **CES Consulting, LLC (CES)** for Quality Assurance. *We offer VDOT a truly integrated DBT that has established relationships working together.* **Fay** and **WM** have worked together on the design and construction of the Thomas J. Hatem Bridge Rehabilitation Project, a \$55M bridge rehabilitation project involving replacement of deck and portions of the superstructure, major substructure repairs, accelerated bridge construction (ABC), utility relocation and coordination, and public outreach. **WM** is currently working as the Lead Designer with the identical team of design subconsultants on the VDOT Albemarle Bundling DB project – this familiarity amongst team members, and proven experience in leading a bundled DB project, will expedite project design and improve the quality of construction.

Fay was founded in 1947 and offers a legacy of success as an accomplished general contractor specializing in the demolition and reconstruction of bridges across the Mid-Atlantic region. **Fay** is a recognized industry leader in design-build, value engineering and accelerated construction delivery methods and is currently reconstructing the Chatham Bridge in VDOT's Fredericksburg District.

WM was founded in 1975 as a structural engineering design firm and has grown into a top-rated, mid-Atlantic-based, multi-disciplined transportation engineering firm. They have completed over 100 bridge rehabilitation and replacement projects within the past 10 years, including superstructure replacements and projects in urban design settings, involving ABC techniques to reduce impacts.

3.3.1 Key Personnel

Proposed key personnel have a combined 142 years of experience and have been *involved in 34 DB projects.*

Design-Build Project Manager (DBPM): Greg Yavicoli, PE (**Fay**) will serve as the DBT's DBPM and VDOT's primary point of contact. He will be responsible for successfully delivering the Project, and integrating all aspects of the DB process, including design; construction; permitting; RW acquisition; utility coordination; quality management; and DBE compliance. He will coordinate with stakeholders; support public outreach; and be fully accessible to answer project inquiries.

Quality Assurance Manager (QAM): Bryan Barnson, PE, CCM, DBIA (**CES**) will serve as the

DBT's QAM and will report to the **DBPM**. He will be responsible for developing the Project's quality assurance (QA) plan and managing its execution. This includes confirming that all required Quality Control (QC) and QA inspections have been performed, and that all materials have passed testing requirements prior to authorizing payment for each work package.

Design Manager (DM): Justin Myers, PE, DBIA (**WM**) will serve as the DBT's DM and will report to the **DBPM**. He will call upon his unique experience as a lead structural engineer, consultant Design Manager, Construction Engineer, and MDOT Bridge Engineer to oversee the Project's multi-disciplined design efforts. Justin will ensure designs conform to contract documents and VDOT policies / guidelines.

Construction Manager (CM): Jack Yon (**Fay**) will serve as the DBT's CM and will report to the **DBPM**. He will manage all aspects of the Project's construction and QC. He holds a DEQ Responsible Land Disturber Certification and a VDOT ESC Contractor Certification. During construction, Jack will be physically onsite and ensure all materials and work performed meet contract requirements.

Lead Utility Coordination Manager (LUCM): Richard Bennett (**BC**) will serve as the DBT's LUCM and will report to the **DM**. He will work with the DM, CM, and utility companies to avoid and minimize utility impacts through the innovative design and construction means/methods he has learned in over 50 years working in the private sector and for VDOT. He will facilitate prioritizing and scheduling utility relocations in a manner that expedites construction.

3.3.2 Organizational Chart

The DBT's organizational chart notes the Key Personnel and illustrates our reporting and functional structure. We included several value-added positions that are unique to our DBT. The additional experience and qualifications of these individuals will guarantee that the Project is delivered ahead of schedule and within budget. Solid lines on the organizational chart identify the reporting relationships of our DBT members in managing, designing, and constructing the Project. There are clear reporting lines from the **DBPM** to the design and construction teams. Dashed lines represent indirect reporting, obligations, and/or communication. The chart shows a clear separation and independent relationship between the construction QC and QA programs.

Functional Relationships and Team Communications | Our approach to coordination and decision-making emphasizes teamwork and partnering within our DBT, with VDOT, and with project stakeholders. DB contracting is a powerful tool for innovative project delivery. *We have learned through experience that an environment of mutual trust and a willingness to make decisions in real-time*

results in successful project delivery that exceeds Owner expectations for quality, schedule, and budget.

Our DBPM, Greg Yavicoli, PE, will be responsible for executing the work under the contract. He will oversee design and construction, coordinate with stakeholders, and manage the Project risks and schedule. Ian Millikan, PE, PMP, DBIA, CCM, will serve as Design-Build Advisor and call upon his years of experience in the DB industry as an owner's representative to assist the DBPM with any decisions that need to be made to keep the Project on budget and ahead of schedule. The DBPM will receive support from the DM, Justin Myers, PE, DBIA; CM, Jack Yon; QAM, Bryan Barnson, PE, CCM, DBIA; and LUCM, Richard Bennett. The DM will be responsible for managing the WM Design Team, as well as 3D Model Manager Julia Simo, PE to ensure quality design submittals are completed on time. Justin will integrate subconsultants as a seamless extension to the WM Design Team. The CM, Jack Yon, will manage all construction activities. He will review the project schedule and coordinate with the Quality Control Manager (QCM), Jason Esser, PE and Safety Manager, Andrew Weston, to ensure all materials and work align with the contract documents and approved plans and can be safely executed.

We will integrate construction field staff and designers throughout project development. The CM will serve as liaison between construction and design, providing a vital interface between **Fay's** project managers, superintendents, the DM, and the WM multi-discipline design team. The design and construction staff will collaborate to build constructability and safety into the design; minimize delays or rework; streamline reviews; integrate SWM/erosion and sediment control (ESC); ensure environmental compliance; and eliminate potential field issues. The DM and CM will work closely with the LUCM, Richard Bennett, to minimize impacts to utilities. During construction, the CM will coordinate with the DM to address field changes and complete engineer's reviews of construction submittals and shop drawings. The CM will provide construction progress updates and will support Public Relations Manager (PRM), Mike Carosi (OnPoint Transportation PR), with public outreach efforts that address public concerns and provide advance notification about temporary closures and changing traffic configurations. The PRM will coordinate with the VDOT Richmond District Communications Office to establish the PR strategy. The QCM will report directly to the CM and will be responsible for administering the quality control process for the duration of the project. The QCM will be responsible for maintaining all project material logs and as-built files in accordance with the QC Plan. QA will coordinate with, but will be independent of, the daily QC and construction efforts. The QAM,

Bryan Barnson, PE, CCM, DBIA, will lead all preparatory inspection meetings, and will receive timely notice of all construction activities to ensure QA staff is on site. He will have access to all records necessary to ensure compliance with design and construction requirements and maintain a log of deficiencies and non-conformances observed. The QAM will have authority to issue a stop work order.

Fay has learned through experience on DB projects that weekly internal progress meetings are critical and should start immediately upon award of the contract. These weekly progress meetings include key construction and design staff, and **make sure that the Project starts right, stays right, and finishes right.** The meetings address project schedule; design status; permit approvals; RW; utility relocations; construction progress; contract administration; safety; and public outreach. We establish working task groups for traffic, roadway, drainage, environmental, and utilities. As the construction begins, managers, superintendents, temporary traffic control (TTC) and utility coordinators, QC personnel, and the QAM will regularly attend the weekly meetings. During construction, designers will continue to participate in weekly progress meetings so field issues can be addressed in a timely manner. We will hold regular interval (monthly, bi-weekly) project coordination meetings with the DBT, VDOT, the QAM, and stakeholders to enhance partnering, provide over-the-shoulder reviews, and resolve all pertinent issues.

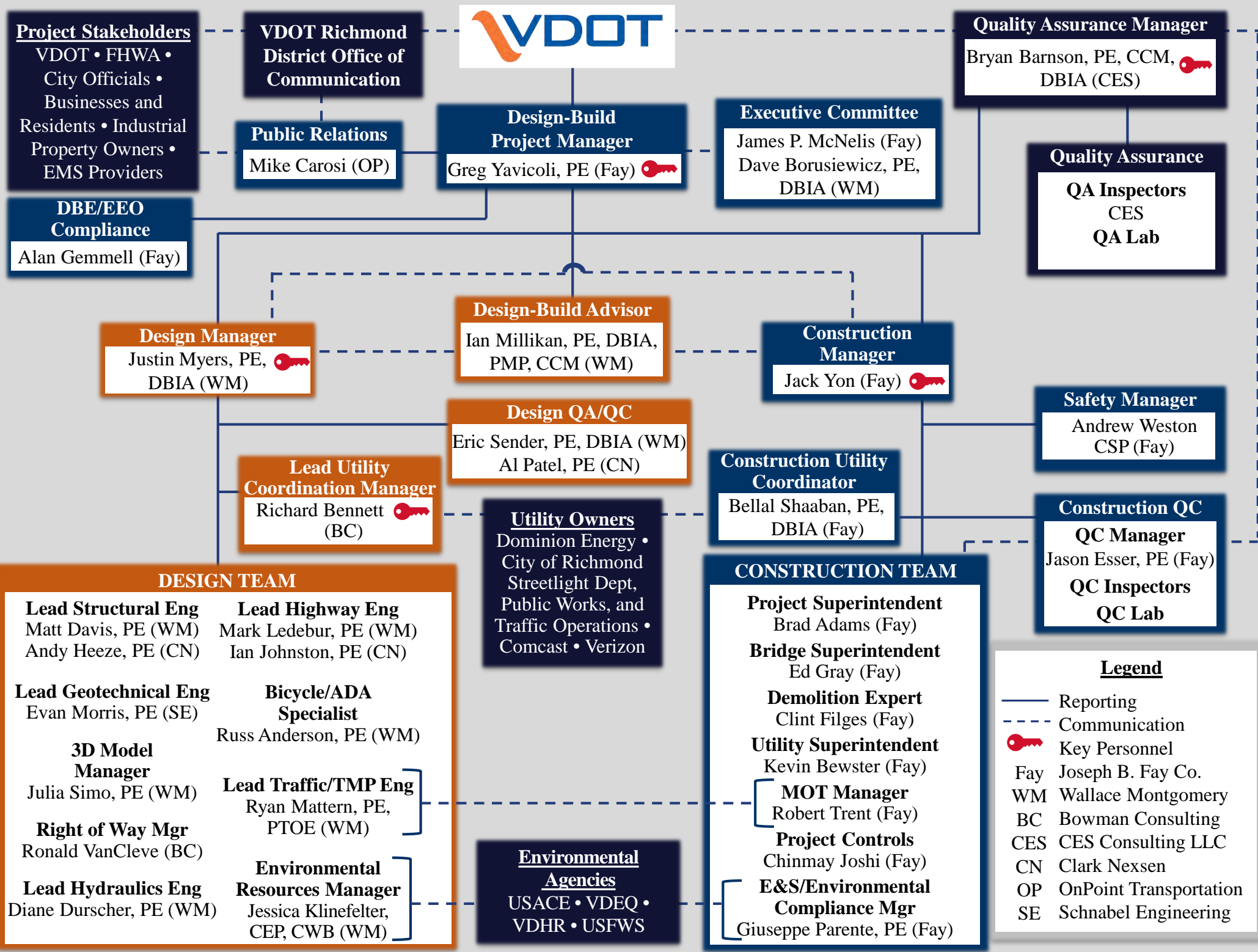
DB VALUE-ADDED SUPPORT STAFF

In addition to WM, BC, and CES, the **Fay DBT** includes subconsultants that were selected as subject matter experts to support this project. These include:

Clark Nexsen (CN): CN will serve as an extension of WM's structural and roadway engineering design staff led by Ian Johnston, PE and Andy Heeze, PE. CN will lead some design tasks in tandem with WM so that the individual bridge designs progress simultaneously to meet the overall bundle schedule. Al Patel, PE (CN) along with Eric Sender, PE, DBIA (WM) will conduct an independent review of all roadway and structural designs, respectively as part of our QA/QC process. WM and CN are following this streamlined process for VDOT's Albemarle Bundling DB; successfully delivering high-quality design deliverables on-time.

Schnabel Engineering (SE): SE has provided preliminary geotechnical services for the bundled bridges since 2015 including materials evaluation for four bridges and most recently, preparing geotechnical data reports. Their understanding of the site and geotechnical conditions will offer insight to the DBT.

OnPoint Transportation PR (OP): OP provided public relations support for the GRTC Pulse and I-64 Exit 300 to 305 projects in VDOT's Richmond District. Their familiarity with the stakeholders in this region will ensure a complete public outreach plan.





3.4 Experience of Offeror's Team



in association with



3.4 Experience of Offeror's Team

Both **Fay** and **WM** are recognized leaders within the infrastructure industry for Design-Build (DB) and the application of innovative engineering and construction techniques, like Accelerated Bridge Construction (ABC). Between our firms, we have successfully led and delivered over 17 significant DB projects involving bridges and roadways since 2006, with a total value of over \$790M, and winning numerous awards locally and nationally on these projects. Our firms are committed to supporting VDOT's mission to provide a safe transportation system for the efficient movement of people and goods. **Fay** is actively working on the \$18M Chatham Bridge Replacement project in Fredericksburg, while **WM** is actively working on VDOT's Albemarle Intersection Bundling DB and celebrating the opening of their new Richmond office in 2020.

Work Experience

In Appendix 3.4.1 – Work History Forms, we have included six Key Projects that highlight our Team's experience as Lead Contractor and Lead Engineer, and demonstrate our capabilities to think outside-the-box and use innovation to overcome similar challenges to those anticipated on the I-95 Richmond Bridge Bundling DB. In addition to these Key Projects, our firms have completed numerous award-winning projects that involved ABC methods, were completed in urban areas with constrained work areas, involved bridge demolition and construction over interstates, and projects involving complex utility relocations and coordination. These examples include the following:

* indicates projects where **Jack Yon, Fay's Construction Manager** or **Justin Myers, PE, DBIA, WM's Design Manager** served in similar capacities.

Experience with Accelerated Bridge Construction

***Port Authority North Braddock Avenue Bridge:** This bridge replacement by **Fay** included superstructure replacement, demolition of existing piers, retrofit of existing concrete abutments, sidewalk restoration, concrete repairs, highway lighting and other miscellaneous repairs. ABC techniques included modular precast concrete superstructure units, joined



together using 21,000 psi ultra-high-performance cement. Additionally, all concrete on the project is specified to be accelerated, thus reducing the time to obtain the necessary compressive strength.

***Wampum Avenue Bridge:** **Fay** completed this bridge replacement project that consisted of three precast deck sections, each having a two-beam module was completed in just six days and 22 hours; well ahead of the nine-day deadline. Six steel rolled girders of 36 x 170 were used in the construction. The project won a national award as the Best Project in the Prefabricated Bridge Elements and Systems category at the *2014 National ABC Conference*.

***LIRC Flat Rock River Bridge DB:** This project removed 506' of existing railroad bridge and replaced it with a new 538' long structure. The existing bridge consisted of two 144' through-truss spans and seven 30' steel deck girder approach spans. The **Fay Team's** design for the new structure included a 118' long (1,000,000-lbs.) through-truss system along with 13 precast deck segments (up to 36-ft. long each). The **Fay Team** completed the work in only 50 hours, ahead of the 96-hour deadline for the scheduled outage.



***Montour Run Bridge:** **Fay** demolished and constructed this bridge in only 4½ days over a Thanksgiving weekend, a full 1½ days ahead of schedule utilizing lightweight concrete and a grid deck, which allowed the superstructure to be assembled at an adjacent location, then set into place.

***Pulaski - New Bedford Bridge:** **Fay** completed a rapid demolition and rebuild of the existing bridge utilizing temporary footings off alignment and casting the superstructure in place ahead of the five-day shutdown. Extensive planning and a detailed hour-by-hour schedule was used to prepare for installation of precast elements (integral abutment pile caps, wingwalls, approach slab barriers, and sleeper slabs). The construction sequence included: jacking the superstructure vertically and lowering it onto rollers; a lateral bridge slide over the new precast integral abutment pile caps; jacking the superstructure vertically and removal of the rollers; and lowering the superstructure onto the precast pile caps.

3.4 Experience of Offeror's Team

Babcock Blvd over Girty's Run: Fay completed this project ahead of schedule that included replacement of the bridge superstructure, approach rehabilitation, drainage installation, the installation of guide railing, signage and pavement markings. The project also consisted of setting more than 20 individual precast concrete pieces over an 84-hour weekend shutdown.

I-95 over CSX Railroad: WM is currently serving as lead designer for the replacement of an existing three-span bridge over CSX Railroad in Childs, MD with a new 130' long single span ABC structure. The proposed design utilizes staged construction to remove the existing bridge and install new prefabricated substructure elements and modular steel girder/precast deck superstructure components. The use of ABC construction methods reduced the anticipated construction duration from 39 months to 24 months.

***Mechanics Valley Road over Little North East Creek:** WM designed this bridge replacement project for a new 80' long prestressed concrete bridge that included multiple precast substructure alternatives. The AASHTO Box Beam superstructure with precast curbs and barrier expedited construction. The bridge was constructed under a full detour, reducing the overall project duration and limiting the duration of utility shutdowns required for the project.

Experience Delivering Projects in Developed Urban Corridors and Over Interstates

***I-579 Capping and New Bridge Construction:** Fay is constructing a three-acre public park to connect a historic neighborhood to downtown Pittsburgh. This bridge-like structure over I-579 will add a much-needed recreational space, rain gardens and multi-modal access including bicycle pedestrian paths and a link to the subway station. Construction of this bridge required installation of more than 1,000,000 pounds of rebar and 126 box beams, each weighing 140,000 lbs.



MD 85 (Phase 1) at I-270 Interchange Reconstruction: Fay is replacing the existing I-270 twin bridges over MD 85 in Frederick, MD, increasing the vertical clearance. Work includes building a new three-span, 450' long and 120' wide structure. The 1.5 miles of MD 85 roadway reconstruction is lined with

businesses and shopping centers for which uninterrupted access must be maintained. Fay is completing this work with an 11-stage MOT plan. ADT on MD 85 is 43,800 and on I-270, it is 111,550.

***I-95 Bridge Rehabilitation in Baltimore City:** WM designed the rehabilitation of 18 bridges along I-95 mainline, ramps, and overpasses in the heart of Baltimore. Long-term lane or ramp closures were avoided by implementing 16 different work zones and 42 separate traffic shifts. The highly urban corridor required coordination with numerous stakeholders including the Maryland Stadium Authority, Baltimore City DPW and DOT, local community leaders, and the Port of Baltimore. Proactive community outreach was accomplished using townhall meetings in local churches, flyers, and website alerts to inform residents of upcoming construction activities and impacts.

Rossville Boulevard over I-95: WM's design replaced an existing four-span bridge over I-95 near Baltimore, MD with a longer two-span structure. The bridge was a critical link between communities and Franklin Square Hospital. The design was implemented to construct the bridge in two stages, maintaining one lane in each direction, and providing continual access to all driveways throughout construction. Staging was developed to relocate an existing 16"-dia. watermain and multiple service connections/hydrants within the project limits. The project was completed with minimal impacts to I-95, with nighttime traffic drags for major demolition operations and erection of new steel girders.

Experience Limiting Impacts to the Traveling Public and Affected Businesses and Communities

Birmingham Bridge Rehabilitation: The Birmingham Bridge is a major artery from the Southside of Pittsburgh into downtown. Fay attended regular meetings with PennDOT District 11's Traffic unit, as well as coordinated with emergency responders and special events in town. Three lanes of traffic were maintained throughout the project. Work on the 4th lane was performed behind a temporary barrier. Closures on the roads under the bridge were limited to nights and weekends. Bicycle traffic across the bridge was maintained during the entire project.

***MD 5 Branch Avenue Metro Access Improvements:** WM designed this project to alleviate congestion along MD 5 (urban principal arterial), provide a new access road (Woods Way) to commercial development and the Branch Avenue Metrorail Station, and improve bicycle and pedestrian access throughout the corridor. The project included a pedestrian bridge over MD 5 southbound for multimodal users to access the Metro station. WM's detailed 5-stage MOT plan allowed all lanes of MD 5 to remain open during construction. We developed innovative designs for retaining walls to minimize impacts on adjacent businesses using top-down

construction and ground improvement techniques (stone columns with load distribution mattresses).

