STATEMENT OF QUALIFICATIONS
A DESIGN-BUILD PROJECT

Route 606 Bridge Replacement
Over I-95 With 606 Improvements
Spotsylvania County, Virginia

State Project Nos.:
Route 606 Roadway Improvements (0606-088-653, C501, UPC 105463)
Route 606 Bridge Replacement (0606-088-622, C501, B634), UPC 100829

Federal Project Nos.:
Route 606 Roadway Improvements (STP-5111(272))
Route 606 Bridge Replacement (BR-5111(237))

Contract ID No.: C00105463DB89

Date: February 4, 2016
ATTACHMENT 3.1.2

STATEMENT OF QUALIFICATIONS
CHECKLIST AND CONTENTS
Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<tr>
<td>Statement of Qualifications Checklist and Contents</td>
<td>Attachment 3.1.2</td>
<td>Section 3.1.2</td>
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<td>i-iii</td>
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<td>Acknowledgement of RFQ, Revision and/or Addenda</td>
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<td>Letter of Submittal (on Offeror’s letterhead)</td>
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<td>Authorized Representative’s signature</td>
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### ATTACHMENT 3.1.2

**Project:** 0606-088-653, C501 & 0606-088-622, C501, B634  
**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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<thead>
<tr>
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<td><strong>Experience of Offeror’s Team</strong></td>
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<td>Appx 3.4.1</td>
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<td>Section 3.5.1</td>
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ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00105463DB89
PROJECT NO.: 0606-088-653, C501 & 0606-088-622, C501, B634

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this acknowledgement in the SOQ may result in the rejection of your SOQ.

By signing this Attachment 2.10, the Offeror acknowledges receipt of the RFQ and/or following revisions and/or addenda to the RFQ for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFQ – December 7, 2015 (Date)

2. Cover letter of RFQ Addendum#1 – January 19, 2016 (Date)

3. Cover letter of (Date)

__________________________
SIGNATURE

__________________________
January 03, 2016
DATE

Allan Myers VA, Inc. by Aaron T. Myers

Vice President/General Manager

PRINTED NAME

TITLE
3.2

LETTER OF SUBMITTAL
February 4, 2015

Stephen D. Kindy, P.E.  
Alternative Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

Letter of Submittal/Statement of Qualifications:  
Route 606 Bridge Replacement over I-95 with 606 Improvements  
State Project Nos.: 0606-088-653, C501; 0606-088-622, C501, B634  
Federal Project Nos.: STP-5111(272); BR-5111(237)  
Contract ID Number: C00105463DB89

Dear Mr. Kindy:

Allan Myers (Myers) and Volkert Inc. (Volkert), referred to as the Myers Team, have teamed together to provide the Virginia Department of Transportation (VDOT) with an experienced and integrated team for the Route 606 Bridge Replacement over I-95 with Route 606 Improvements Design-Build Project (Project). Our Team’s recent integrated design-build (DB) experience includes replacement of the Elm Avenue Bridge replacement over I-581 and improvements to the Rolling Road/Franconia-Springfield Parkway Interchange. Myers employs experience bridge builders who have constructed more than $1.2B in bridge construction projects and has modified 22 interchanges over the last 10 years. Volkert provides 25 years of VDOT structural/roadway design and construction inspection services. Further, our Team has designed and implemented complex TMPs for DB projects in congested areas and are experienced with alternative configuration intersections, including roundabouts, through projects such as VDOT’s I-95/Temple Ave Interchange DB project.

SUBMITTAL REQUIREMENTS

The Myers Team presents the following information as required by Section 3.2 of the RFQ:

3.2.1 Allan Myers VA, Inc., 301 Concourse Blvd, Suite 300, Glen Allen, VA 23059
3.2.2 Design Manager, Thomas Heil, P.E. will serve as the Point of Contact for the Myers Team.  
   Thomas Heil, P.E., Design-Build Project Manager  
   301 Concourse Boulevard, Suite 300  
   Glen Allen, VA 23059  
   (571) 485-0387 (Telephone)  
   (610) 222-4348 (Fax)  
   tom.heil@allanmyers.com
3.2.3 Vice President/General Manager, Aaron Myers is the Principal Officer for Allan Myers.  
   Aaron Myers, Vice President/General Manager  
   301 Concourse Boulevard, Suite 300  
   Glen Allen, VA 23059  
   (804) 290-8500 (Telephone)  
   (804) 418-7935 (Fax)  
   aaron.myers@allanmyers.com
3.2.4 Allan Myers VA, Inc., is a registered corporation in the Commonwealth of Virginia and will take full financial responsibility for the Project.
3.2.5 Allan Myers VA, Inc. will be the Lead Contractor and Volkert Inc. will be the Lead Designer.
3.2.6 All affiliated and subsidiary companies are identified on the attachment in Appendix 3.2.6.
3.2.7 Executed Certification Regarding Debarment Forms are included in Appendix 3.2.7.
3.2.8 Allan Myers VA, Inc. is active, in good standing, and prequalified to bid on the Project. Myers’ prequalification number is G303 and evidence of prequalification is included as in Appendix 3.2.8.
3.2.9 Myers ability to obtain a performance and payment bond for the $13.6M estimated contract value of the Project is exhibited by the surety letter in Appendix 3.2.9.
3.2.10 SCC and DPOR information and licenses for each team member are included in Appendix 3.2.10.
3.2.11 Myers is committed to achieving the 15% DBE participation goal for the Project.