Experience with Innovative Bridge Design Solutions and Construction Techniques

US 50 over Severn River from MD 70 to MD 2/MD 450 Median Barrier Replacement and Lane Configuration: This was one of MDOT SHA's first 'Innovative Design and Construction' concept projects, connecting two adjacent 'Ocean Gateway' bridges to add an eastbound travel lane without increasing the footprint of the old bridge. **Fay implemented precast solutions along with other ABC methods that allowed us to achieve the full \$900k incentive, completing the project 36-days early.**

Engineered Cementitious Composite (ECC) and UHPC Link Slab Program: WM served as the lead engineer for this pilot project with the University of Maryland to design, construct, and monitor performance of link slabs for joint elimination using innovative materials. Link slabs were designed using both UHPC and proprietary ECC materials (Elephant Armor). WM selected an existing I-95 overpass in Maryland to test the proposed system. Existing joints were removed to a partial depth and new link slabs were constructed. Strain gauges were installed at various levels within the pours and testing was conducted using pre-scaled live loads.

US 40 Thomas J. Hatem Memorial Bridge Rehabilitation: For this major rehabilitation and deck replacement project, one of the primary objectives was to increase the load carrying capacity of the existing bridge which was functioning near the operating stress level. WM designed and Fay constructed a custom, prefabricated, partially filled concrete deck system using lightweight concrete and fiber reinforcing to reduce loads and extend the service life of the deck. The lightweight deck alternative resulted in a 25% weight reduction as compared to a conventional concrete deck; and saved millions of dollars in steel upgrades throughout the 1.5-mile long structure.

Previous Success in Complex Utility Relocation/Coordination

PA State Rte. 51 and 88 Bridge and Safety Improvement: This project included complex utility relocation plans. Fay coordinated with several utilities, including Armstrong Cable, Columbia Gas, Consolidated Communications, Marshall Sanitary Authority, DQE Communications, and Penn Power. Nonexistent and inaccurate utility as-builts further complicated the work. Fay explored for and identified unmapped utilities using "soft dig" ground penetrating radar (GPR), GPS mapping and hand excavation. Fay repaired, replaced and relocated waterlines, sanitary lines, storm sewers and electrical duck banks as part of the contract. The project required 1,568 LF of sanitary sewer relocations, deep pipe and manhole installations, sewer bypass pumping, a major RCP

interceptor pipe, and 3,000 LF of storm drainage improvements to reduce flash flooding.

MD 85 (Phase 1) at I-270 Interchange Reconstruction: This project required coordination with nine utility owners for complex utility relocations. Seven utilities were coordinated by Fay concurrent with the construction of the project, including gas, power, water, fiber optic, cable TV, and telephone. Fay's Utility Coordinator Bellal Shaaban, PE, DBIA held monthly utility coordination meetings. Fay self-performed the relocation of gravity sewer and pressurized waterline for Frederick County. Fay was also able to save the County over \$150,000 through innovative ideas to reinforce existing sewer utilities rather than relocating the entire system.

***Albemarle Intersection Improvements Bundling Design-Build:** WM is the Lead Designer, and our subconsultant Bowman is serving as the Lead Utility Engineer, on this design-build bundle project that includes six separate intersection improvements. Our utility coordination approach proactively sought to minimize and avoid conflicts. We coordinated with utility owners during initial scoping to limit potential delays with design relocations. Various utility owners were involved including overhead and underground. To control schedule impacts for utility relocations, the DBT is providing a combined utility trench and corridor to expedite construction. On the 151/250 Roundabout the combined trench includes converting an overhead Verizon line, a CenturyLink and a Crown Castle underground fiber optic line to the combined underground trench; reducing construction time and minimizing service interruptions. On the Exit 124 DDI Conversion, WM used 3D models to determine a utility corridor to relocate an underground 6" county gas line and fiber optic line. These utilities will be relocated on Rte. 250 under the I-64 bridges; the utility corridor significantly reduces the length of relocation required and avoids boring under I-64. The utility corridor schedule better aligns with the overall construction sequence, including placement of a drainage structure, and pier protection system.

Boyers Mill Roadway Improvements and Bridge Replacement over Lake Linganore: WM completed designs to relocate water mains and gravity sewer mains as part of the roadway widening and bridge replacement project. Designed approximately 850 LF of 12" and 16" diameter water mains, including thrust collars and valves for the proposed tie-in points and portions suspended from the bridge. Designed 600 LF of 8" diameter interceptor gravity sewer, including sanitary sewer manholes. Advanced coordination with Verizon and Potomac Edison Power was performed to coordinate temporary and permanent relocation of aerial facilities. Our design accommodated duct banks on the approaches and suspended from the bridge to provide additional capacity for fiber optic, telephone, electric and other services in the future.



3.5 Project Risks



in association with



Critical Risk #1 – Incorporating an Aging Utility Infrastructure

The **Fay Design-Build Team (DBT)** understands that the I-95 Richmond Bundled Bridges are in a highly congested, urbanized area. Because I-95 is depressed, many existing utilities are underground and attached to the bridges. The bridges provide most of the utility connectivity to the adjacent Richmond neighborhoods. Coordination will be required with Dominion Energy and City of Richmond Streetlight Division for electric facilities, the City of Richmond Public Utilities for gas, water and sanitary sewer facilities, Comcast for Cable TV, City of Richmond Traffic Operations for communication cables, and Verizon for telecommunications facilities. There could be other fiber optic companies occupying the City's and Verizon's ducts that must be identified, located, and coordinated with as a first order of work.

In addition to the need to coordinate the relocation of the existing utilities, it will also be necessary to ensure that there is adequate capacity for future downtown district development - this must be coordinated during project development, such that everything can be incorporated into the project. The **Fay DBT** viewed the bridge sites and the information provided by VDOT in the RFQ Package. Based on our cursory assessment, we believe the following utility facilities are present/attached to the existing structures:

First Street Bridge is a unique bridge having existing overhead utility lines attached to the structure on the west side. The overhead poles are Dominion 3 phase power, telephone and fiber optic lines, and cable TV. Under the bridge deck, a watermain is located on the outside bay, two sets of electric duct banks are located within the interior bays, and there is also a set of communication duct banks attached. Conduits are imbedded in the sidewalk for streetlights.

Fourth Street Bridge only has streetlights overhead. Under the bridge deck, a watermain is present within the exterior bay, there are two sets of electric duct banks, and conduits are imbedded in the sidewalk for the referenced streetlights.

Fifth Street Bridge has streetlights overhead. Under the bridge deck, watermains are attached within both exterior bays, and there is a gas main on the east side. There are two sets of electric duct banks suspended from the bridge and conduits are imbedded in the sidewalk for the streetlights.

Seventh Street Bridge has streetlights overhead. Under the bridge deck, a watermain is attached within one exterior bay and there is a gas main within the other outside bay. There are two sets of electric duct banks and two sets of communication duct banks under the bridge, with conduits imbedded in the sidewalk for streetlights.

Broad Street Bridge has streetlights overhead. Under the bridge deck, are two watermains in the south exterior bay and a watermain and gas main are located

in the north exterior bay. There is a major Dominion electric duct bank near the center of the bridge and possibly Verizon conduits as well. The conduits for streetlights are imbedded in the sidewalk. From appearances and project information, the existing utilities appear to be original construction, from more than 50 years ago.

WHY THIS RISK IS CRITICAL | The aging utility infrastructure poses a significant risk to the successful completion of the project, for several primary reasons:

3rd Party Stakeholders: These utilities are owned and operated by third parties who will need to be integrated into the coordination process. Because it is essential to maintain uninterrupted services, the utility owners' priorities may not align with the Project's objectives.

Scope and Budget Driver: The validation, evaluation, coordination and ultimately the relocation of the utilities will significantly impact the project cost and design. Higher relocation costs can often arise from the need to maintain uninterrupted services, including the potential for temporary relocations for construction.

Critical Path Schedule: The design and construction schedules could be affected by the extensive coordination that will be required to ensure that all facilities are identified, evaluated and the required relocations are planned and constructed.

Hazardous Materials: There is a potential for encountering hazardous materials around utility attachments and insulation. The existing communication conduits are transite, containing asbestos and there could be additional asbestos associated with any insulation for the watermains.

RISK IMPACT | The risks associated with incorporating an aging utility infrastructure into a project with a compressed schedule are significant. These utilities can impact nearly every milestone and activity, and demand coordination and planning to ensure every member of the team and all stakeholders understand the urgency and importance of this work. Potential impacts include:

- **Project Schedule:** Potential additional project development time for utility coordination or additional construction time for complex utility relocation and the need for temporary relocations
- **Project Cost:** Potential additional utility relocation or increased bridge construction costs due to design changes for avoidance or temporary work
- **Utility Operations/Customer Service:** Potential affect due to shutdowns for relocation connections
- **Hazardous Materials:** Potential impact to workers and public from airborne asbestos during utility replacement.

RISK MITIGATION STRATEGY | The **DBT** will mitigate risks associated with integrating the 50+ year old utility infrastructure into this project through a number of key strategies. These strategies will be in

place from the moment we start work on the project, continuously through project closeout. Our approach will include the following:

Committed Project Utility Team: To ensure the most effective interactions with utility owners, **Fay's** Utility Coordination Team will be led by Richard Bennett of **Bowman Consulting**. Richard is the most experienced Utility Team leader in Virginia, having led VDOT's utility relocation program for more than 20 years as both State Utilities Engineer and Director of Right-of-Way (RW) and Utilities, and having worked on design-build projects for 15 years. *Richard and his team have extensive experience working on projects with aging utility infrastructures in urban areas, including the City of Richmond.*

Bellal Shaaban, PE, DBIA, **Fay's** Utility Coordinator, has worked on numerous projects involving major utility relocations and coordination. He will work alongside Richard and the entire Utility Coordination Team to provide specific construction experience with utility coordination. He will incorporate the utility relocation work into the CPM schedules and will participate in all scheduled meetings with utility owners. Bellal is currently providing similar services on the I-270/MD 85 interchange reconstruction project, involving similar types of utilities (water, gas, electric, telephone, cable, fiber optic) with seven different owners. Bellal will be committed to the Project for all utility related activities.

Early Identification and Verification of Facilities: **Fay's** Utility Coordination Team will be proactive from the beginning of the Project, establishing contacts with the utility companies and utility stakeholders. This will include preliminary work to ensure all existing utility facilities are shown on the designation and all owners are identified. We will use Bowman's 3D laser scanning of the bridges to obtain survey details of existing conditions.

We will perform additional field and utility record reviews, to ensure there are no missing utility owners in our designation. For existing conduit ducts owned by private companies, we will request field investigations to identify all cables within the existing ducts, ensuring no additional owners require coordination. During the RFP response phase, the Utility Coordination Team will evaluate the existing utility infrastructure to determine if there are interconnections between facilities that may allow the lines to be back-fed. Information will be obtained from utility owners regarding permitted shutdown periods and any other specific construction requirements to be incorporated into the project development.

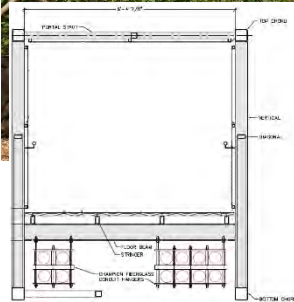
Utility Alternatives: The **Fay DBT** will consider engineering designs and construction methods to reduce schedule and cost implications, where practical. In particular, we will evaluate sequencing the utility relocations to minimize delays with third-party

installations and splicing requirements. Based on our experience in addressing similar challenges. We will consider options such as:

- **Temporary Support In-Place:** The least costly option would include temporarily supporting and protecting the existing utility during construction. This option will be complicated with the use of prefabricated bridge elements for ABC construction, particularly at Broad Street. Special construction methods can be used to support the utilities from above, adding temporary sister-beams on either side, and installing debris shields to protect the utilities on the top and sides during demolition. We will consider the age and condition of the existing facilities that may require total replacement to minimize ongoing maintenance issues.
- **Temporary Topside Utility Relocations:** Evaluate placing temporary conduits and utilities on the topside of existing sidewalks across the bridge during construction. This will simplify support but requires careful consideration of construction sequencing and protection of the utilities during construction.
- **Underground/Bored Utility Relocations:** Evaluate placing underground casings to bore utilities underground instead of above grade/structure mounted utilities. While this option would address many conflicts, there are major costs associated with the boring operation. Construction impacts must also consider the location, size, and depth of the bore pits.
- **Temporary Utility Structures:** Involves use of an overhead truss structure to support utilities off-alignment. Utilities can be temporarily supported and allow unrestricted access to complete demolition and construction. The temporary utility structure can serve a dual purpose to safely allow pedestrian/bicycle traffic during construction. This approach will be evaluated carefully at the Broad Street Bridge to accommodate the major utilities located on both sides and in the interior bays of the bridge that require accommodation. The **Fay DBT** Team utilized a very similar approach with the Design-Build of a temporary pedestrian and utility support structure for the replacement of Frederick Avenue over Gwynns Falls and CSX Railroad.



Innovative 3D Modeling: WM's 3D Model Manager, Julia Simo, PE also will serve a pivotal role on the Utility Coordination Team, providing design information and assistance in evaluating relocation alternatives. Julia will utilize the 3D design



**Fay-WM Design-Build
Pedestrian and
Temporary Utility Structure**

functionality of Bentley ORD, to incorporate the existing conditions obtained through **Bowman's** laser scanning of the bridges. Graphically depicting the location of the utilities in 3D enables the **DBT** to fully understand the extent of all utility facilities and quickly identify possible design solutions. Julia is currently working with Richard Bennett on the Albemarle Intersection Bundling's I-64 @ US 250 (Exit 124) DDI to avoid/minimize utility impacts along US 250, avoiding the 16" watermain and telecommunications duct bank to minimize the need for costly relocations.

Key's to Successful Coordination: The **Fay** Utility Coordination Team will use the following methods to coordinate and arrange for timely relocations:

- **Design Coordination:** The Lead Utility Coordinator will work with the design engineer and Construction Utility Coordinator to carefully plan all relocation activities. Early interactions between design/construction staff and the utility owners will expedite completion of required relocations or adjustments. Our Team's extensive knowledge of what the various owners will require will give us an advantage as we begin these negotiations.
- **Utility Owner Buy-In:** After the preliminary road and bridge designs are reviewed, adjusted, and approved, plans will be distributed to the utility companies and a Utility Field Inspection (UFI) scheduled. The Utility Coordination Team will conduct the UFI, reviewing the utility impacts and potential relocation concepts. A UFI report and other customary documents will be prepared and distributed. Schedules for the utility companies' submission of plans, specifications, and estimates (PS&E) for the relocations will be established.
- **Consistent, On-Going Communication:** To ensure that relocation plan development is progressing on schedule, the Utility Coordination Team will continue to work with each utility company and resolve any conflicts between the Project plans and

the utility plans. As easement acquisition can be time consuming and expensive, evaluations will be made for each utility relocation to determine if impacts to private properties can be avoided. The Utility Coordination Team will work with the RW specialists to obtain any easements or permits required for relocation.

- **Review of Owner Relocation Plans:** As the utility company's plan and estimates are submitted, **Fay's** Utility Coordination Team will perform reviews in accordance with state and federal regulations and procedures. We will finalize the cost responsibility determination and recommend approval of the requested reimbursement. A utility relocation agreement will be prepared, executed by the utility company, and submitted to VDOT for approval as a part of the PS&E package. Upon PS&E approval and any permitting required, the utility company may be authorized to proceed with utility relocation.
- **Schedule Integration:** **Fay's** Utility Coordinator, Bellal Shaaban, PE, DBIA will work with Richard to secure the involvement of the Utility Owners as early as possible. He will ensure that relocation activities for each utility are reflected in the project schedule and refine those activities as the design evolves. Bellal and Richard will facilitate monthly utility coordination meetings to review project designs, relocation designs, and schedule progress. Action items for each stakeholder will be recorded on a Utility Tracking Log Sheet, utility owner commitments will also be memorialized. This information will be distributed to all stakeholders involved. Successful coordination and collaboration will reduce construction delays and project costs.
- **Public Outreach:** Unavoidable impacts and service interruptions will be thoroughly communicated to all affected parties via the outreach program. This outreach will be completed in a timely manner to ensure as much notice is given to customers as possible.

ROLE OF VDOT AND OTHER AGENCIES

Fay's Utility Coordination Team will keep VDOT fully informed as the utility relocation process proceeds through the Project development phases. In accordance with most RFP requirements, VDOT will review the Project's utility relocation plan, bridge attachment designs, and utility design submittals for both in-plan and out-of-plan utility relocations. In the unlikely event that a utility company is not responsive to the **DBT** and places the utility relocation on the Project's critical path, VDOT may be asked to provide assistance in facilitating timely responses and actions from the utility company.

Critical Risk #2 – Constrained Work Area in an Urban Environment

The I-95 Bridge Rehabilitation in Richmond presents major construction/logistics complexities. Safe

movement of the public and sustaining business operations is paramount, while performing multiple bridge replacements in this highly constricted, urban environment. Having a well thought out plan, established early, coordinated with stakeholders, and providing contingencies and redundancy of resources is critical to delivering a safe project, with the least impact to the community, on-time, and within budget.

WHY THIS RISK IS CRITICAL | Working in close quarters over live traffic presents major schedule challenges. Without a clear plan, there is a significant risk for the job to become bottlenecked, magnifying schedule impacts, delaying critical path activities, and causing further delays. Given this is a bundled project with five overpasses, potentially impacted at different times, the risk and potential for project impacts is increased. Based on the scope of work for the I-95 Richmond Bridge Bundle, we have identified the following specific items to be prioritized within **Fay's** Construction Logistics Plan:

Limited Work Areas: In this highly urban environment, there is limited space for mobilization and staging of construction operations. Based on project constraints, accelerated bridge construction (ABC) is anticipated for the Broad Street Bridge; including prefabricated bridge elements which must be fabricated, shipped, and erected. Other ABC methods may also be integrated where there is opportunity to reduce MOT impacts. This method of construction generally requires larger equipment and advanced planning to ensure elements fit together seamlessly.

Demolition and Reconstruction Operations: I-95 serves as a major commerce link through the City of Richmond accommodating shipping/hauling for the entire east coast. Demolition and reconstruction activities occurring overhead and in adjacent lanes to such a critical highway require precise operations to protect the traveling public, as well as the men and women working on the job site. The risk includes the potential for falling debris, traffic impacts from major equipment, performing work over nighttime hours and reopening lanes for morning commutes.

Staged Construction: Changes to load paths and unbalanced loads resulting from staged construction operations must be considered in the design. Efforts to reduce structure depths will also likely result in the addition of more, shallower beams, that change the loading on the existing substructure. These conditions must be evaluated considering unsupported and unequal deck overhangs, partial pier removal operations, addition of construction loads such as bidwells, cranes, backhoes, and general construction live and dead loads. As elements are removed, bracing conditions change and could lead to instability. The risk associated with these considerations is significant – as failure to properly plan and sequence work could lead to catastrophic failure of existing bridge elements.

RISK IMPACT | Bundled projects have interdependencies of critical path items between project sites that must be considered when allocating and planning resources. The risks identified above could create considerable impacts without proper mitigation planning by the **DBT**, including:

Safety of Traveling Public: This project presents safety risks both on the overpass roadways and I-95 below. This includes motorized and non-motorized traffic using the local streets, which will be maintained during construction for all but one of the bridges. Falling debris onto cars below can have disastrous effects should it fall into live traffic below on I-95.

Safety for Workers and Field Personnel: Our staff are the greatest assets of our businesses, and their safety is a top priority on every project. Working adjacent to a high-speed facility, with limited room for workers and heavy equipment increases the risk to worker safety. **Fay's** reputation for maintaining a safe work zone is exemplified by an EMR of 0.60, 2016 and 2014 AGC National Safety Excellence Awards, and numerous local safety awards.

Public Support and Stakeholder Buy-in: Effective risk management must consider the major stakeholders involved on the project. These include the local community, nearby businesses, and the commuters who use these bridges. They will play key roles in the success of the project and must buy-in to the solution. The commitments made during the planning stages with the local community and political leaders must be integrated into the project design and construction plan. When impacts change, schedules slip, and delays become excessive –public support can be quickly lost.

RISK MITIGATION STRATEGY | The **DBT** will mitigate these risks through proactive planning of all construction activities, aligned with our design schedule, ensuring that activities and resources are synchronized to minimize impacts, maximize productivity, and streamline construction operations. This planning will be documented in our Construction Logistics Plan (CLP). The CLP is developed based on the resources we have available (people and equipment), our detailed CPM schedule, and safety plan. Our risk mitigation strategies include:

Working in Confined Areas: Mitigating the limited staging, stockpiling, and mobilization areas in an urban environment is critical for this project. Each of the bridges presents unique construction considerations. These will include the use of ABC methods to minimize our disruption to the community and to traffic, specifically:

- **Broad Street:** The limited lane closures available (weekend full closure to traffic/pedestrian access full time), will require the use of ABC techniques to complete the construction, including prefabricated bridge elements. We will also implement the following:

3.5 Project Risks

- Advanced Utility Relocation: See Risk #1 above.
- Substructure Modifications & Repairs: In advance of bridge closures, working from below we will prepare the existing substructure to accommodate temporary and ultimate loads. Evaluate the use of temporary support towers to support the bridge while substructure modifications are performed. Evaluate strengthening alternatives for the existing pier cap including FRP strengthening, steel post-tensioning, and use of concrete in-fills.
- Anodes to mitigate steel corrosion at substructure units will extend the service life and avoid the need for full replacement of the substructure elements. **Fay** is currently installing these anodes as part of the Chatham Bridge Rehabilitation Project.
- Evaluate staging and logistics to use SPMT's to move modular superstructure units. Consider potential staging areas, and coordinate with property owners and VDOT.
- **1st and 7th Street Bridges:** Several key mitigation strategies for these bridges include:
 - The 7th Street Bridge Rehabilitation uses 1st Street as a detour route, and our sequencing must ensure that lane closures on these bridges do not occur simultaneously.
 - The 7th Street bridge is adjacent to the auxiliary helipad and parking lots for VCU Medical Center (formerly MCV). Coordination with VCU Facilities Management and VSP Med-Flight Unit will be critical.
- **4th and 5th Street Bridges:** The proximity to one another (approximately 150-ft.) will require coordinated staging operations between the two bridges, including:
 - Erection of girders near the east end of the bridges, particularly at 4th Street will be in conflict with the overhead Ramp to I-64 Eastbound. **Fay** has developed a proprietary skid beam system for launching girders and is evaluating its potential use of this project.
 - **Fay** anticipates use of staging areas located on the north side of 4th Street at each approach, and a narrow space available at the northeast corner of the 5th Street Bridge.

Demolition and Reconstruction Operations: The **Fay Team** brings unmatched expertise in the field of bridge demolition and reconstruction, including those over major interstate roadways. We will integrate several key elements into our strategy, including:
“Surgical” Demolition Team – The DB will utilize our specialized demolition crews led by Clint Filges. Clint will be committed to the Project as Demolition Expert, having personally led demo operations hundreds of bridges over the past 20 years with **Fay** for blasting, conventional surgical demolitions and select removal

for bridges. He is currently overseeing the Betsy Ross over I-95 demolition in Philadelphia and has been responsible for demo activities on notable bridges for several state DOTs such as the Cleveland Innerbelt. Clint will direct the use of demolition strategies including, but not limited to, slot/saw and lift operations (over roadways) or controlled drop (over approaches) for removal of existing decks.



*Demolition over I-95 in Philadelphia
Betsy Ross Bridge*

- **Pre-Shielding:** We will shield 100% of areas over roadways to ensure there is no debris falling into traffic below. 3x10 tongue and groove sheeting will be cut to fit tight to the webs of existing beams and joints sealed with spray foam. It will be installed as a first order of work, to ensure that any existing deck defects or deterioration do not result in falling debris prior to the completion of the superstructure replacement. Shielding will be designed for full demolition loads (150PSF) such safe demolition operations can occur over live traffic. Demo blankets will be used on top of shielding to facilitate material removal. Shielding will include overhang brackets in the exterior bays.
- **Gawk Screens for MOT:** **Fay** has effectively used Gawk-Screens on projects involving interstate highways to significantly reduce driver distractions and headlight glare, while also serving as an effective debris shield. Using modular plastic glare

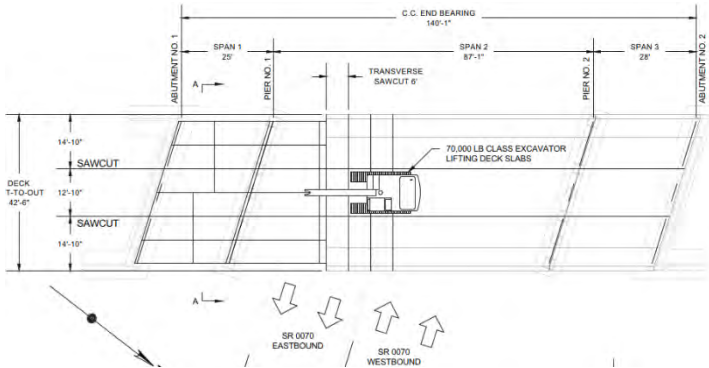


*Gawk Screens Used to Prevent Driver
Distraction*

3.5 Project Risks

screens, 2' tall attached to the top of temporary concrete traffic barriers.

- **Demo Field Layout:** Fay will carefully mark out the locations of existing beam top flanges and utilities (where applicable) confirmed by pilot holes, to ensure that the sawcut and slotting operations do not damage existing elements prior to removal from the site. Excavator placement will be evaluated to minimize loading to decks and keep tracks over top of existing beams to extent practical.



- **Hazardous Materials:** The potential for encountering hazardous materials will be addressed in Fay's Health, Welfare and Safety Plan for the project. This will specifically include all requirements for addressing lead-based paint on existing steel elements and asbestos containing materials associated with the existing utilities. Our plan will provide procedures to identify, encapsulate, and remove hazardous materials in accordance with state and federal regulations using properly trained and certified individuals.

Staged Construction: The framing, loading, sequence of construction, and lane configurations vary for each bridge, requiring separate detailed analyses be considered, tied to the means and methods planned for construction. Several key strategies:

- **3-D Modeling:** Existing and proposed structures using Bentley's Open Roads and Open Bridge Modeler Software will be developed. We will determine applied stresses and ensure stability throughout construction operations, and perform clash detection to confirm there are no physical conflicts between existing and proposed construction.
- **Real-World Construction Loadings:** Fay will work closely with the design team to ensure that all applicable construction loads are reflected in the analysis models. Specific design requirements, such as temporary supports and limitations for removal operations will be depicted on the construction plans. Over the shoulder reviews will be used in design.
- **Substructure/Foundation Impacts:** Changes to the bridge configurations will result in increased loading to bridge substructure elements and

foundations, particularly during various construction stages.

- Reduced beam depths and spacings are less efficient and the final superstructure weight may increase dead load reactions.
- Integrating continuity over existing piers will increase reactions at several pier locations. Existing substructure elements will be modeled to determine impacts, stress, and strengthening needs.
- Innovative FRP strengthening of pier caps and wrapping of pier columns, and integration of support systems with concrete in-fill such that the piers function as solid shafts will be evaluated to increase capacity of the existing piers.

ROLE OF VDOT AND OTHER AGENCIES |

Construction coordination will be a primary responsibility and focus point of the **Fay Team**. The major role of VDOT in the construction coordination efforts is anticipated to be coordination with external agencies, such as VCU Medical Center (formerly MCV), where VDOT may have prior commitments and agreement in place for the project. Fay will integrate these commitments into our construction staging operations. Fay will work closely with VDOT to understand all specific roadway closure opportunities. Any opportunities for a full closure will be fully taken advantage of to reduce impacts.

Critical Risk #3 – Maintaining Multi-modal Mobility During Construction

Maintaining multi-modal mobility while completing the five bridge projects in three years requires concurrent work, an extensive arsenal of temporary traffic control (TTC) strategies and devices, and a multi-phase transportation management plan (TMP) that is closely choreographed with the construction schedule for each bridge and adjacent projects. The TMP must maximize mobility while giving our Team adequate space to execute the work. The TMP must have contingencies in place if delays occur on one of the project elements, and must address vehicles along each roadway and I-95/I-64, and impacts to GRTC routes, pedestrians, bicyclists, and emergency access to VCU Medical Center (formerly MCV).

WHY THIS RISK IS CRITICAL | The five roadways carried by the bridges in this bundle serve as **crucial connections to both I-95 and I-64**. Broad Street and 5th Street are on the National Highway System (NHS). The 4th, 5th, and 7th Street bridges provide access to I-95 and I-64 and are used primarily by commuters. PlanRVA sees 1st Street as a “multi-modal superhighway” with its two-way cycle track, multiple bus routes, and walkability; it **connects members of minority and low-income communities**, many who do not own cars, to Downtown.

The 7th Street and Broad Street bridges are **heavily used by VCU employees walking from parking areas** to the east of I-95. I-95 carries between 147,000 to



161,000 vehicles each day through the project area; maintaining efficient movement of motorized and non-motorized traffic is *essential for the RVA economy*.

Working above active interstate traffic on all five bridges adds to the risk, as any piece of falling debris can have devastating effects (crashes, delays, injuries). Between January 2015 and October 2020 there were two fatal and 306 injury crashes in the two-mile segment within the project area on I-95; there are curves, retaining walls, and ramps with short weaving sections within the project area. The 5th Street bridge is both the link from WB I-64 to SB I-95 and the main access downtown from the east. Work zones are abnormal occurrences on roadways, and users require easy-to-understand instructions to navigate them, especially as they become more *reliant on GPS* and turn-by-turn directions. Minutes wasted for *emergency vehicles* in traffic trying to reach VCU Medical Center may literally be the difference between life and death. The bridge project coupled with the *extensive building construction nearby* creates one large work zone with multiple TMPs that must be coordinated. We want all of our workers to get home safely, and as such the TMP must create *hardened work zones that protect workers from errant vehicles*. The construction must also be staged properly, especially with ABC methods; we have one shot within a very limited time window to complete the work. The TMP is critical in that it serves as the “living document” that not only details how we will stage the work and control traffic (motorized and non), but how we will maintain traffic operations during incidents within all five work zones to the fullest extent practicable and how we will communicate any changes to impacted communities, residents and businesses.

RISK IMPACT | The critical risks highlighted above could create considerable impacts if our Team does not work to avoid or mitigate them, including the following:

Impacts to Critical Linkages: The 1st, 4th, and Broad Street bridges are used extensively by commuters,

buses, cyclists, and pedestrians. Bus detours and lane closures increase travel time for commuters, resulting in lost productivity.

Impacts to I-95 and I-64: Traffic shifts will lower operating speeds, which may create queues longer than typical that could cause increased rear-end or sideswipe crashes. The 4th, 5th, 7th, and Broad Street bridges all provide access to/from I-95 and I-64, and when work is ongoing on one bridge traffic will divert to the others. During the afternoon peak, vehicle queues waiting to enter I-95 or I-64 could create gridlock downtown if not controlled.

Schedule Concerns: A delay on one work element could snowball into delaying mobilization on another. Delays in securing TMP approvals could slow the project as well. Third-party utility work could impact the schedule, especially if the delay impacts mobilization to another bridge.

Non-Motorized Traffic: RVA has a very active community that is reliant on walking, transit, or bicycling. Detours and closures impact their ability to get to work or access vital community services.

Coordination with Current Construction and Future Projects: There is a robust list of projects that are under construction or ready to break ground within the next 18 months, including the VCU Medical Building and Children’s Hospital, new General Assembly Building, and potential enhancements to the Coliseum and Navy Hill. The City DPW is implementing “Smart Cities” technology to create an adaptive signal system with transit priority and emergency vehicle pre-emption. There is the potential for overlapping detours, needless congestion, impacts to bus routes, and degradation in safety. Similarly, we must ensure that the proposed roadway typicals are consistent with newly built (1st Street) and future streetscape plans.

Community Stakeholders: If we do not perform the needed outreach to advise local communities about the project, as well as allow for input on the scope, we run the risk of lawsuits, losing funding for the project, and/or impacts to the schedule.

Limited Working Hours for Broad Street: Only weekend closures are permitted on the Broad Street bridge with ped/bike access required at all times. These restrictions will require extensive ABC methods to replace modular sections of the bridge superstructure, coordinated with any required utility relocations. We will also evaluate the possible use of a temporary bridge utilities and for pedestrians.

RISK MITIGATION STRATEGY | The DBT will mitigate risks through logical scheduling of multiple teams and subcontractors working concurrently at multiple work sites, a well-detailed multi-site TMP linked to the schedule, ABC where feasible, continuous collaboration with the City DPW and Planning/Development divisions, extensive public

outreach, and choreographed multi-phase TTC for each project element. We intend to develop our first draft of the full TMP and submit it concurrently with the Project Schedule and Public Involvement Plan. The TMP will include the Traffic Operations Plan that has a multitude of incident management scenarios for each phase of the work, and we will have the signage and equipment available on-site to implement detours and 24-hour wrecker service quickly. We will link the TMP directly to the Sequence of Construction and the SWPPP plans. Our strategy includes:

Fay experience with ABC methods: As part of the TMP development, the **Fay** Team will integrate ABC techniques into the project, minimizing the duration of closures and reducing mobility impacts. **Fay** has successfully completed 8 ABC projects within the past 10 years, with closures as short as 35 hours for demolition and reconstruction using modular units.

Accelerated design submittals: We will coordinate the design submittals such that the work along I-95 for substructure repairs including new beam seats could be approved and executed first, followed by the superstructure work on the bridges with the least amount of utility and RW impact.

Maintain access in and out of Downtown: Downtown is the RVA region's economic engine. Minimizing the number of traffic shifts and the duration of access changes is essential to maximize productivity, as well as secure community and agency buy-in. Two access points to/from I-95/I-64 cannot be impacted at the same time. As an example, drivers may use both 4th Street and 7th Street to access I-95/I-64 northbound. We would avoid work on both bridges at the same time to reduce congestion. Similarly, pedestrian access must be maintained across I-95, especially for access to VCU/MCV along 7th and Broad Streets.

Enhanced TTC equipment and methods: Our Team understands that we need to overload the approach roadways with traffic sensors and PCMS to provide real-time conditions and queue warnings to drivers approaching the project area to reduce the likelihood of crashes. The TTC must be intuitive for drivers, ensuring that they do not need to make sudden lane changes within the work zone. Our TTC must be integrated with the existing ITS devices that advise drivers of travel times through the region via I-95 and I-295 to enhance mobility.

VCU/MCV Worker and Emergency Access: Each phase of the TMP will have detailed directions and signage as to how workers (driving and walking) and emergency vehicles would access VCU Medical Center. Closures to side streets may impact hospital patient pick-up/drop-off. We must provide alternative access for each phase that may require adjustments to Opti-cons, signal timing, and detour signing for larger vehicles or access to parking areas.

Maintain access to transit and shuttles/bicycle compatibility: We will ensure that all transit stops

remain ADA-compliant throughout the work, including those for the VCU Health shuttles, as well as the sidewalks that connect Lots I and O on the east of I-95 to the hospital via Broad Street. We must ensure that all pedestrian routes are ADA-compliant both during the construction and after the work is complete. Bicycle detours and areas where vehicles and bicyclists will share the road will be clearly marked, and we will add signage at 5th Street - *Bicycles and pedestrians are prohibited.*

Coordination with current and future construction: The I-95 ReVamp project and several private developments are currently underway, each with their own TTC plan. Next up on ReVamp is the Laburnum and Belvidere interchanges in 2021-2022. We must coordinate TTC and construction delivery routes with these projects. We will meet with the design firms and contractors working on behalf of VCU and private developers to ensure that they can still receive large deliveries.

Communication with local communities during scoping, design, and construction: The Jackson Ward and Gilpin Park communities have a higher percentage of low-income and minority residents than the surrounding area, and we must provide direct outreach to these communities. They must be consulted on the scope of the improvements and desired aesthetic treatments. The Greater Mt. Moriah church is on 1st Street, and 3rd Street Bethel AME is a block away from the 4th Street bridge. We will work with the Richmond Redevelopment and Housing Authority and churches to communicate/gather feedback. Several commercial businesses that are already impacted by COVID will be affected by the work. We must provide positive guidance for accessing businesses and parking lots.

Detailed Public Involvement Plan: OnPoint Transportation PR has extensive experience working with the impacted communities for this project as part of the GRTC Pulse team. We will develop meeting materials (presentations, mapping, handouts) that are reviewed by VDOT prior to distribution and placement on the project web page. All community meetings will be documented. We will meet with the community, prior to construction, and prior to traffic shifts. Door-hangers and newsletters are methods we will use to keep people informed.

Transit Routes/Coordination with GRTC: The proposed work will impact bus routes, and we will ensure that detours minimize the extra mileage of trips and that all buses can make all turns on detour routes. We will ensure temporary stops meet ADA.

ROLE OF VDOT AND OTHER AGENCIES | The role of VDOT will be minimized to the greatest extent practical. The maintenance of traffic plans will go through the standard plan review process outlined in the RFP and the Public Involvement Plan will be coordinated through the VDOT Project Manager with the Richmond District Communications Office.



Appendix 3.2.6 Affiliated / Subsidiary Companies



in association with



ATTACHMENT 3.2.6

Contract ID C00111300DB107

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate	Infrastructure and Industrial Constructors USA Holdings, Inc.	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Infrastructure and Industrial Constructors USA, LLC	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Fay Acquisition, Inc.	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Infrastructure Constructors, Inc.	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Infrastructure and Industrial Constructors Southeast, Inc.	5700 Thurston Ave, Suite #211, Virginia Beach, VA 23455-3302
Affiliate	Advance Hauling, Inc.	5700 Thurston Ave, Suite #211, Virginia Beach, VA 23455-3302
Affiliate	Infrastructure and Industrial Energy, LLC	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Infrastructure and Industrial Equipment Leasing Holdings, LLC	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Infrastructure and Industrial Equipment Leasing, LLC	Nova Tower 1, One Allegheny Square, Ste 300, Pittsburgh, PA 15212
Affiliate	Darmale, LLC	606 Liberty Avenue, 3 rd Floor, Pittsburgh, PA 15222



Appendix 3.2.7 Debarment Forms



in association with



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.

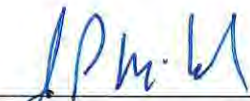
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under 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

January 25, 2021

Date

President

Title

Joseph B. Fay Co.

Name of Firm

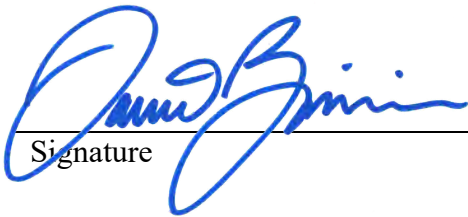
ATTACHMENT 3.2.7(b)

**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

January 27, 2021

Date

Partner

Title

Wallace, Montgomery & Associates, LLP

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.

Rhoad R Bennett January 29, 2021

Signature Date Title

Director of Right of Way & Utility Relocations

Bowman Consulting Group Ltd.

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.



01/27/2021

Principal

Signature

Date

Title

Clark Nexsen, 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	1.27.21 _____ Date	President _____ Title
---	--------------------------	-----------------------------

On Point Transportation PR

Name of Firm

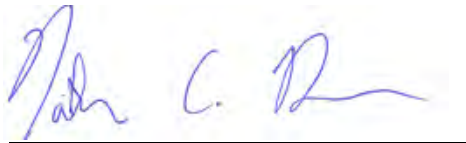
ATTACHMENT 3.2.7(b)

**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

1/27/2021

Date

Senior Associate

Title

Schnabel Engineering, LLC

Name of Firm



VDOT Prequalification Evidence



in association with





**Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 1/27/2021**

- F -

Vendor ID: F1022
Vendor Name: FAUQUIER PAVING AND GRADING LLC
Prequal Level: Prequalified
Prequal Exp: 05/31/2021

-- PREQ Address --

P.O. BOX 944
MARSHALL, VA 20116
Phone: (540)364-3239
Fax: (540)364-0389

Work Classes (Listed But Not Limited To)

002 - GRADING
101 - EXCAVATING

Bus. Contact: WEAVER, DONNIE LEROY
Email: PAVE41580@AOL.COM

-- DBE Information --

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

Vendor ID: F204
Vendor Name: JOSEPH B. FAY CO.
Prequal Level: Prequalified (Currently Inactive)
Prequal Exp: 05/31/2021

-- PREQ Address --

1 ALLEGHENY SQ, NOVA TOWER 1, STE 301
PITTSBURGH, PA 15212
Phone: (724)265-4600
Fax: (724)265-3323

Work Classes (Listed But Not Limited To)

003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES
045 - UNDERGROUND UTILITIES
101 - EXCAVATING

Bus. Contact: MCNELIS, JAMES PATRICK
Email: JMCNELIS@JBFAYCO.COM

-- DBE Information --

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

From: [Caples, Harold](#)
To: [Greg Yavicoli](#)
Cc: prequalification@vdot.virginia.gov; [Jim McNelis](#); [Kurt Karanovich](#); [John Greene](#); [Ryan Surrena](#); [Katie Spear](#); [Brett Hause](#)
Subject: Re: F204 / Joseph B. Fay Co. / Waiver Request
Date: Monday, February 1, 2021 10:28:40 AM
Attachments: [image001.png](#)

Greg,

I have reviewed the qualifications of Joseph B. Fay Co. and I find them acceptable for the purpose of bidding on the referenced project. Therefore, I hereby waive the bidding restriction on your firm for this project.

This waiver is predicated on your compliance with the Rules Governing Prequalification. The rules state that you are limited to no more than three projects at any given time, each of these contracts will be limited to a maximum contract value of \$2 million not exceeding a total value of \$6 million (aggregate). This waiver allows you to bid beyond that dollar limit, but should you be successful on this project, you may be ineligible for any further VDOT work as a prime contractor until you receive a satisfactory VDOT performance evaluation.

VDOT looks forward to your submission.

Thank you,

Harold R. Caples, P.E., VCCO

Assistant State Construction Engineer

Virginia Department of Transportation

1401 East Broad Street

Richmond, Virginia 23219

(804) 786-1630 - Office

(804) 371-7896 - Fax

On Fri, Jan 29, 2021 at 6:17 PM Greg Yavicoli <gyavicoli@jbfayco.com> wrote:

Good Evening,

Joseph B. Fay Co.'s current prequalification(F204) level with VDOT is Prequalified (Currently Inactive). We are requesting a waiver in order to submit a Statement of Qualifications for the following project:

PROJECT NUMBER: Contract ID No. C001111300DB10

DESCRIPTION: Statement of Qualifications for I-95 City of Richmond Bridge

Superstructure Replacement and Rehabilitation Bundling Design-Build Project

DATE SOQ TO BE SUBMITTED: 4:00 P.M. TUESDAY FEBRUARY 2, 2020

Fay has performed Design-Build projects of similar size and scope of work, and documentation to support our ability is attached.

Please contact me if you need additional information and to inform us of the status of the waiver.

Thanks,

Greg Yavicoli, P.E.

Operations Manager

6711 Baymeadow Drive, Suite A1

Glen Burnie, MD 21060

Office: 410-424-3380

Mobile: 312-907-4209

www.jbfayco.com



EMAIL DISCLAIMER: This message and any attachments are intended only for the use of the addressee and may contain information that is privileged and confidential. If the reader of this message is not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any dissemination of this communication is strictly prohibited. If you have received this communication in error, notify the sender immediately by return email and delete the message and any attachments from your system.



Evidence of Bonding



in association with





ZURICH

**FIDELITY AND DEPOSIT COMPANY OF
MARYLAND**

Liberty Mutual Surety

January 22, 2020

Commonwealth of Virginia
Department of Transportation (VDOT)
1401 E. Broad Street
Richmond, Virginia 23219
Attention: Joseph A. Clarke, P.E. DBIA (APD Division)

Re: Request for Qualifications
A Design Build Project
1-95 City of Richmond Bridge Structure Replacement and Rehabilitation Bundling
City of Richmond, VA

Dear Mr. Clarke:

Fidelity and Deposit Company of Maryland/Zurich American Insurance Company, 1299 Zurich Way, Schaumburg, IL 60196 and Liberty Mutual Insurance Company, 175 Berkeley Street, Boston, MA 02116, both listed in the Department of Treasury's Listing of Approved Sureties (Department Circular 570), are pleased to provide surety bonds on behalf of Joseph B. Fay Company. At the present time we provide a \$250,000,000 single project/\$500,000,000 aggregate surety program. There is approximately \$400M available capacity under the facility.

As sureties for Joseph B Fay Company, Fidelity and Deposit Company of Maryland/Zurich American Insurance Company with A.M. Best Financial Strength Rating A+ and Financial Size Category XV and Liberty Mutual Insurance Company with A.M. Best Financial Strength Rating A and Financial Size Category XV is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction and said bonds will cover the Project and any warranty periods as provided 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 is customary, any actual approval of any performance and payment bonds required would be subject to review and approval of the final contract terms and conditions and the review of any other underwriting information that is appropriate at the time of request for surety support. This letter does not constitute an assumption of liability and we assume no liability to you or to any third parties by the issuance of this letter.

Regards

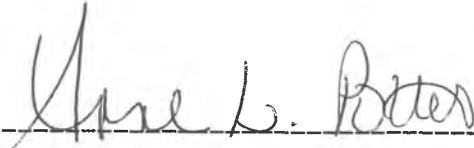
Zurich American Insurance Company
Fidelity and Deposit Company of Maryland
Liberty Mutual Insurance Company

By: Beverly A. Woolford
Beverly A. Woolford, Attorney-In-Fact

ACKNOWLEDGEMENT OF SURETY

STATE OF New York,
COUNTY OF Queens,)

ON THE 22nd DAY OF January, 2021 , BEFORE ME PERSONALLY CAME Beverly A. Woolford TO ME KNOWN, WHO, BEING BY ME DULY SWORN, DID DEPOSE AND SAY THAT (S)HE RESIDES AT Queens County, New York THAT (S)HE IS THE ATTORNEY-IN-FACT OF Zurich American Insurance Company/Fidelity and Deposit Company of Maryland and Liberty Mutual Insurance Company THE CORPORATION DESCRIBED IN AND WHICH EXECUTED THE ABOVE INSTRUMENT; THAT (S)HE KNOWS THE SEAL OF SAID CORPORATION; THAT ONE OF THE SEALS AFFIXED TO THE FOREGOING INSTRUMENT IS SUCH SEAL; THAT IT WAS SO AFFIXED BY ORDER OF THE BOARD OF DIRECTORS OF SAID CORPORATION; AND THAT (S)HE SIGNED HIS/HER NAME THERETO BY LIKE ORDER.



Notary Public

ANNE L. POTTER.
NOTARY PUBLIC-STATE OF NEW YORK
No. 01PO6283845
Qualified In Queens County
My Commission Expires 06-17-2021

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Nancy SCHNEE, Valorie SPATES, Beverly A. WOOLFORD, Anne POTTER and Susan A. WELSH, all of Garden City, New York**, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 17th day of July, A.D. 2019.



**ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

By: *Robert D. Murray*
Vice President

By: *Dawn E. Brown*
Secretary

**State of Maryland
County of Baltimore**

On this 17th day of July, A.D. 2019, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.



Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2023

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 22nd day of January, 2021.



Brian M. Hodges

By: Brian M. Hodges
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.reportsfclaims@zurichna.com
800-626-4577

THE FIDELITY AND DEPOSIT COMPANY

OF MARYLAND
1299 Zurich Way Schaumburg, IL 60196

Statement of Financial Condition
As Of December 31, 2019

ASSETS

Bonds	\$ 255,279,821
Stocks	21,280,401
Cash and Short Term Investments.....	2,878,421
Reinsurance Recoverable	25,356,035
Federal Income Tax Recoverable.....	140,480
Other Accounts Receivable.....	20,383,843
TOTAL ADMITTED ASSETS	\$ <u>325,319,001</u>

LIABILITIES, SURPLUS AND OTHER FUNDS

Reserve for Taxes and Expenses.....	\$ 795,381
Ceded Reinsurance Premiums Payable	43,024,327
Remittances and Items Unallocated	0
Payable to parents, subs and affiliates.....	0
Securities Lending Collateral Liability	0
TOTAL LIABILITIES.....	\$ 43,819,708
Capital Stock, Paid Up	\$ 5,000,000
Surplus	<u>276,499,293</u>
Surplus as regards Policyholders.....	281,499,293
TOTAL	\$ <u>325,319,001</u>

Securities carried at \$164,223,431 in the above statement are deposited with various states as required by law.

Securities carried on the basis prescribed by the National Association of Insurance Commissioners. On the basis of market quotations for all bonds and stocks owned, the Company's total admitted assets at December 31, 2019 would be \$322,248,132 and surplus as regards policyholders \$288,428,424.

I, LAURA J. LAZARCZYK, Corporate Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company on the 31st day of December, 2019.

Laura J. Lazarczyk

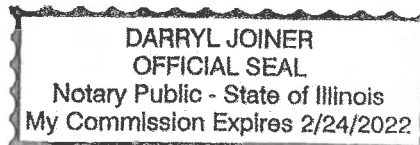
Corporate Secretary

State of Illinois }
City of Schaumburg } SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 25th day of February, 2020.

Darryl Joiner

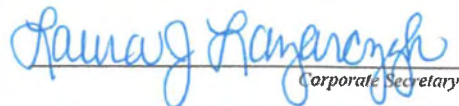
Notary Public



ZURICH AMERICAN INSURANCE COMPANY
COMPARATIVE BALANCE SHEET
4 WORLD TRADE CENTER, 150 GREENWICH STREET, NEW YORK, NY 10007
As of December 31, 2019 and December 31, 2018

	12/31/2019	12/31/2018
<u>Assets</u>		
Bonds	\$ 16,780,375,969	\$ 17,540,109,648
Preferred Stock	-	-
Common Stock	3,121,559,258	3,132,639,174
Real Estate	1,273,640,596	1,373,151,270
Other Invested Assets	1,185,313,467	1,113,225,492
Derivatives	21,358	642,656
Short-term Investments	14,532,665	24,895,313
Receivable for securities	114,199,089	75,504,004
Cash and cash equivalents	42,548,382	(38,621,060)
Securities lending reinvested collateral assets	55,769,285	47,379,583
Employee Trust for Deferred Compensation Plan	129,612,266	142,053,861
Total Cash and Invested Assets	\$ 22,717,572,333	\$ 23,410,979,940
Premiums Receivable	\$ 4,775,851,073	\$ 4,800,865,144
Funds Held with Reinsurers	97,862	371,693
Reinsurance Recoverable	1,497,744,413	1,298,188,705
Accrued Investment Income	127,170,427	126,363,306
Federal Income Tax Recoverable	565,755,651	503,312,859
Due from Affiliates	204,233,875	205,170,893
Other Assets	527,556,278	602,852,006
Total Assets	\$ 30,415,981,911	\$ 30,948,104,546
 <u>Liabilities and Policyholders' Surplus</u>		
<u>Liabilities:</u>		
Loss and LAE Reserves	\$ 12,626,869,059	\$ 13,849,911,195
Unearned Premium Reserve	3,845,794,904	3,819,936,876
Funds Held with Reinsurers	385,953,985	559,639,569
Loss In Course of Payment	1,442,194,686	959,528,132
Commission Reserve	124,215,143	120,056,749
Federal Income Tax Payable	-	-
Remittances and Items Unallocated	147,106,142	19,668,701
Payable to parent, subs and affiliates	294,896,500	106,578,289
Provision for Reinsurance	110,765,261	213,799,231
Ceded Reinsurance Premiums Payable	1,821,418,177	1,939,296,998
Securities Lending Collateral Liability	55,769,285	47,379,583
Other Liabilities	1,887,566,082	2,136,803,941
Total Liabilities	\$ 22,742,549,225	\$ 23,772,599,265
 <u>Policyholders' Surplus:</u>		
Common Capital Stock	\$ 5,000,000	\$ 5,000,000
Paid-In and Contributed Surplus	4,394,131,321	4,394,131,321
Surplus Notes	-	-
Special Surplus Funds	2,910,000	5,106,000
Cumulative Unrealized Gain	118,847,749	52,396,417
Unassigned Surplus	3,152,543,616	2,718,871,543
Total Policyholders' Surplus	\$ 7,673,432,686	\$ 7,175,505,281
Total Liabilities and Policyholders' Surplus	\$ 30,415,981,911	\$ 30,948,104,546

I, LAURA J. LAZARCZYK, Corporate Secretary of ZURICH AMERICAN INSURANCE COMPANY do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company, on the 31st day of December, 2019, according to the best of my information, knowledge and belief.

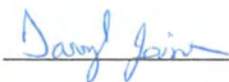


 Corporate Secretary

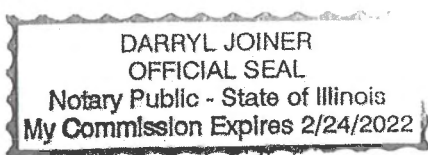
State of Illinois
 County of Cook

} SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 25th day of February, 2020.



 Notary public





This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8201321-015001

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Jennifer L. Jakaitis; Anne Potter; Nancy Schnee; Valorie Spates; Susan A. Welsh; Beverly A. Woolford

all of the city of Garden City state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 29th day of May, 2019.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 29th day of May, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 22nd day of January, 2021.



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



LIBERTY MUTUAL INSURANCE COMPANY
FINANCIAL STATEMENT — DECEMBER 31, 2019

Assets		Liabilities	
Cash and Bank Deposits.....	\$778,754,989	Unearned Premiums.....	\$8,007,146,482
*Bonds — U.S Government.....	2,780,808,610	Reserve for Claims and Claims Expense.....	21,532,853,787
*Other Bonds.....	12,645,608,792	Funds Held Under Reinsurance Treaties.....	507,868,920
*Stocks.....	16,385,435,431	Reserve for Dividends to Policyholders.....	1,143,826
Real Estate.....	235,608,378	Additional Statutory Reserve.....	125,722,000
Agents' Balances or Uncollected Premiums.....	6,217,983,641	Reserve for Commissions, Taxes and Other Liabilities.....	4,117,460,075
Accrued Interest and Rents.....	102,273,390	Total.....	\$34,292,195,090
Other Admitted Assets.....	11,957,106,292	Special Surplus Funds.....	\$32,768,443
		Capital Stock.....	10,000,075
		Paid in Surplus.....	10,044,978,933
		Unassigned Surplus.....	6,723,636,983
Total Admitted Assets.....	<u>\$51,103,579,523</u>	Surplus to Policyholders.....	16,811,384,434
		Total Liabilities and Surplus.....	<u>\$51,103,579,524</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2019, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 27th day of March, 2020.

T. Mikolajewski

Assistant Secretary



Appendix 3.2.10 SCC and DPOR Documentation



in association with



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
Joseph B. Fay Company	F0130486	Stock Corporation	Active	1 Allegheny Square Nova Tower 1, Suite 301 Pittsburgh, PA 15212	Contractor Class A	2705079280	09-30-2021
Wallace Montgomery & Associates, LLP	K0007346	Limited Liability Partnership	Active	8150 Leesburg Pike Suite 403 Vienna, VA 22182	Business Entity Branch ENG, LS	0411001087	02-28-2022
				2920 W. Broad Street Suite 18 Richmond, VA 23230	Business Entity Branch ENG, LS	0411001629	02-28-2022
				10150 York Road Suite 200 Hunt Valley, MD 21030	Business Entity ENG, LS	0407005814	12-31-2021
Bowman Consulting Group, Ltd.	11139594	Corporation	Active	3951 Westerre Pkwy Suite 150 Richmond, VA 23222	Business Entity Branch ENG, LS	0411000610	02-28-2022
				9815 Godwin Drive Manassas, VA 20110	Business Entity Branch ENG, LS	0411000497	02-28-2022
CES Consulting, LLC	S3416007	Limited Liability Company	Active	5269 Greenwich Road Virginia Beach, VA 23462	Business Entity Branch ENG	0411001331	02-28-2022
				23475 Rock Haven Way Suite 255 Dulles, VA 20166	Business Entity ENG	0407005783	12-31-2021
Clark Nexsen, Inc.	01901750	Stock Corporation	Active	4525 Main St, Ste 1400 Virginia Beach, VA 23462	Business Entity ENG, ARC, CID, LA	0407006529	12-31-2021
				1111 E Main St, Ste 1905 Richmond, VA 23219	Business Entity Branch ENG	0411001119	02-28-2022
On Point Transportation PR LLC	S7190905	Limited Liability Company	Active	n/a <i>(Public Relations Firm)</i>	n/a	n/a	n/a
Schnabel Engineering, LLC	S0889123	Limited Liability Company	Active	9800 Jeb Stuart Pkwy, Ste 200 Glen Allen, VA 23059	Business Entity ENG	0407004386	12-31-2021

Entity Information

Entity Information

Entity Name: JOSEPH B. FAY CO.
Entity ID: F0130486
Entity Type: Stock Corporation
Entity Status: **Active**
Formation Date: N/A
Reason for Status: Active and In Good Standing
VA Qualification Date: 09/18/1957
Status Date: 10/25/1999
Industry Code: 0 - General
Period of Duration: Perpetual
Jurisdiction: PA
Annual Report Due Date: N/A
Registration Fee Due Date: Not Required
Charter Fee: \$0.00

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

Principal Office Address

Address: 1 Allegheny Sq Ste 301, Pittsburgh, PA, 15212 -
5360, USA
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https://www.scc.virginia.gov/clk/clk_contact.aspx

(<https://www.facebook.com/VirginiaStateCorporationCommission>)
 Principal Information (<https://twitter.com/VAStateCorpComm>)

Title	Director	Name	Address	Last Updated
Vice President	Yes	KURT GEORGE KARANOVICH	1 Allegheny Sq Ste 301, Pittsburgh, MD, 15212 - 5360, USA	08/20/2020
Vice President, Secretary	Yes	KEVIN RIHN	1 Allegheny Sq Ste 301, Pittsburgh, MD, 15212 - 5360, USA	08/20/2020
President	Yes	JAMES PATRICK MCNELIS	6711 BAYMEADOW DR. STE. A1, Glen Burnie, MD, 21060, USA	08/20/2020
Vice President	Yes	RYAN D SURRENA	1 Allegheny Sq Ste 301, Pittsburgh, MD, 15212 - 5360, USA	08/20/2020
Vice President	Yes	CLINTON EDWARD FILGES	1 Allegheny Sq Ste 301, Pittsburgh, MD, 15212 - 5360, USA	08/20/2020

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DPOR License Lookup License Number 2705079280

License Details

Name	JOSEPH B FAY CO
License Number	2705079280
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	1 ALLEGHENY SQUARE NOVA TOWER 1, STE 301, PITTSBURGH, PA 15212-5360
Specialties²	Commercial Improvement (CIC) Commercial Building (CBC) Highway / Heavy (H/H) Home Improvement (HIC) Residential Building (RBC)
Initial Certification Date	2003-09-25
Expiration Date	2021-09-30

- 1 Refer to the Statutory Definitions (<http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/>) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.
- 2 Refer to the Classification Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20>) and Specialty Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30>) for detailed definitions of these classifications and specialties.

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

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DPOR License Lookup build 1,426 (built 2020-10-01 09:09:15).

Entity Information

Entity Information

Entity Name: Wallace, Montgomery & Associates, LLP

Entity ID: K0007346

Entity Type: General Partnership

Entity Status: **Active**

Formation Date: 10/13/2010

Reason for Status: GP - LLP Status Only

VA Qualification Date: 10/13/2010

Status Date: 10/13/2010

Industry Code: 0 - General

Period of Duration: N/A

Jurisdiction: MD

Annual Continuation Report Due Date: N/A

Registration Fee Due Date: Not Required

Charter Fee: N/A

LLP Status: Yes

Registered Agent Information

RA Type: Entity

Locality: HENRICO COUNTY

RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO
TRANSACTION BUSINESS IN VIRGINIA

Name: NATIONAL REGISTERED AGENTS, INC.

Registered Office Address: 4701 COX ROAD, SUITE 285, GLEN ALLEN, VA,
23060 - 0000, USA

Principal Office Address

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10150 YORK RD STE 200, HUNT VALLEY, MD,
21030, USA (<https://www.facebook.com/VirginiaStateCorporationCommission>)

(<https://twitter.com/VASateCorpComm>)

Virginia Office Address

Address:

Partner Information

Title	Name	Address	Last Updated
No records to view.			

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Department of Professional and Occupational Regulation
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Telephone: (804) 367-8500

EXPIRES ON
02-28-2022

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0411001629

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

PROFESSIONS: ENG



WALLACE, MONTGOMERY & ASSOCIATES, LLP
10150 YORK RD STE 200
HUNT VALLEY, MD 21030



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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02-28-2022

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0411001087

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

PROFESSIONS: ENG, LS



WALLACE, MONTGOMERY & ASSOCIATES, LLP
10150 YORK RD STE 200
HUNT VALLEY, MD 21030



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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HUNT VALLEY, MD 21030



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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG, LS



WALLACE, MONTGOMERY & ASSOCIATES, LLP
10150 YORK RD STE 200
HUNT VALLEY, MD 21030



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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10150 YORK RD STE 200
HUNT VALLEY, MD 21030



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Entity Information

Entity Information

Entity Name: Bowman Consulting Group Ltd.
Entity ID: 11139594
Entity Type: Stock Corporation
Entity Status: **Active**
Formation Date: 11/13/2020
Reason for Status: Active and In Good Standing
VA Qualification Date: 11/25/2020
Status Date: 11/25/2020
Industry Code: 0 - General
Period of Duration: Perpetual
Jurisdiction: DE
Annual Report Due Date: N/A
Registration Fee Due Date: Not Required
Charter Fee: \$750.00

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: 12355 Sunrise Valley Dr Ste 520, Reston, VA,
20191, USA
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(<https://www.facebook.com/VirginiaStateCorporationCommission>)
 Principal Information (<https://twitter.com/VASateCorpComm>)

Title	Director	Name	Address	Last Updated
Executive Vice President	No	Benoit Cossart	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Treasurer, Executive Vice President	No	Bruce Labovitz	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Bruce Larson	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Charles E Powell	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Executive Vice President	Yes	Charles E Walls Jr.	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Eric L Keller	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
President, Chairman	No	Gary P Bowman	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Executive Vice President	Yes	James DePietro	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	James E Hall	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Jamie E Crown	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Executive Vice President	Yes	Jesse Goldfarb	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	John R. Lutostanski	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	M. Scott Delgado	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Mark J King	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020

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Title (https://www.facebook.com/VirginiaStateCorporationCommission)	Director	Name	Address	Last Updated
Assistant Secretary, Executive Vice President	Yes	Michael G Bruen	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Michael P Hannemann	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Executive Vice President	No	Patricia Hollar	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Executive Vice President	Yes	Patrick Quante	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Reed P. Larson	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Secretary, Executive Vice President	Yes	Robert A Hickey	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
Vice President	No	Spencer M. Francis	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020
	Yes	Stanley Omland	12355 Sunrise Valley Dr Ste 520, Reston, VA, 20191, USA	11/25/2020

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

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

PROFESSIONS: ENG, LS



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



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

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PROFESSIONS: ENG, LS
BOWMAN CONSULTING GROUP LTD
3951 WESTERRE PKWY
SUITE 150
RICHMOND, VA 23233



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EXPIRES ON
02-28-2022

NUMBER
0411000497

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

PROFESSIONS: ENG, LS



BOWMAN CONSULTING GROUP LTD
9815 GODWIN DR
MANASSAS, VA 20110



Mary Brax-Vanhan
Mary Brax-Vanhan, Director

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BOWMAN CONSULTING GROUP LTD
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MANASSAS, VA 20110



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DPOR-PC (02/2017)

APESCIDLA 1/2017

Entity Information

Entity Information

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
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(<https://www.facebook.com/VirginiaStateCorporationCommission>)
Principal Information (<https://twitter.com/VASateCorpComm>)
Management Structure: N/A

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

PROFESSIONS: ENG



CES CONSULTING LLC
5269 GREENWICH RD
VIRGINIA BEACH, VA 23462



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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PROFESSIONS: ENG
CES CONSULTING LLC
5269 GREENWICH RD
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12-31-2021

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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

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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)

Entity Information

Entity Information

Entity Name: Clark Nexsen, Inc.
Entity ID: 01901750
Entity Type: Stock Corporation
Entity Status: **Active**
Formation Date: 11/27/1978
Reason for Status: Active and In Good Standing
VA Qualification Date: 11/27/1978
Status Date: 05/16/1989
Industry Code: 0 - General
Period of Duration: Perpetual
Jurisdiction: VA
Annual Report Due Date: N/A
Registration Fee Due Date: Not Required
Charter Fee: \$3820.00

Registered Agent Information

RA Type: Individual
Locality: VIRGINIA BEACH CITY
RA Qualification: Officer of the Corporation
Name: TERESA HALL
Registered Office Address: 4525 MAIN STREET, STE. 1400, VIRGINIA BEACH,
VA, 23462 - 0000, USA

Principal Office Address

Address: 4525 Main St Ste 1400, Virginia Beach, VA, 23462 -
3375, USA

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Principal Information (<https://www.facebook.com/VirginiaStateCorporationCommission>)

(<https://twitter.com/VASateCorpComm>)

Title	Director	Name	Address	Last Updated
	Yes	PETER ARANYI	1111 METROPOLITAN AVE. STE. 333, CHARLOTTE, NC, 28204 - 0000, USA	09/27/2019
President	Yes	TERESA S HALL	4525 MAIN STREET STE. 1400, VIRGINIA BEACH, VA, 23462 - 0000, USA	09/27/2019
	Yes	SAMUEL ESTEP	4525 MAIN STREET STE. 1400, VIRGINIA BEACH, VA, 23462 - 0000, USA	09/27/2019
	Yes	ROBERT BURKHOLDER	4525 MAIN ST. STE. 1400, VIRGINIA BEACH, VA, 23462 - 0000, USA	09/27/2019
	Yes	CLYMER CEASE	333 FAYETTEVILLE ST. STE. 1000, RALEIGH, NC, 27601 - 0000, USA	09/27/2019

Current Shares

Total Shares: 1000000

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0407006529

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BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG, ARC, CID, LA



CLARK NEXSEN INC
4525 MAIN ST STE 1400
VIRGINIA BEACH, VA 23462



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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BOARD FOR APPELSCIDLA

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PROFESSIONS: ENG, ARC, CID, LA

CLARK NEXSEN INC

4525 MAIN ST STE 1400

VIRGINIA BEACH, VA 23462



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



CLARK NEXSEN INC
1111 E MAIN ST STE 1905
RICHMOND, VA 23219



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001119 EXPIRES: 02-28-2022
PROFESSIONS: ENG
CLARK NEXSEN INC
1111 E MAIN ST STE 1905
RICHMOND, VA 23219



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DPOR-PC (02/2017)

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

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Management Structure: N/A

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Entity Information

Entity Information

Entity Name: Schnabel Engineering, LLC
Entity ID: S0889123
Entity Type: Limited Liability Company
Entity Status: **Active**
Formation Date: 12/19/2002
Reason for Status: Active
VA Qualification Date: 12/19/2002
Status Date: 11/15/2010
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: 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

Principal Office Address

Address: 9800 JEB STUART PARKWAY, SUITE 200, GLEN
ALLEN, VA, 23059 - 0000, USA
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Management Structure: N/A

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BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



SCHNABEL ENGINEERING, LLC
9800 JEB STUART PKWY STE 200
GLEN ALLEN, VA 23059




Mary Broz-Vaughan, Director

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SCHNABEL ENGINEERING, LLC
9800 JEB STUART PKWY STE 200
GLEN ALLEN, VA 23059



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EXPIRES ON
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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

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Department of Professional and Occupational Regulation

BOARD FOR AP/SC/ID/LA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402055847 EXPIRES: 12-31-2021

BRYAN SCOTT BARNSON
105 SAINT ANDREWS DR
SUFFOLK, VA 23435



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0402055370

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



JUSTIN KEITH MYERS
10150 YORK RD
STE 200
HUNT VALLEY, MD 21030



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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BOARD FOR APESCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402055370 EXPIRES: 01-31-2022

JUSTIN KEITH MYERS
10150 YORK RD
STE 200
HUNT VALLEY, MD 21030



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Appendix 3.3.1 Key Personnel Resumes



in association with



- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. Note your role, responsibility, and specific job duties for each project, not those of the firm.
 2. Note whether experience is with current firm or with other firm.
 3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.

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

DDOT – Frederick Douglas Memorial Bridge Design-Build, Washington, DC (\$440 million)

Project Role: Construction Manager	With Current Firm? No, Granite Construction Company
---	--

Beginning Date: 2018	End Date: 2020
-----------------------------	-----------------------

Specific Responsibilities: As the Construction Manager and Design-Build Coordinator, Greg was responsible for managing the construction on this \$440M design-build project for the replacement of the historic Frederick Douglas Memorial Bridge. The structurally deficient bridge is replaced with a 1,600 ft. architecturally unique suspension bridge spanning the Anacostia River, utilizing innovative bridge design solutions and construction techniques. Work also includes reconstruction of the Suitland Parkway/I-295 interchange and reconstruction of eight lane-miles of I-295, along with the complete demolition and replacement of three urban bridges. On the I-295 bridges, vertical clearance was increased to 15’ in several phases. Significant utility coordination and relocations along with multi-phased MOT were required. Greg worked with his Team to develop ATCs including; integrating MOT phases to reduce schedule and traffic impacts; streamlining Erosion and Sediment Control plans and procedures; elimination of retaining walls through 3-D modeling; innovative Support of Excavation methods to mitigate traffic and schedule risks; and ABC techniques. Greg responsibilities also included safety and quality, contract administration, environmental compliance and QA/QC. Greg organized, coordinated and attended public outreach meetings, and directly worked with local agencies and residents in order to effectively communicate and avoid all traffic, pedestrian, and businesses’ impacts.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Bridge Project	Complex Utility Relocations	Stakeholder/Public Outreach
Environmental Permitting	Urban Corridor Construction	Cost Saving ATC’s
Innovative Bridge Design	ROW Acquisitions	Structurally Deficient Bridges

MDOT SHA – Inter-County Connector (ICC) Contract B Design-Build, Montgomery County, MD (\$547 million)

Project Role: Construction Manager	With Current Firm? No, Kiewit Construction
---	---

Beginning Date: 2008	End Date: 2011
-----------------------------	-----------------------

Specific Responsibilities: As the Construction Manager and Design-Build Coordinator, Greg managed construction on this \$547M design build project. The project included approximately seven miles of new controlled access six-lane highway to improve vehicle mobility and capacity. The ROW is considered the most environmentally sensitive stretch of the 18-mile ICC. Greg supervised the construction of five new mainline bridges through the sensitive areas, innovatively designed and constructed to minimize the roadway and bridge footprint. Greg also managed the construction of five overpass bridges, built to carry state and local roads over the ICC. These bridges were designed to be signature and aesthetically pleasing structures. Greg was responsible for safety, quality, cost, schedule, equipment, and craft resource management, this included the entire field staff of superintendents and field engineers.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Bridge Project	Utility Coordination/Relocation	ROW Acquisitions
Innovative Bridge Design	Hydraulics-Drainage & SWM	Stakeholder/Public Outreach
Environmental Permitting	Staged MOT	Roadway Construction

VDOT - Chatham Bridge Rehabilitation and Replacement, Fredericksburg, VA (\$17.9 million)

Project Role: Operations Manager	With Current Firm? Yes
---	-------------------------------

Beginning Date: June 2020	End Date: Current
----------------------------------	--------------------------

Specific Responsibilities: Greg is the Operations Manager for the \$17.9M Chatham Bridge Replacement in Fredericksburg, VA. The bridge has significant historical and architectural value. The bridge superstructure is structurally deficient and is being replaced. Work also includes substructure repairs, pedestrian fencing and architectural treatments. The bridge is in an urban area and is being built with a detour. Greg is directly responsible for the fast track delivery, contract management, and resource allocation. Greg is responsible for all of Fay’s obligations to VDOT and for avoiding and resolving disputes. Greg provides management and construction leadership, strategic planning, and supervises budgeting and QA/QC.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Environmental Permitting	Fast Track Construction	Limited Staging Areas
Historical Location	Utility Coordination/Relocation	Stakeholder/Public Outreach
Architectural Treatments	Significant Substructure Repairs	Roadway Approach Construction

* 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. **Currently serving as the Mid-Atlantic Operations Manager, Greg would be available at the start of construction of this Project.**

ATTACHMENT 3.3.1

**VDOT Contract ID C0011300DB107 – I-95 City of Richmond Bridge Bundling Design-Build
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 the Firm with which you are employed at the time of submitting SOQ.: CES Consulting, LLC	
d. Employment History: With this Firm <u>5.5</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 of 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: April 2015 End Date: Present Position: Senior Project Manager Responsibilities: As a Senior Project Manager, Bryan has served as a QAM, a VDOT Construction Manager, and VDOT Design Project Manager for design-build (DB) projects and as an on-site consultant to VDOT. While serving in these roles, Bryan developed extensive bridge maintenance and construction experience managing key aspects of VDOT design-bid-build and design-build projects from the preliminary engineering stage through construction. For DB projects, Bryan was responsible for the QA and owner inspection and testing of all materials used and work performed including monitoring the contractor’s QC and QA programs, and maintained an active role in the constructability processes. Further, he confirmed that all work and materials, testing and sampling complied with the contract requirements and the approved for construction plans and specifications. He has tackled complex issues through each phase of construction having had experience managing both the design and construction side of projects. Examples of typical work items Bryan has managed includes full design/plan development for bridge superstructure replacements, served as Engineer of Record for Hampton Roads District Bridge Maintenance contracts while in construction, project submittal review as an owner (VDOT) representative to include coordination with VDOT Hampton Roads District disciplines (Structure & Bridge, Materials, Traffic Engineering, Environmental), QA plan development, review of project documentation ensuring conformance with the minimum requirements for VDOT DB projects, performing constructability reviews, coordination of OIA/VST inspections/testing, review of complex maintenance of traffic (MOT) implementations, review and processing of design build pay applications, maintaining project Materials Notebooks, and facilitating VDOT project environmental inspections. <u>Skanska USA Civil</u> Start Date: May 2011 End Date: April 2015 Position: Project Engineer/Superintendent Responsibilities: While employed with Skanska, Bryan progressively garnered boots on the ground experience managing large scale DB and design-bid-build heavy civil construction sites. As both a Project Engineer and Superintendent, Bryan was tasked with managing quality, safety, and environmental risks, and coordinated QC and contractor inspections to ensure conformance to plan/specification requirements. In these roles he has gained exposure in a leadership capacity in activities including MOT on interstate and urban roadways, pile driving, ITS/CCTV installation, pavement markings, concrete placement, formwork design, crane lifting and rigging, quality control/assurance testing, and environmental risk mitigation.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Military Institute, Lexington, VA/BS/2011/Civil Engineering	
f. Active Registration: Year First Registered/Discipline/VA Registration # 2017/Professional Engineer/VA #0402-055847 2016/CCMA Certified Construction Manager/#6976 2018/DBIA Designated Design-Build Professional	
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 Connector Design-Build, Williamsburg, VA (\$24.5 million)	
Project Role: Quality Assurance Manager	With Current Firm? Yes
Beginning Date: January 2020	End Date: Present
Specific Responsibilities: Bryan is serving as the QAM for this \$24.5 million roadway and bridge DB project. This project entails the new construction of two bridges, one over Skiffes Creek and one over Rt. 143 and CSX railroad tracks, new roadway construction, ITS/CCTV installation, intersection/traffic signal modifications, traffic lighting, and overhead and ground mounted sign structures. Responsible for delivering the overall Quality Management System Plan for the construction phase of the project. The project is currently in the design phase. 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. Working with the team to ensure that all technical requirements stipulated in the contract are followed and adopted into the design. 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 Minimum Requirements for Quality Assurance and Quality Control for Design-Build Projects. Responsible for drafting the project's Construction Quality Management Plan, ensuring processes/procedures are set up in advance for use when the construction operations start. His experience in managing DB projects will be key in maintaining project compliance with respect to Quality Assurance (FOT/Inspection Requirements) as well as Environmental compliance via completion of project C-107 inspections.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Bridge Project MOT Coordination/Compliance Heavy Commercial Traffic

VDOT – I-64 Widening Segment II Design-Build, Williamsburg, VA (\$138 million)

Project Role: Construction Manager	With Current Firm? Yes
Beginning Date: January 2016	End Date: November 2019

Specific Responsibilities: Served as a vital part to the successful project delivery for the \$138M I-64 Widening Segment II DB project serving as the consultant VDOT Construction Manager. This project extends the three lane section of I-64 from roughly mile marker 248 to mile marker 241 which includes the addition of 12' wide travel lanes and 12' wide shoulder lanes, and the repair and widening of nine existing bridges. Similar to the QAM role, actively managed every aspect related to quality for this DB project. Coordinated and scheduled all Independent Assurance (IA) inspection and testing resources; maintained VDOT's owner frequency of testing logs/testing documentation; and coordinated with VDOT disciplines (Hampton Roads Materials/Elko) for OIA/OVST testing. Reviewed all DB QA/QC testing and inspection frequencies for compliance with the minimum requirements for VDOT DB projects. Acted 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. Coordinated with QAM on tracking and VDOT resolution of non-compliance reports. Performed monthly reviews of QA/QC testing, inspection documentation, and material book to ensure compliance with the VDOT DB minimum requirements, as it relates to pay application review/approval. Approved all lane closures; coordinated LCAM; and verified plan/WAPM compliance for unique phased TMP implementations. Served as lead owner representative and inspected rehabilitation work on nine existing bridges that included superstructure surface repairs; concrete beam end repairs; steel beam end repairs; substructure surface repairs; slope protection repairs; epoxy/latex overlays; and type A/B deck repairs. Managed inspection and VDOT acceptance of overhead sign structures located over I-64. Performed the project Material Notebook and Finals Audit at project completion ensuring compliance with the VDOT Manual of Instructions and VDOT Minimum Requirements for QA/QC on DB projects. Served as a key asset to VDOT and maintained environmental/permit compliance for highly sensitive wetlands/streams and property owners that were present. Coordinated VDOT project ECI inspections (Direct report to CM) and performed project C-107 inspections to confirm SWM BMPs maintained compliance with plan and permit regulations. Reviewed and responded to Hampton Roads District NPDES and Water Quality inspection reports.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Bridge Project Highly Traveled Corridor

VDOT New Midtown Tunnel/Elizabeth River Crossings Design-Build, Portsmouth and Norfolk, VA (\$2.1 Billion)

Project Role: Superintendent	With Current Firm? No, Skanska USA Civil
Beginning Date: July 2012	End Date: July 2017

Specific Responsibilities: Served as Superintendent for one of Virginia's largest PPTA projects that involved construction of the New Midtown Tunnel, construction of the new MLK Expressway, and rehabilitation of the existing Midtown and Downtown Tunnels. Managed field operations and quality control testing to rehabilitate the two tunnels located in a heavily congested urban interstate corridor. Construction included installation of 200,000SF of Promat fireproofing; complete electrical rehabilitation (\$90M); installation of Jet Fan ventilation systems; concrete spall/delamination repairs in the tunnel ceiling and barrier wall; concrete crack repairs; and removal of suspended concrete panel ceiling in the EB Downtown Tunnel. Responsible for coordinating quality control testing and inspections; maintaining quality control testing logs in the Materials Notebook; facilitating preparatory inspection meetings; and managing MOT deployment, maintenance, and pickup during nightly lane/tunnel closures. Ensured quality control inspection staff was onsite to document all work was constructed in accordance with the VDOT Road and Bridge Specifications, QA/QC Plan, as well as the Approved for Construction plans. Developed a corrective action plan to resolve non-compliance reports (NCRs) identified by Quality Control staff, Quality Assurance staff, or VDOT.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Project Complex MOT Coordination with Adjacent Projects
 Urban Corridor Managed Inspectors/Subcontractors

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

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

ATTACHMENT 3.3.1

**VDOT Contract ID C0011300DB107 – I-95 City of Richmond Bridge Bundling Design-Build
KEY PERSONNEL RESUME FORM**

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: Justin Myers, PE, DBIA, Associate Vice President	
b. Project Assignment: Design Manager	
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Wallace Montgomery	
<p>d. Employment History: With this Firm 8 Years With Other Firms 14 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>Wallace Montgomery</u> Start Date: 2012 End Date: Present Position: Associate Vice President-Structures Responsibilities: Justin offers over 22 years of bridge and highway structure experience, including the last eight years as a Design Manager for a wide range of design-bid-build and design-build (DB) projects involving bridge replacement and rehabilitation. Justin has successfully completed projects involving the design and rehabilitation of steel beam and girder bridges; retaining walls; and other structures. He has expertise in structural design and analyses, load ratings, and construction phase services. Justin knows the latest AASHTO bridge design specifications (LRFD); AASHTO Standard Specifications including VDOT Modifications; and is familiar with the VDOT Bridge Manual, IIM's, standards, and specifications. He successfully coordinates work among all disciplines, expedites long lead items, tracks production and billing, ensures QA/QC policies are followed to provide a design in conformance with Contract Documents, and minimizes risk to resolve potential constructability issues during design. He also oversees the reviews of working plans and shop drawings to confirm compliance with the Contract Documents. Justin serves as a practice leader for accelerated bridge construction (ABC) projects, focusing on minimizing right-of-way (RW) and environment resources impacts through innovative concepts and practical means and methods. He has designed projects involving the use of prefabricated bridge elements, including superstructures and substructures. He has addressed constructability issues in urban and tight constraint environments, and involving major utility relocations.</p> <p><u>Wagman Heavy Civil</u> Start Date: 2005 End Date: 2012 Position: Construction Engineer Responsibilities: Justin performed construction project management and estimating for routine and complex bridges, culverts, noise walls and retaining walls on both Design-Build and Design-Bid-Build projects. Justin served as part of a management team responsible for over \$200M in construction operations. He oversaw production, schedules, equipment usage, staff allocation, and tracked project performance. He led efforts to coordinate with the Engineer of Record in modifying designs based on field conditions. Justin also managed construction activities related to dismantling and removing portions of existing structures, installing foundation structures, handling and erecting bridge girders, and performing multiple superstructure and substructure repairs.</p> <p><u>Maryland Department of Transportation State Highway Administration</u> Start Date: 1998 End Date: 2005 Position: Senior Design Engineer Responsibilities: Justin served as a Senior Design Engineer working in both the new bridge design and bridge maintenance/repair divisions. He designed and managed bridge projects during preliminary, final design, and construction phases. He addressed field and construction issues during the construction phase and managed consultants during the design phase.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Maryland, College Park, Maryland / MS / 2004 / Civil Engineering University of West Virginia, Morgantown, West Virginia / BS / 1998 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2016 / Professional Engineer / VA #0402055370 2017 / DBIA Designated Design-Build Professional / D-2314	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> <i>Note whether experience is with current firm or with other firm.</i> <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>	
MDOT SHA – MD 254 over Neale Sound, Charles County, MD (\$13 million)	
Project Role: Design Manager	With Current Firm? Yes
Beginning Date: November 2015	End Date: December 2020

Specific Responsibilities: Justin served as Design Manager for the preliminary and final design to replace an existing bridge with a new seven span, 575' long bridge over navigable water on a new alignment. He managed and oversaw all civil and highway support services for this project to support the bridge design that was completed by MDOT SHA in-house forces. Work included alternative alignment studies; preliminary and final design; erosion and sediment control (ESC) design for staged construction; stormwater management (SWM) design for two environmental site design (ESD) facilities (concept, site development, and final approval); traffic engineering; environmental permitting including JPA and Critical Area Commission (CAC) coordination; decorative pedestrian lighting; signing and pavement marking design; and navigational lighting design. He conducted an independent peer review of the bridge design, as well as performed the load rating of the new bridge. He also provided assistance with constructability reviews and provided complete Phase V services, including shop drawings reviews, consultation, and responding to RFIs.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

On Budget & Time	Utility Coordination	Hydraulics-Drainage & SWM
Structural Engineering	TMP & Traffic Control Devices	Construction Engineering
Staged Construction	Geotechnical Exploration/Design	

MDOT SHA – I-95 at Contee Road Interchange Design-Build, Prince George’s County, MD (\$34 million)

Project Role: Senior Structural Engineer	With Current Firm? Yes
Beginning Date: January 2012	End Date: November 2014

Specific Responsibilities: Justin served as a Senior Structural Engineer on this DB project that involved the construction of an urban arterial roadway and its grade separated connection with I-95 using a partial cloverleaf interchange configuration. The Contee Road Interchange connects within the I-95 collector-distributor (CD) roadway system between Maryland Route 198 and the Intercounty Connector (ICC). Contee Road was constructed parallel to the north and replaced the existing Van Dusen Road and its crossing over I-95 that entailed designing a new four-span steel plate-girder bridge. The bridge included concrete cap-and-column piers with spread footings and steel H-pile-founded abutments that were made semi-integral to minimize future maintenance. Justin was responsible for the final design, plans development, and QA/QC reviews of the new Contee Road bridge. He also directed the development of responses to contractors’ structural-related RFIs and reviews of construction working and shop drawings. Justin oversaw WM’s development of the existing Van Dusen Road bridge’s superstructure demolition working drawings.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build On Budget & Time	Complex Staged Construction	Geotechnical Exploration/Design
Steel Superstructure Design	Coordination with Adjacent Projects	Hydraulics-Drainage & SWM
Demolition Plans over I-95	Environmental Permitting	Quality Assurance and Control
Construction Engineering		

Maryland Transportation Authority (MDTA) – I-95 Bridge Rehabilitations, Baltimore City, MD (\$55 million)

Project Role: Lead Structural Engineer	With Current Firm? Yes
Beginning Date: January 2014	End Date: November 2017

Specific Responsibilities: Justin served as Lead Structural Engineer for this high profile project to rehabilitate bridge decks and complete miscellaneous repairs to 18 bridges along mainline I-95 and adjacent ramps and overpass structures. The project includes a 4.3 mile viaduct section of I-95 through the heart of Baltimore City and through the interchanges with I-395 and I-295. Work included bridge superstructure rehabilitations, LMC overlays, milling and overlaying bridge approaches, bridge demolition over existing roadways, reconstruction of approach slabs, guardrail and barrier upgrades, coordination of utility impacts, drainage design including modification of existing inlet structures, signing and pavement markers, SWM, E&SC, extensive stakeholder outreach, and coordination with adjacent ongoing projects. The project involved the staged construction replacement of 67 bridge expansion joints to reduce future maintenance and prevent deterioration of superstructure and substructure elements. This I-95 corridor serves over 170,000 vehicles per day, and all work was completed without any long-duration lane closures. The project involved an extremely complex TMP that included 16 work zones and 42 separate traffic shifts to complete all construction activities. As part of the TMP, Justin led design efforts to provide an MOT conflict matrix – to coordinate which of the 16 district work zones could be completed concurrently, due to overlapping traffic impacts, ramp closures, and local street detours. With simultaneous ongoing projects in the City, collaboration was done with the design and construction managers of all projects to ensure all lane closures and impact were synched. External stakeholder coordination involved a diverse group that included the Maryland Stadium Authority (Orioles and Ravens games), the Port of Baltimore, local communities in Baltimore City, and Baltimore City DPW. Accelerated bridge construction (ABC) was integrated through the use of Rapid Set LMC and Cementitious Materials used for overlays and joint replacements completed over short term weekend closures. The project was awarded 2016 ENR Regional Best Specialty Project Award; 2017 MDQI Grand Award; 2017 MDQI Modal Award over \$5M; and the 2017 MDQI Partnering Award.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

On Budget & Time (incl. incentives)	Complex Staged Construction	Geotechnical Exploration/Design
Steel Superstructure Design	Coordination with Adjacent Projects	Hydraulics-Drainage & SWM
Demolition Plans over Interstates	Environmental Permitting	Quality Assurance and Control
Construction Engineering	Material Testing	Stakeholder 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. **Not applicable for this position.**

ATTACHMENT 3.3.1

**VDOT Contract ID C00111300DB107 – I-95 City of Richmond Bridge Bundling Design-Build
KEY PERSONNEL RESUME FORM**

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: Jack Yon – Construction Manager/Superintendent	
b. Project Assignment: Construction Manager	
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Joseph B Fay Company	
<p>d. Employment History: With this Firm 16 Years With Other Firms 17 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>Joseph B Fay Company Start Date: 2004 End Date: Present Position: Construction Manager Responsibilities: Jack has 33 years of relevant transportation construction experience, building large, complex and award-winning projects for state DOTs. His experience includes Design-Bid-Build, Design-Build (DB) and Accelerated Bridge Construction (ABC). His successful projects include significant bridge replacements over I-95, I -695 and I-495 in the urban corridors of Washington, DC and Baltimore, MD. He is responsible for managing all construction, including Quality Control, ensuring that all materials and workmanship meet plan and specification requirements. He is accountable for safety, quality and schedule ensuring the project is completed on time and within budget. Jack holds a RDL and ESCCC. Working in Mid-Atlantic region for most of his career, he has significant knowledge and familiarity with permitting agencies, their regulations and permitting. He collaborates with design engineers, participates in over-the-shoulder reviews; and shares innovative design ideas. He provides strategic planning and oversight for the estimate development, project operations, value alternatives and ATC’s, cost forecasting, material sourcing and procurement, subcontractor identification, risk identification and management plans. His project responsibilities also include managing suppliers and subcontractors, coordinating with project stakeholders, and implementing the Partnering process. He leads coordination with utilities for identification, relocation or adjustment of their infrastructure. His expertise includes the replacement and rehabilitation of structurally deficient bridges (many with multi-staged MOT phases in urban areas), implementing innovative construction techniques, retrofitting and replacing fatigued structural steel members, substructure repairs, demolition, utility relocations and coordination, MOT, bridge painting, platforms and shielding, and the implementation of Best Management Practices. Jack has many award-winning DOT projects including four (4) DB projects and four (4) ABC projects utilizing; prefabricated bridge elements, ultra-high performance and accelerated concrete, and adjacent pre-assembly (to reduce traffic closures) techniques.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: High School Diploma, OSHA 10 & 30-Hour Construction Certified/2016, GHS and OSHA Hazardous Communication/2016, Fall Hazard in Construction Certified/2021, First Aid CPR/2020, Multiple OSHA Compliance Training	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2020/Responsible Land Disturber (RLD)/ #400348 2020/VDOT Erosion and Sediment Control Contractor Certification (ESCCC)/ #4-00348	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> <i>Note whether experience is with current firm or with other firm.</i> <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>	
PennDOT – US 219 New Highway and Bridge Construction, Somerset County, PA (\$68 million)	
Project Role: Construction Manager	With Current Firm? Yes
Beginning Date: 2015	End Date: 2017

Specific Responsibilities: As the Construction Manager, Jack was directly responsible the management and all construction operations performed on this \$68 million project. Significant scope included fast track construction of five sets of dual bridges, all constructed concurrently (Buffalo Creek 1,100' long, 220' high, and five spans with curved steel girders; Swamp Creek which is 717' long, 130' high, three spans; Mud Pike Road which is a single span 126' long; Walters Mill Road which is a single span 131' long, and Garrett Shortcut Bridge which is a single span 127' long. Additionally, Blue Lick Bridge deck was widened. Jack supervised a team of 27 construction crews totaling 80 people and 20 subcontractors; for bridge, roadway, storm drainage, SWM, survey, MOT, signing, and guardrail. Jack was responsible for daily safety and quality audits, implemented regular meetings to coordinate permitting agencies, utilities and other project stakeholders. Jack led the Partnering process. He participated in Public Community Day events. He provided guidance for the MOT plan and coordinated traffic restrictions to minimize impacts on the Blue Lick widening, and for local road realignments and reconstruction. He works closely with the environmental agencies and the owner to design and implement an operation model that avoided environmental disturbances to nearby endangered and protected species. His team utilized drones for disturbance verification and final as-built surveys. He provided schedule updates, performed constructability reviews, managed the budget, and was responsible for QA/QC oversight, environmental compliance, permitting and safety. Under Jacks leadership the project received the *2018 ENR Award of Merit Award*, *2019 Associated Pennsylvania Constructors Partnering Award* and the *2019 ASCE Pittsburgh CE Achievement Award*.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Environmental Permitting	Storm Drainage/SWM	Roadway Reconstruction (11 miles)
R/W Acquisition	Stakeholder Coordination	QA/QC Success
Built Six Bridges Concurrently	Public Outreach	Signing/Lighting/Barrier

PennDOT – I-90 over Six Mile Creek Gorge Twin Bridges Replacement Design-Build, Erie County, PA (\$32.1 million)

Project Role: Construction Manager	With Current Firm? Yes
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Beginning Date: 2009	End Date: 2011
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Specific Responsibilities: As the Construction Manager, Jack managed design and construction efforts on this \$32M design-build project, involving the replacement of 7,000 lf of I-90 roadway and two bridge structures. The work included the removal of the current bridges and the construction of dual 3-span bridges which are continuous steel girder structures. The work included the design and construction of 180' piers, among the tallest in the state. Jack worked closely with PennDOT and stakeholders, performed key reviews, coordinated with design and construction and provided guidance for and monitored the CPM schedule. He was directly responsible for public relations; utility coordination; QA/QC; environmental compliance; safety; scheduling; budgeting; and ensuring that construction conforms to the design plans and specifications. Jack's collaboration with the Design Team and PennDOT to develop the traffic management plan utilizing 6-stages of MOT. This plan successfully provided four lanes of unrestricted I-90 flow throughout demolition and construction. Jacks plan of operations allowed removal of the existing structures with no added impacts to the environment. Jack worked with permitting agencies to acquire permits for the construction of wetlands and stream mitigations. This involved coordinating with many agencies for permitting efforts, including PADEP, PAF&BC, USACE, and USFWS. Under Jacks leadership the project received the *ABCD Outstanding New Multiple Span Bridge Award* and the *ACE/PA Diamond Award*.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Design-Build Bridge Project	Innovative Bridge Solutions	High Volume Vehicle Traffic
Complex Demolition	Environmental Permitting	Significant SWM
Minimizing MOT Impacts	QA/QC for Design and Construction	Expedited Schedule

VDOT – Chatham Bridge Rehabilitation and Replacement, Fredericksburg, VA (\$17 million)

Project Role: Construction Manager	With Current Firm? Yes
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Beginning Date: 2020	End Date: Current
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Specific Responsibilities: Jack is the Construction Manager for the \$17M Chatham Bridge Replacement in Fredericksburg, VA. The 1,700' bridge spans the Rappahannock River. Jack is directly responsible for management and construction operations for this project. The bridge has significant historical and architectural value. The bridge superstructure is structurally deficient and must be replaced. Substructure repairs are also required including pier seats and abutment modifications, pier concrete and spall/crack repair. Pedestrian fencing and architectural treatments will be installed. The bridge is in an urban area and is being built fast-track with a MOT detour. The approach roadway is being reconstructed. Jack is directly responsible for safety and quality, coordination with permitting-agencies/utilities/stakeholders. He also provides schedule guidance, constructability reviews, manages the budget and environmental compliance.

Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling

Structurally Deficient Bridge	Urban MOT	Architectural Treatments/Historic
Superstructure Replacement	Substructure Repairs	Fast Track Construction
Ensured Materials and Work Met Contract Requirements		

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. **Jack is currently the Construction Manager for VDOT Richmond District's Chatham Bridge Rehabilitation and Replacement located in Stafford County, VA. Construction will be completed on his current assignment prior to the start of construction of this Project.**

ATTACHMENT 3.3.1

**VDOT Contract ID C0011300DB107 – I-95 City of Richmond Bridge Bundling Design-Build
KEY PERSONNEL RESUME FORM**

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Richard Bennett, Director of Right-of-Way (RW) and Utility Relocation Services
b. Project Assignment: Lead Utility Coordination Manager
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Bowman
d. Employment History: With this Firm <u>6</u> Years With Other Firms <u>46</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): Bowman Start Date: 2014 End Date: Present Position: Director of RW and Utility Services Responsibilities: Richard is currently responsible for Bowman’s RW acquisition, utility coordination, and Virginia Department of Transportation (VDOT) coordination groups, providing services on public and private projects. He has extensive knowledge of federal and state laws, rules, regulations, and procedures regarding utility coordination, relocations, and accommodation on transportation. Utility coordination services are being performed on both local government and VDOT administered improvement projects. He has led the Bowman team working on utility coordination and relocations designs on both design-build projects and projects being developed for construction bidding. With responsibly for the coordination of all utility relocations during the design and construction phases on the projects, his Team has successfully cleared the utility conflicts maintained the road and bridge construction schedules. Coordination services performed include verifying conflicts, determining cost responsibilities; conducting the utility field inspections; coordinating utility relocation designs, reviewing, and recommending approval of utility relocation plans and estimates and inspection and coordination of all utility relocation construction activities. The Team also performs utility relocation design for in-plan work (Dominion, Verizon, Comcast, locality’s water, gas, and sewer) and coordinates design modifications necessary due to field conditions. VDOT Start Date: 2008 End Date: 2014 Position: State RW and Utilities Director Responsibilities: Richard provided leadership and direction for VDOT’s statewide RW, utility, railroad, and property management programs. He managed and directed 170+ managers, specialists, and support staff located across the Commonwealth. Additionally, Richard acted on behalf of the Commissioner to institute eminent domain proceedings; to resolve cases through litigation or settlements; and to approve all acquisition settlement either before or after condemnation, executing all legal documents. Other responsibilities included entering into agreements on behalf of VDOT for utility and railroad projects; managing and directing the property management group in leasing or selling VDOT RW; and providing direction and guidance on design-build and P3 contracts relating to RW, utilities, and railroads. Greenhorne & O’Mara, Inc. (G&O) Start Date: 1999 End Date: 2008 Position: Project Director/Office Manager Responsibilities: Richard started at G&O as a Senior Project Manager where he assembled and directed a qualified staff of RW specialists; created project management plans; and provided utility coordination services. He then managed the operations of G&O’s Richmond office, including budgeting, personnel, billing, and financial analysis. As Project Director, Richard managed and directed G&O’s RW and utility group, performing services in VA, MD, DC, and PA and providing guidance to clients and staff regarding laws and regulations to accomplish projects. Utility coordination services included coordination of relocations designs being prepared by utility companies and relocation designs being prepared by his staff. Richard led his Team at G & O in the utility relocation coordination for the Virginia side of the Woodrow Wilson Bridge replacement project and the Route 495 HOT Lanes project, both mega projects. Accomplishments included leading a DC task force in developing a RW Policy and Procedure Manual and authoring a seventeen-chapter manual for the District Department of Transportation, meeting FHWA requirements.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Commonwealth University, Richmond, VA/Coursework in Real Estate & Appraisals / 1980
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <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 – Albemarle Intersection Bundling Design-Build, Albemarle County, VA (\$28.5 million)								
Project Role: Lead Utility Coordination Manager	With Current Firm? Yes							
Beginning Date: September 2019	End Date: Present							
<p>Specific Responsibilities: Richard’s primary responsibility is to lead the utility relocation team on this intersection bundling design-build project that includes six individual projects being separately designed. Improvements include a diverging diamond interchange (DDI) at I-64 (Exit 124) and US Route 250; interchange ramp improvements along US 29 at I-64 (Exit 118) and Fontaine Avenue; a new Rio Mills Road to Berkmar Drive connector roadway; and converting the US 250/Route 151 and Route 20/Route 649 intersections into single lane roundabouts to improve operations, safety, and overall traffic congestion. He is currently providing utility relocation coordination services on the Route 20/Route 649 roundabout project. The project involves constructing the roundabout at a four-leg uncontrolled Route 20 and connecting stop sign-controlled Routes 649 and 1494 junction and a large stormwater management basin facility in the adjacent northwest quadrant. Utilities with facilities on this project include electric, overhead telephone, and underground fiber optics owned by Dominion, Verizon, Comcast, and local water, gas, and sewer companies. Richard’s utility coordination team has been working with the design engineers and the Contractor to thoroughly review existing utility locations and clearances/cover requirements, minimize conflicts, facilitate proposed utility relocation corridors, and coordinate construction phase procedures/sequencing with the utility relocations. This roundabout project is located just outside of the City of Charlottesville’s urbanized area. This project has an aggressive DB schedule which involved completing all six elements in Albemarle County. In addition to working with the design team to minimize utility conflicts, the chosen utility relocation plan will clear the first and longest construction phase early, allowing road construction to begin while utility relocations in other phases are being completed. An example of a minimum cost design change was to use a flat bottom ditch allowing the roadside grades to be raised and cover maintained over an existing underground fiber optic facility running along Routes 20 and 649 in the intersection’s northeast quadrant.</p> <p>Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling</p> <table border="0"> <tr> <td>Design-Build Project</td> <td>Utility Coordination/Relocation</td> <td>Field Surveys</td> </tr> <tr> <td>RW Acquisitions</td> <td>Interstate Highways</td> <td></td> </tr> </table>			Design-Build Project	Utility Coordination/Relocation	Field Surveys	RW Acquisitions	Interstate Highways	
Design-Build Project	Utility Coordination/Relocation	Field Surveys						
RW Acquisitions	Interstate Highways							
VDOT – I-66 Outside the Beltway P3 Project, Fairfax and Prince Williams Counties, VA (\$2.1 billion)								
Project Role: Utility Project Manager	With Current Firm? Yes							
Beginning Date: March 2016	End Date: Present							
<p>Specific Responsibilities: Richard led the Bowman utility coordination team on this P3 project to improve a 20-mile section of I-66, known as Transform I-66 Outside of the Beltway. His team prepared a comprehensive utility analysis and matrix identifying over 350 potentially affected utility facilities. The team analyzed the concept plans and developed utility relocation concepts. The team also performed utility prior rights determinations; selected utility relocation detailed design plans; and provided easement acquisition services to support the project. This project involves utility facilities owned by all the major utilities in Northern Virginia, which required establishing effective working relationships with those companies. In order to meet the schedule for a design-build project, minimizing utility conflicts is key and during the first year of the project had a utility engineer working full time in the Contractor’s office. In collaboration with the utility companies, his team worked with the design team to recommend and implement design refinements that eliminated many conflicts. In some cases, the Team designed alternative relocation concepts for the BD contractor so they could more thoroughly analysis the cost and schedule effects. Bowman also developed a matrix and numbering system to track of all utility facilities located along the 20-mile project limits.</p> <p>Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling</p> <table border="0"> <tr> <td>Design-Build Project</td> <td>Utility Coordination/Relocation</td> <td>Field Surveys</td> </tr> <tr> <td>RW Acquisitions</td> <td>Interstate Highway</td> <td></td> </tr> </table>			Design-Build Project	Utility Coordination/Relocation	Field Surveys	RW Acquisitions	Interstate Highway	
Design-Build Project	Utility Coordination/Relocation	Field Surveys						
RW Acquisitions	Interstate Highway							
VDOT – US Route 29 NB at Vint Hill, Alexandria, VA (\$4.6 million)								
Project Role: Lead Utility Coordination Manager	With Current Firm? Yes							
Beginning Date: February 2019	End Date: August 2019							
<p>Specific Responsibilities: Richard led the utility relocation coordination work for this safety improvements project. His team was engaged in this accelerated design-build project for the reconstruction improvements to an approximately 4,000’ section of the US 29 north bound roadway. The project involved blasting rock in order to lower the crest and improve sight distance. Utility owners were identified and coordinated with very early in the process, which minimized or eliminated all potential project impacts. Utility owners included two electric companies, two telecommunications companies, and cable TV. The utility field inspection was held just two weeks after the project contract was signed. This was a compact design-build project that had to be constructed over the summer season prior to the fall school opening. The project involved engaging the utility owner while the design was incomplete. The UFI was scheduled and held early, bringing all five utility owners to the meeting, and identifying the issues and solutions with the companies. The design-build team successfully engineered a project that met the utility requirements and ended with no conflicts, therefore allowing road construction to commence immediately and being completed on schedule.</p> <p>Similarities with the I-95 City of Richmond Bridge Superstructure Replacement and Rehabilitation Bundling</p> <table border="0"> <tr> <td>Design-Build Project</td> <td>Utility Coordination/Relocation</td> <td>Accelerated Delivery</td> </tr> </table> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>			Design-Build Project	Utility Coordination/Relocation	Accelerated Delivery			
Design-Build Project	Utility Coordination/Relocation	Accelerated Delivery						
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. Not applicable for this position.								



Appendix 3.4.1 Work History Forms



in association with



ATTACHMENT 3.4.1(a)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
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: Boulevard of the Allies Design-Build Bridge Replacement Location: Pittsburgh, PA	Name: PennDOT- Gannett Fleming/Wilbur Smith Fay-Design Build Portion; SAI Consulting Engineers, Inc.	Name of Client/ Owner: PennDOT District 11 Phone: (412) 429-5000 Project Manager: Doug Thompson Phone: 412-292-2289 Email: douthompson@pa.gov	May 2009	July 2009 (Actual – Completed on-time with an Owner approved 2-month completion date extension for the approved expansion of roadway work)	\$29,109,868.00	\$30,334,099.00 (Actual – Overage due to owner directed expansion of roadway work for adding lane miles, sidewalks, utilities, signs and traffic controls)	\$30,334,099.00

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.



PROJECT DESCRIPTION

Joseph B. Fay Company (Fay) was awarded this PennDOT project which had both design-build and design-bid-build contractual components. This project involved modernizing a major arterial roadway connecting Pittsburgh and Oakland, in a vibrant dense urban neighborhood, using aesthetically pleasing, environmentally friendly and community minded elements. The signature feature is the new 300 ft bridge with its architectural features, serving as the Gateway into the Oakland neighborhood, a regional center for culture, higher education and health care. Home to multiple universities and medical facilities including University of Pittsburgh and Carnegie Mellon. The Design-Build components included seven large retaining walls and all supporting maintenance of traffic for the project.

The project was completed with five major phases of work to provide continuous traffic movement throughout construction. The scope included the demolition of three existing steel bridges, the construction of a new two-span steel bridge, two new roadway ramps, and seven new retaining walls. The new steel girder bridge was enhanced with pre-cast eagle panels on three wing walls and 4,500 sf of architectural finish on the abutments. Full-depth roadway reconstruction required 37,000 cy of pavement excavation replaced with 14,000 sy of concrete pavement overlaid with 1,200 tons of bituminous pavement. Other similar features included excavation and disposal of contaminated material, 2,600 sy of sidewalk & curb, 5,000 lf of storm sewer, and significant water main, sanitary sewer, electric, telecom, lighting, signalization, streetscape features and landscaping work. As an environmental steward, Fay recycled all concrete and steel removed from existing structures, and had no penalties working only 1,500 ft from the Monongahela River.

Fay constructed retaining walls, varying in complexity from common segmental retaining walls used for minor slope stability and landscaping, to major cantilevered walls with steel beams anchored into rock extending 32' in the air and stretching over 800' long. For aesthetic improvements, Fay enhanced new bridge with precast eagle panels on three wing walls and an architectural finish on the abutments. Other aspects included; lighting, signing (ground mounted and overhead), traffic signals, ITS/CCTV/COMM, storm drainage and SWM, and QA/QC for design and construction.

Securing and Maintaining Public Support: Minimizing inconvenience and impacts to the traveling public, local businesses, hospitals, universities and residents was critical. The urban environment provided additional obstacles to construction with high ADT volumes both vehicular and pedestrian. Our team's success started immediately upon the Notice to Proceed, Fay established the Partnering process, collaborating with the PennDOT, its designers, SAI Consultants, utilities and all other stakeholders. This Team developed protocols and procedures to clearly convey, publicize and update the Transportation Management Plan. Details included dates, times, locations and specific approaches to the temporary lane closures and detours. Access through the work zone was continually updated for emergency responders.

John Myler, PennDOT Assistant Construction Manager: "I was always impressed by Fay's attention to detail, and their sheer effort to get difficult parts of the job accomplished without cutting corners. For example, there was a period from May to August this year when we really had to get a lot done because the students (project close to Pitt) were mostly gone. There was no changing the schedule for students to return, so they really had to put the manpower out there to get it done. It was impressive to see Fay's people just commit to getting it done no matter the circumstances."

EXCEPTIONAL PERFORMANCE

- 2009 ASHE Outstanding Highway Achievement Award*
- 2009 PSPE Outstanding Project of the Year*
- 2009 NPHQ Quality in Structure Award*

SIMILAR RISKS MITIGATED

Utilities: Multiple aerial and underground utilities conflicted with roadway, bridge and retaining wall construction, immediate relocations were required. To ensure success, the Fay Team began communication with the utility companies upon award. Fay initiated the preconstruction utility meeting, followed with regular and monthly coordination meetings. The CPM included utility relocations showing potential project effects. Open and honest communications allowed the project to be completed without utility delays or unknown service disruptions to customers. Utility stakeholders included Pittsburgh Sewer Authority, Verizon, Duquesne Light, and Peoples Gas among others.

Design and Construction Coordination: Fay integrated the Team to facilitate the involvement of construction expertise during design and design expertise during construction. The Team utilized a variety of project management software programs for collaboration, file sharing and scheduling. Fay's Design Build Manager, Fay's Construction Manager and SAI's Design Manager led a team that regularly met whose agenda was to ensure; that innovative design solutions and construction techniques were implemented; that work was constructible and construction was completed to the standards; that work was aesthetically unique and sequenced to reduce impacts to the traveling public.

Relevance to Richmond Bridge Bundling

- ✓ Design-build delivery
- ✓ Urban Corridor
- ✓ Minimized Impacts to Traveling Public
- ✓ Minimized Impacts to Affected Businesses and Communities
- ✓ Innovative Bridge Design Solutions and Construction Techniques
- ✓ Complex Utility Relocation/Coordination
- ✓ Increased the Vertical Distance
- ✓ Complex Demo over Interstate
- ✓ Pedestrian Fencing and Architectural Features
- ✓ Cultural Resources in a Historic District

Proposed Staff Involvement

James McNelis (Fay) Executive Committee
 Clint Filges (Fay) Demolition Expert

ATTACHMENT 3.4.1(a)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
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: Liberty Bridge Rehabilitation Location: Pittsburgh, PA	Name: HDR was PennDOT's Engineer of Record	Name of Client/ Owner: PennDOT, District 11 Phone: 412-429-5000 Project Manager: Jason Zang Phone: 412-781-3260 Email: JZANG@pa.gov	08/2018	08/2018	\$80,810,294	\$81,228,333 (Owner Approved Modifications)	\$81,228,333

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.



PROJECT DESCRIPTION

Joseph B. Fay Company (Fay) was awarded this PennDOT project for the major rehabilitation of the deck and superstructure on two bridges critical to commuter traffic within the urban corridor of Pittsburgh. The structurally deficient bridges include the Liberty Bridge and the Boulevard of the Allies Bridge. Fay completed the Liberty Bridge superstructure replacement, bringing the structure back to full vehicle weight capacity, while minimizing traffic disruptions and impacts to the environment. Work included the replacement of the entire cast-in-place grid deck and stringer system. Fay installed a 173,000 sf of new bridge deck supported on 990 new stringers. A total of 2,477,000 pounds of structural bridge members were replaced. Other work included demolition, milling, ITS, signing/lighting/signals, 2,850 cf of substructure concrete repairs, and maintenance of traffic (MOT). **Fay's** work on the Boulevard of the Allies Bridge, also successful for minimizing traffic impacts and impacts to the environment, included deck rehabilitation (mill and latex overlay), three-coat structural painting; jacking and bearing replacement; and replacement of fatigued structural steel, MOT, signing and lighting. Work was concurrent on both structures and utilized accelerated bridge construction (ABC) techniques. On this project, **Fay** worked 254,522 man-hours without a lost-time accident. The **Fay** Team designed and installed a two-staged containment and construction platform system. This system allowed for concurrent paint, steel repair, and deck replacement operations. The system effectively prevented all hazardous blast media and concrete dust or debris from entering the river and provided a safe and efficient access platform.

Many milestones had road users liquidated damages up to \$8,300/hour. To accelerated work, by schedule demands, **Fay** Teams worked six days per week, 24 hours per day during the construction seasons of 2016/2017. **Fay** provided the Design-Build Maintenance of Traffic Plan. Using the partnering process, the **Fay** Team coordinated its MOT plan with PennDOT and HDR, the project designer, as well as other project stakeholders, including UPMC, fire/police/EMS services, Port Authority, and the Pittsburgh Marathon. On Liberty Bridge, our Team's plan reduced the allowable weekday nightly closures from 26 to 10, significantly reducing traffic impact. The MOT plan spanned two construction seasons utilizing seven stages. Traffic was maintained on the bridge for all stages of construction. The first construction season consisted of five MOT stages to reconstruct 1,790 lf of the Liberty Avenue Bridge one lane at a time. All work was accelerated and completed within 154 calendar days. Behind barrier and adjacent to traffic, **Fay** crews removed and replaced the existing deck and stringers with new stringers and a grid deck. The second construction season consisted of two MOT stages in order to reconstruct 722 lf of the bridge. For these two stages, work was completed with weekend lane closures and ABC methods. The weekend closures created the opportunity to use larger capacity cranes, setting all precast deck modules in only five weekends. Also, two ramps on the bridge were completed in this MOT stage. Work restriction calendars only allowed a 132 day closure at each ramp. **Fay** completed work in only 80 days.

Securing and Maintaining Public Support: **Fay** partnered with PennDOT, EMS, utility owners, schools, businesses, subcontractors, and suppliers to maximize coordination and proactively provide solutions for project success. **Fay** integrated all emergency responders, schools, and businesses into the partnering process. **Fay** developed a site specific Incident Management Plan and led plan rehearsals. This allowed everyone to understand our access points, MOT staging, and the overall work environment. **Fay** also supported PennDOT's community relations programs by presenting project plans and answering questions at public meetings.

No Delays from Utility Relocations: **Fay** led coordinated with all utility owner's for no project delays.

Jason Zang, PennDOT District 11 Assistant District Executive of Construction "This was an extremely challenging project involving the rehabilitation of a 90-year-old truss, in the City of Pittsburgh, with a very high ADT, attracting a high degree of media attention. New products never before used in Pennsylvania were utilized, and Fay was up for the challenge, bringing their own innovative ideas to the project. Fay did a fantastic job on this very challenging project, and I look forward to our continued partnerships moving forward."

EXCEPTION PERFORMANCE

- 2020 National Steel Bridge Alliance, Prize Bridge Awards - Special Award for Resilience*
- 2019 ESWP Transportation Project of the Year*
- 2018 ABCD Pittsburgh Outstanding Rehabilitated Bridge*
- 2018 ASCE Pittsburgh Section Civil Engineering Achievement Award*
- 2018 PSPE Pittsburgh Chapter Outstanding Engineering Achievement*

SIMILAR RISKS MITIGATED

Utilities: Risks were mitigated by involving utilities in the preplanning Partnering meetings. Fay, with its subcontractor, Power Contracting, successful coordinated with the utility owner to relocate the power feeds suspended from the bridge prior to season one and season two work. No schedule delays were encountered from these relocations.

Innovative Bridge Design and Construction Techniques: The **Fay** Team analyzed the structure for stability as it was demolished and rebuilt. All means and methods plans were designed around this critical information. **Fay's** Team also conducted constructability reviews for the ABC methods with PennDOT and HDR.

Traffic Management/Construction Coordination: **Fay** held an emergency response meeting at our filed office to discuss the incident management plan. There were two Partnering meetings with PennDOT, stakeholders, subs, suppliers and utility owners to coordinate and proactively provide solutions. One unique areas of construction coordination was with the Pittsburgh Penguins, who not only had the normal season, but were in the playoffs. Our PM along with PennDOT met with the Penguins management to assure fans could easily commute to and from these non-scheduled games.

Relevance to Richmond Bridge Bundling

- ✓ Design-build MOT aspect
- ✓ Accelerated Bridge Construction (ABC)
- ✓ Urban Congested Corridor
- ✓ Minimized Impacts to Traveling Public
- ✓ Minimized Impacts to Affected Businesses and Communities
- ✓ Innovative Bridge Design Solutions and Construction Techniques
- ✓ Utility Relocation/Coordination
- ✓ ADT over 50,000
- ✓ Superstructure Replacement
- ✓ Substructure Repair

Proposed Staff Involvement

- James McNelis (Fay) Executive Committee
- Clint Filges (Fay) Demolition Expert
- Jason Esser (Fay) Schedule Manager

ATTACHMENT 3.4.1(a)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
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-70 New Stanton Interchange Reconstruction Location: New Stanton, PA	Name: AECOM for PennDOT	Name of Client/ Owner: PennDOT, District 12 Phone: 724-439-7315 Project Manager: Mr. Dominec Caruso, PE Phone: 724-439-7286 Email: dcaruso@pa.gov	October 2018	March 2018 (interchange was substantially complete and open to traffic by November 2017)	\$53.7 million	\$53.9 million (owner approved modifications)	\$53.0 million

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.



PROJECT DESCRIPTION

Joseph B. Fay Company (Fay) was awarded PennDOT’s I-70 New Stanton Interchange Reconstruction project whose goals were to enhance safety, improve mobility and increase access for road users along this section of I-70. The project includes the closure of two existing and closely spaced interchanges and construction of one new diamond interchange with roundabouts at the ramp intersections. Similar to this project, it involved the replacement of structurally deficient bridges, increase the height of some bridges and replace entire bridge superstructure. The project location is adjacent to many businesses and residents.

The work included the reconstruction and realignment of I-70 for approximately 1.8 miles; two new bridges; structural steel rehabilitation of an existing bridge; construction of three local connector roads for business/resident; vehicular access to the interchange; a Park and Ride; a new retaining wall; geosynthetic reinforced slope system; sloped rock embankments; traffic signals, signing, pavement markings and lighting; ITS relocation work; utility relocation; stormwater management (SWM), erosion and sediment control (ESC); stream relocation; excavation and handling of hazardous and contaminated soil and groundwater; and other miscellaneous construction. The new interchange opened almost a year early and the project overall was several months ahead of schedule.

Project improvements included demolition of 12 properties; 567,000 cy of excavation; 230,000 cy of embankment; processing of 50,000 cy of rock excavation for undercut treatment; 99,000 sy of concrete pavement; 115,000 sy of asphalt pavement; 19,000 lf of closed storm drain; 190 drainage structures; 3,299 cy of structural concrete; 23,000 sy of topsoil placement; and planting of 1,226 trees for reforestation. Fay also coordinated with affected utility companies for the relocation of utilities (including Columbia Gas, People’s Natural Gas, Verizon and West Penn Power).

Environmental protection was a significant part of this project. Fay protected the local environment through wetland and stream mitigation as well as stream relocation. More than 1,500 feet of stream mitigation was being completed with Fay creating ephemeral and perennial streams using native sandstone and trees to create step pools and reforestation with native trees, shrubs, and seeds. Constraints were put on clearing to ensure protection of the endangered Northern Long Eared Bats which nested within the limits of disturbance.

Securing and Maintaining Public Support: Coordinated with all stakeholders, PennDOT, utility owners, and businesses by holding weekly coordination and job progress meetings to discuss issues/solutions, scheduling, partnering, safety, and MOT. These meetings mitigated conflicts and facilitated open communication about all concerns. **Fay** coordinated due diligence with PennDOT for major revisions to PennDOT’s NPDES permit. Finally, **Fay** provided support to PennDOT through participation in the community relations efforts associated with this work and coordination with stakeholders. Fay sent representatives to participate in community outreach meetings and distributing flyers to notify area residents and businesses about the project.

No delays from Utility Relocations: **Fay** coordinated with utility companies for the relocation of utilities without impacts to users and without delaying the project.

“This project was a huge success for many reasons, including innovative bidding which encourages bidders to pursue expedited construction. Fay bid the project with innovations that allowed the construction to complete almost one year early.” – Joe Szczur, PennDOT Executive
Awards: 2018 Pittsburgh ASHE Outstanding Highway Engineering Award and 2018 Associated Pennsylvania Contractors (APC) Partnering Award

EXCEPTION PERFORMANCE

Fay was responsible for implementation of three significant ATCs. **Fay** provided new structural steel for the Sewickley Bridge in lieu of PennDOT’s designed structural steel rehabilitation. The original bridge design called for existing girders to be rehabilitated with structural repairs, followed by sandblasting and painting. Fay’s ATC replaced the superstructure with new steel girders, bearings, and paint for a zero dollar cost change and eliminated environmental impacts associated with blasting and painting above the Sewickley Creek. Saved 80 days on schedule. **Fay’s** second ATC replaced PennDOT’s original design using a geosynthetic reinforced slope system for slope stability. Fay provided an improved alternate design, which was done for a zero dollar cost change. Fay redesigned the engineered 1:1 sloped rock embankments to reduce the time of construction and eliminate future maintenance concerns with the reinforced slopes.

SIMILAR RISKS MITIGATED

Utilities: Our Team dealt with nine different utilities involving them in preconstruction meetings, as well as monthly utility coordination meetings. As a result, some utilities were relocated prior to construction and some concurrent with construction.

Traffic Management Plan: **Fay’s** third ATC redesigned the original MOT plan for the entire project. The redesign eliminated the use of crossovers to maintain the required two lanes of unrestricted traffic. This MOT redesign improved traffic flows, reduced quantities of work (cost savings), and accelerated the scheduled completion date. Our traffic and phasing redesign also eliminated the need to place 2-hour accelerated concrete paving mix for nightly opening of the roadway to traffic. **Fay’s** new MOT plan provided less obstructions to traffic flow and only required normal concrete paving mix with an extended cure time. The savings to PennDOT was \$700,000. It also provided a more durable concrete pavement section with less future maintenance costs.

Construction Coordination: To reduce external impacts, lean pull planning was used with major stakeholders. Additionally, property owners and businesses were constantly communicated with both by meeting attendance and personal face-to-face meetings.

Relevance to Richmond Bridge Bundling

- ✓ Innovative Bridge Solutions
- ✓ Demolition and Construction of Urban Bridge over Interstate
- ✓ Complex MOT with High Volume Vehicle and Pedestrian Traffic – redesigned 20 stages to 9 stages
- ✓ Minimized Impacts to Traveling Public
- ✓ Minimized Impacts to Affected Businesses and Communities
- ✓ Innovative Bridge Design Solutions and Construction Techniques
- ✓ Complex Utility Relocation/Coordination
- ✓ Replacement of a structurally deficient bridge
- ✓ Increased Vertical Clearance

Proposed Staff Involvement

James McNelis (Fay) Executive Committee
 Clint Filges (Fay) Demolition Expert
 Jason Esser (Fay) Schedule Manager

ATTACHMENT 3.4.1(b)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-95 at Contee Road Interchange Design-Build Location: Prince George's County, MD	Name: Allan Myers	Name of Client: Maryland Department of Transportation State Highway Administration Phone: 410-241-1120 Project Manager: Dave Phillips Phone: 410-545-8823 Email: dphillips@mdot.maryland.gov	01/2012	11/2014 <small>(Schedule was maintained with contractor advancing conduit installations for utility relocations)</small>	\$30,700	\$33,744 <small>(Overage due to owner directed updates for new bike lane requirements and upgrade of a WSSC watermain crossing)</small>	\$5,500

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. Project/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.



Design-Build Project. The project involved construction of an arterial roadway, Contee Road (now known as Konterra Drive), and its grade separated partial cloverleaf interchange connection with I-95. The four-lane divided Contee Road replaced the adjacent existing two-lane Van Dusen Road and its crossing over I-95. The Contee Road Interchange connects within the I-95 collector-distributor (CD) roadways between MD 198 and the ICC - MD 200. The work included constructing a 4-span steel haunched girder bridge over I-95 along with demolition of the existing overpass bridge, two interchange direct outer connection ramps and two cloverleaf inner loop ramps, and the relocated at-grade connections of Sweitzer Lane and Van Dusen Road to Contee Road. The project purpose was to increase the capacity of Contee Road and provide a new access point with I-95, driven by the traffic demands of the County's northern region communities including the Konterra Town Center, a 2000-acre mixed-use development. Engineering services provided by WM include surveying; highway, structural, pavement, and drainage design; Transportation Management Plan (TMP) and maintenance of traffic development; geotechnical, traffic (signals, lighting, ITS, signing, markings) and utility engineering; landscape architecture; construction documents preparation; stakeholder/public outreach; and securing stormwater management (SWM)/erosion sediment control approvals along with ensuring compliance with NEPA and environmental commitments for wetlands/streams and forest impacts. WM designed new cantilever and butterfly sign structures.

WM received the 2016 MdQI Partnering in Construction Gold Award of Excellence for exemplifying a high level of achievement through their practice of the Partnering principles and also the Award of Excellence for MDOT SHA Project of the Year >\$5M Category.

Minimize Inconvenience to the Community and Traveling Public: Given the high visibility of the project, the local commercial interests and the nearby hospital, our Team sequenced the project in conjunction with roadway profile refinements and bridge construction through reducing vertical differential and meeting grades between existing and proposed roadways to maintain traffic and intersection movements/operations at all times throughout construction; completing the work in the minimum number of stages; facilitating smooth transitions between existing and new; minimizing traffic disruption and maximizing accessibility with adjacent properties.

Minimize Overall Impacts and Provide Proactive Coordination: Our SWM approach minimized the project footprint, reduced environmental resource impacts, and increased available mitigation areas by providing for water quality treatment in Environmental Site Design micro-scale practices along the roadways instead of concentrating the treatment in end-of-line pond facilities. We reduced the permitted forest impacts from 24.43 acres to 19.65 acres. We increased on-site reforestations from 14.52 acres to 27.57 acres. Our Team coordinated with the environmental agencies and prepared necessary environmental summaries for NEPA reevaluations of proposed project refinements.

SIMILAR RISKS MITIGATION

Utilities: Clearing utilities was critical in order to meet the Schedule's Critical Path construction activities, therefore advanced utility coordination was a priority. The Team held and facilitated Monthly Utility Coordination Meetings. Our Team designed and installed conduit duct systems for the relocation of impacted telecommunication fiber optic (FO) utilities and/or for new FO and electric infrastructure supporting the new adjacent development as well as the relocation of a I-95 gas main crossing. Also, WM designed the replacements of existing WSSC 30" and 42" Water Transmission Main within the proposed grading limits for the new Contee Road and realigned Van Dusen Road and designed relocations of existing WSSC 10" and 24" water main at Van Dusen and Virginia Manor Roads.

Traffic Management Plan: Staged Construction Sequence was implemented the allowed one lane to remain in service during all construction stages. The construction sequence included temporary retaining walls between construction stages to protect travel lanes and to allow for excavation adjacent to existing roadways. Our TMP included nighttime traffic drags and multiple lane closures of I-95 coordinated with crane placements to allow for efficient and safe demolition of the existing bridge and erection of the new steel girders over the interstate. All lanes on I-95 were re-opened each day before the morning commuter driven rush hour.

Construction Coordination: Working over I-95 required careful planning and design for the demolition of an existing complex, curved multi-span bridge and erection of new steel girders. Assisted in the development and review of detailed erection plans. Designed demolition sequence including a full 2-D analysis of the superstructure with construction equipment loading on the bridge.

CHALLENGES AND SOLUTIONS

Expedited Bridge Design: Completing the design and construction of the proposed Contee Road Bridge was vital to project success in order to remove the existing Van Dusen Bridge and allow for the completion of I-95 CD roadways. WM developed a schedule and approach that ensured all necessary design activities were completed on time and all elements were constructed without delay; resulting in completion the new bridge and demolition of the old 1½ months ahead of the interim milestone date.

Reducing Future Maintenance: Efforts to reduce future maintenance were incorporated throughout the project, through major changes and subtle design adjustments. Our Team developed ATCs to reduce the Contee Road bridge size through the realignment of the under passing I-95 Northbound CD Road and adjoining interchange ramps and the use of concrete F-Shape barriers at the abutments; resulting in the shorting of the bridge by 82 ft. and providing symmetrical spans. The better proportioned span ratios, and maximized design efficiency resulted in less "bridge" for the owner to maintain in the final condition. We also incorporated jointless construction (deck extensions were used at the abutments).

Bridge Aesthetics: Simulated stone finish formliners were incorporated into the bridge parapets and face of substructure elements to provide a context sensitive design. Geometric enhancements were incorporated into pier design, including flared columns and tapered concrete caps. Curved bridge cheekwalls were used to provide visual enhancement to the bridge.

Maximize Project Elements to Improve Operations and Safety: WM applied innovative structural solutions along with road geometric refinements and an alternative SWM approach that resulted in over \$3 million in cost savings towards the Contract's \$33M maximum price limit and allowed our Team to complete the maximum contract scope – adding ½ mile of new Contee Road with realignment of Sweitzer Drive and Van Dusen Road Intersections. To further enhance access and multi-modal features, WM incorporated 6 ft. marked bike lanes along Contee Road and pocket lanes at the new Sweitzer and Van Dusen intersections.

Relevance to Richmond Bridge Bundling

- ✓ Design-Build Completed On-Time and Within Approved Budget
- ✓ New Steel Superstructures over I-95
- ✓ Demolition Plans over I-95
- ✓ Erection Plans with Nighttime Closures and Drags along I-95
- ✓ Staged Construction Coordination
- ✓ Jointless Bridge Design
- ✓ Coordination with Adjacent Projects
- ✓ Value Engineering and Practical Design Solutions
- ✓ Multiple Utility Relocations / On-Bridge and Under I-95
- ✓ Overhead Sign Structure Design

Proposed Staff Involvement

Justin Myers, PE, DBIA* • Dave Borusiewicz, PE, DBIA • Matt Davis, PE • Russ Anderson, PE • Diane Durscher, PE • Jess Klinefelter, CEP, CWB • Eric Sender, PE, DBIA
**Indicates Key Personnel*

Design Work Office Location: Hunt Valley, MD

WM's Role: Prime Designer

PROJECT DESCRIPTION

Wallace Montgomery (WM) provided full engineering services to design and construct MDOT SHA's I-95 at Contee Road Interchange

ATTACHMENT 3.4.1(b)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: US 40 over Susquehanna River (Hatem) Bridge Deck Replacement & Rehabilitation Location: Harford and Cecil Counties, MD	Name: Joseph B. Fay Company	Name of Client: Maryland Transportation Authority (MDTA) Phone: 410-537-7824 Project Manager: Nafiz Alqasem, PE Phone: 410-838-7824 Email: nalqasem@mdta.state.md.us	04/2008	06/2011 (Actual – 3 Months Ahead of Schedule)	\$48,632	\$55,256 (Actual – Based on Owner Approved Modifications and Additional Work Added to the Project due to increase in owner available funding)	\$1,100

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. Project/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.



Design Work Office Location: Hunt Valley, MD

WM's Role: Prime Designer

PROJECT DESCRIPTION

Wallace Montgomery (WM) was responsible for the inspection, preliminary and final design, preparation of contract documents, and construction-phase services for the rehabilitation of the Thomas J. Hatem Memorial Bridge on US 40 in Harford and Cecil Counties in Maryland. Each year approximately 11 million vehicles cross the 1.5 mile-long structure that spans the Susquehanna River, Garrett Island, CSXT Railroad, local roads and a park area. The bridge, which was determined eligible for listing in the National Register of Historic Places in 2007, is owned and operated by the MD Transportation Authority. The bridge is located downstream of an existing dam for the Susquehanna River. This project included a complete deck replacement, superstructure modifications and strengthening, and major substructure modifications. Construction for the project was performed by Fay Company.

WM provided the following services on this project: field surveys; wetland delineation; borings and geotechnical analysis for foundation design; material testing and studies of remaining structure life; strain gauge testing; preliminary studies and alternatives evaluations; permits for stream and wetland impacts; structural design; historic structure documentation; maintenance of vehicular and marine traffic; drainage design; erosion and sediment control (ESC) design; utility relocation, and approach roadway re-construction. Specific services include: preparation of plans, specifications, and estimates; coordination with MDTA, Maryland Department of Transportation State Highway Administration District offices, permitting agencies, utilities, emergency responders, and community organizations; public meetings; and construction-phase services, including partnering meetings, working drawing review, constructability reviews, and load ratings. During construction, the owner increased project funding to add numerous structural repairs to the project, changing the scope of the project from deck replacement to complete bridge rehabilitation. **WM** and **Fay** worked together to incorporate the additional work into the project without extending the completion date. The project was still completed 3-months ahead of schedule. Key project features included:

Preliminary Structural Studies/Design: Performed alternatives analysis to determine the most cost-effective deck rehabilitation alternative. Developed life cycle costs; investigated Accelerated Bridge Construction (ABC) techniques; and developed a summary report and matrices to compare alternatives. Work included review of constructability considerations in conjunction with maintenance of traffic (MOT) options to determine the safest, least disruptive and most cost-effective solution.

Permitting and Environmental: Performed environmental and historical investigations and prepared necessary documentation to obtain all approvals for the project. A joint permit was obtained for impacts to wetlands and Waters of the US. Obtained permits for work on Garrett Island.

CHALLENGES AND SOLUTIONS

Testing of Existing Bridge Elements: Developed a comprehensive material testing program for the existing substructure elements. Obtained chloride-ion tests, compressive strength tests, petrographic analysis, and

freeze-thaw resistance. Determined the remaining concrete life. Performed UT Testing of existing pins in the superstructure. Established, monitored, and performed a detailed analysis using strain gauges for the existing Wichert girder frames.

Increasing Structure Capacity: Custom designed a partially filled, steel grid deck, using lightweight concrete and fiber reinforcing. The lower weight deck increased the load carrying capacity of the structure, and significantly reduced the number of members that required strengthening to accommodate legal loads.

Site Access: Developed a geotechnical program for replacement of portions of existing concrete piers under full traffic load, including design of temporary support foundations. Designed deep foundations on innovative helical piers for the temporary structure based on constructability reviews and ABC principles. Allowed the work to be performed on Garrett Island, where there was limited access and staging areas for equipment.

Incorporating Additional Work: During construction, the owner saw value in using the same designer and contractor to complete additional structural repairs as part of the Contract that were not originally scoped. With the infusion of additional construction funds, the project evolved a full bridge rehabilitation. This work included over 1,700 structural defects that were added to the project scope. Additionally, **WM** and **Fay** worked together to design and construct a complex jacking system for replacement of seven existing pedestal piers where concrete deterioration was significant. Innovative helical piers were incorporated as well as the use of rapid setting concrete mixes to maintain the project schedule.

SIMILAR RISKS MITIGATED

Utilities: Researched, coordinated, and obtained all available records, information, plans, etc. to identify existing utilities within the project corridor. Prepared a base map depicting existing utilities. Coordinated with owners during the design and provided a utility support hanger design for electric and communications.

Traffic Management Plan: Coordinated with the owner and local governments (Town of Perryville and City of Havre de Grace) to perform a risk assessment regarding potential disruption to motorists, local residents and businesses, and emergency responders. Coordinated with emergency management personnel to ensure response times were minimized. Mobile Highway Advisory Radio sites were designed to continually transmit construction and bridge information to motorists. Revised the Freeway Incident Traffic Management (FITM) plan in case of a long-term emergency bridge closure. Coordinated and assisted in outreach efforts for the project, including public forums and a project website with progress photos and traffic information.

Construction Coordination: Provided extensive and responsive construction support services including attending partnering and progress meetings; 24 hour emergency response to address unforeseen conditions and design repairs as needed; and shop drawing review and coordination.

Relevance to Richmond Bridge Bundling

- ✓ Accelerated Bridge Construction (ABC) Methods
- ✓ WM/Fay Design Collaboration
- ✓ Complex Bridge Jacking and Temporary Support
- ✓ Pier Reconstruction and Rehabilitation
- ✓ Bridge Rehabilitation and Strengthening
- ✓ Complex Staged MOT Design to Minimize Impacts
- ✓ Coordination with Local Businesses / Emergency Responders / Adjacent Community Leaders
- ✓ Utility Relocation During Construction
- ✓ Controlled Demolition over Highways with Shielding

Proposed Staff Involvement

Dave Borusiewicz, PE, DBIA • Matt Davis, PE • Diane Durscher, PE • Eric Sender, PE, DBIA

**Indicates Key Personnel*

ATTACHMENT 3.4.1(b)
VDOT CONTRACT ID C00111300DB107 – I-95 CITY OF RICHMOND BRIDGE BUNDLING DESIGN-BUILD
LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: Replacement of Bridges on MD 151 at Tradepoint Atlantic Development Location: Baltimore County, MD	Name: The Six M Corporation	Name of Client: Maryland Department of Transportation State Highway Administration Phone: 410-545-8074 Project Manager: Kelly Nash Phone: 410-545-8074 Email: knash@sha.state.md.us	09/2020	12/2023 (Estimated)	\$25,800	\$25,800	\$1,530

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. Project/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.



Design Work Office Location: Hunt Valley, MD
WM's Role: Prime Designer

PROJECT DESCRIPTION

Wallace Montgomery (WM) provided engineering for preliminary studies, preliminary and final design, and construction phase services for the rehabilitation of three bridges as part of a bundled interchange improvement project. The project includes three bridges (Nos 0309900, 0335000, and 0335100) within the interchange to accommodate current and future industrial development in the vicinity of the project. Work consisted of field visits and surveys; geotechnical explorations and soil borings; foundation design; utility investigation designation and relocation; wetland delineation; environmental permitting services to develop both the Joint Permit Application (JPA), Roadside Tree Permit (RTP), and Chesapeake Bay Critical Area Commission (CAC) approval; public outreach assistance; bridge and foundation design; highway design; drainage design; maintenance of traffic (MOT); stormwater management (SWM)/erosion and sediment control (ESC) approval; development of contract documents that include plans, engineer's estimate and specifications for advertisement; assistance during the advertisement/bid phase; and currently includes construction support services. **WM** was responsible for supporting public outreach, developing project renderings, and general coordination. The new bridges included a new two-span (100' – 100') continuous steel girder and concrete deck bridge on MD 151/Sparrows Point Boulevard over MD 151B/Wharf Road and Tradepoint Rail; a new single span, 70-foot long, steel girder and concrete deck bridge on the SW Ramp to MD 151 SB over Wharf Road NB; and a new two span (90' – 120') continuous steel girder and concrete deck bridge on MD 151B over Warehouse Road and Tradepoint Rail. All three bridges replaced multi-span simply supported bridges eliminating roadway joints and reducing future maintenance costs.

Roadway Design: Roadway design included profile adjustments at all three structures to accommodate increased vertical clearance requirements for the railroad and roadways below, as well as full depth reconstruction and shoulder reconstruction along the approach roadways within the limits of the vertical ties. Horizontal alignments were also modified to eliminate spiral and other complex geometry. The roadway typical sections were also modified to accommodate ADA compliant pedestrian sidewalks and bicycle compatible shoulders along the bridges and approach roadways throughout the interchange.

Drainage/SWM/ESC Control Design: The project included design of new storm drains to accommodate the new bridges and roadway construction. Extensive evaluation of stormwater facilities was performed, complicated by the presence of existing toxic soils (slag from prior steel plant). SWM requirements were achieved through four roadside grass swales, pavement removal, and credits. ESC plans were developed, specifying the limits of disturbance and all temporary protective measures for each stage of construction.

MOT: **WM** completed a Maintenance of Traffic Alternatives Analysis during preliminary design, which resulted in the use of staged construction for the two mainline bridges and a full detour for the ramp bridge. Median crossovers were implemented along MD 151/Sparrows Point Blvd in order to maintain one lane of traffic in each direction while the bridge was replaced in stages. Signing and marking plans were also developed for the entire MOT scheme and finished project conditions.

CHALLENGES AND SOLUTIONS

Assessing Existing Conditions: **WM** reviewed previous inspection reports and performed a hands-on inspection of the bridges to confirm the extent of deterioration and estimate limits of required repairs.

A material testing program was performed to obtain concrete cores of the existing substructure elements and to evaluate their suitability for re-use in the completed structure. **WM** performed a baseline analysis on two of the three existing bridges to determine the load carrying capacity of the superstructure and substructure, including unbalanced loads during construction, using the latest AASHTO LRFD Design Specifications and MBE to confirm suitability for various rehabilitation and replacement alternatives.

Rehabilitation vs. Replacement Studies: Preliminary studies were performed by **WM** to evaluate alternatives for repair, rehabilitation, and replacement of the structure and roadway reconstruction. Alternatives included deck replacement, superstructure replacement with major substructure rehabilitation, and total bridge replacement. The superstructure replacement option included innovative alternatives for pier encapsulation, localized replacement and repair, and replacement with elimination of selected piers.

Adaptability to Project Changes: **WM** adapted our design as nearby development plans changed. The project originally started as a superstructure replacement for a single structure and evolved into the full replacement of all three bridges within the interchange. The project was also completed on an accelerated schedule, progressing from preliminary design to advertisement within nine months.

Stakeholder Coordination: Project required extensive design coordination with the developer, Tradepoint Atlantic and the local railroad, Tradepoint Rail, regarding potential conflicts with overlapping construction limits, railroad operations, clearances to temporary support-of-excavation for the foundations, removal of potentially hazardous materials on site, special provisions, and maintenance of traffic.

SIMILAR RISKS MITIGATED

Utilities: **WM** coordinated test pit programs to locate the existing utilities to eliminate any possible conflicts with the proposed construction. **WM** also evaluated protective measures for an existing 36" diameter waterline adjacent to one of the bridge piers to mitigate concerns of damaging the line while both removal and construction activities are being performed.

Traffic Management Plan: The multi-stage MOT scheme developed by **WM** maintains one lane of traffic in each direction to allow for construction of erosion and sediment controls; new storm drain systems; a temporary ramp and realigned approach roadways; and removal of the existing bridge and construction of the new bridge in two stages. The traffic plans also included pavement markings and signing plans for the finished project. Reviews were made by the owner, local developers, and local government agencies. **WM** performed additional traffic analysis during the construction phase of the project to evaluate the use of a full detour along Wharf Road to allow the construction of the bridge to be completed during a single stage, which simplified construction methods, reduced construction duration, and reduced traffic impacts.

Construction Coordination: Under staged construction there was limited space available for the size of the crane anticipated for use on this project. As part of the design, **WM** provided additional grading to accommodate the placement of construction equipment to ensure constructability of the project. During construction, **WM** also modified the MOT scheme with new median crossover limits to accommodate construction of a new 36" diameter waterline being performed concurrently with the bridge construction along MD 151/Sparrows Point Blvd.

Relevance to Richmond Bridge Bundling

- ✓ Bundled Bridge Replacements
- ✓ New Steel Bridge Superstructures
- ✓ Complex Staged Construction / TMP Development
- ✓ Extensive Stakeholder Coordination
- ✓ Major Utility Coordination and Protection
- ✓ Inspection of Existing Structures / Materials Testing
- ✓ Superstructure Replacement Evaluations
- ✓ Vertical Clearance Improvements
- ✓ Constructability Evaluations
- ✓ Public Outreach Support

Proposed Staff Involvement

Justin Myers, PE, DBIA* • Matt Davis, PE • Mark Ledebur, PE •
 Russ Anderson, PE • Diane Durscher, PE • Jess Klinefelter, CEP, CWB
 • Eric Sender, PE, DBIA
 *Indicates Key Personnel