Respectfully,

Aaron T. Myers, Vice President/General Manager; Allan Myers VA, Inc.
3.3 TEAM STRUCTURE
3.3.1 KEY PERSONNEL

The Key Personnel committed to the Project by the Myers Team are experienced in their respective roles and were selected for the Project based on their recent VDOT experience on bridge replacement, interchange/ ramp reconstruction, roundabout, and roadway widening design-build (DB) projects. The Key Personnel identified and a highlight of their individual experience are provided in Figure 3.3.1. These individuals will provide an efficient design and timely construction to safely replace the existing structurally deficient Route 606 Bridge over I-95 and improvements on Route 606 including roadway widening and roundabout as well as accommodate numerous other stakeholders including the new Dominion Raceway.

Figure 3.3.1 Key Personnel Relevant Experience Highlights

<table>
<thead>
<tr>
<th>DBPM - Tom Heil, PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBPM on the $12M Walney Rd Bridge Replacement and $9M Rolling Rd/Franconia Pkwy Interchange DB projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QAM - Matt Weaver, PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAM on recent VDOT DB projects including the $9M Rolling Rd/Franconia Pkwy and $13M I-95/Temple Ave Interchanges</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DM - Keith Weakley, PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed the $20M Elm Ave. Bridge over I-581 and the $15M I-495 Shoulder Lane DB projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CM - Benjamin Bushey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recently completed construction of the $20M I-581/Elm Avenue Bridge Replacement DB project</td>
</tr>
</tbody>
</table>

3.3.2 ORGANIZATIONAL STRUCTURE

The organizational structure of the Myers Team, presented graphically on page 4, provides the structure and functionality to support effective communication between VDOT, the DB Team, and the project stakeholders. With Myers and Volkert self-performing the majority of the work for the Project, this organizational structure monitors, controls, and manages the project risks. Our Team will be supported by subconsultants/subcontractors for specific expertise and to achieve the 15% DBE participation goal for the Project. We have establishing working relationships with the firms supporting our Team through previous VDOT projects, including the experience highlighted in Table 3.3.1.

Table 3.3.1 Subconsultants to the Myers Team

<table>
<thead>
<tr>
<th>Firm (* DBE)</th>
<th>Role</th>
<th>Relevant Experience</th>
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<tbody>
<tr>
<td>GAI Consultants (GAI)</td>
<td>Environmental/Permitting/Utility Coordination</td>
<td>Worked with Volkert on several DB projects including VDOT’s I-264 Pavement Rehabilitation</td>
</tr>
<tr>
<td>Athavale Lystad &amp; Associates (ALA)*</td>
<td>Drainage/ Structural Support</td>
<td>Integrated design relationship with Volkert on six recent VDOT bridge replacement projects</td>
</tr>
<tr>
<td>Schnabel</td>
<td>Geotechnical</td>
<td>Supporting Myers on the I-95/Temple Ave DB</td>
</tr>
<tr>
<td>H &amp; B Surveying*</td>
<td>Survey</td>
<td>Supported Myers on two recent DB projects</td>
</tr>
<tr>
<td>DMY Engineering Consultants (DMY)*</td>
<td>Construction QC</td>
<td>Providing QC services for Myers on the I-95/Temple Ave DB project</td>
</tr>
</tbody>
</table>

FUNCTIONAL RELATIONSHIPS AND COMMUNICATION

VDOT – VDOT staff can rely on DBPM, Tom Heil, to control the work on Project and resolve any design, construction, or quality concerns. Open lines of communication between the QAM, Matt Weaver, and VDOT will support monitoring quality assurance oversight. Coordination with the DB Team will include monthly progress meetings, over the shoulder reviews, comment resolution meetings, and weekly updates. Partnering between VDOT, the DB Team, and the major project stakeholders will establish communication protocols with major project stakeholders including Spotsylvania County, EMT responders, adjacent businesses, and Dominion Raceway.

Integrated DB Team
Myers and Volkert have successful experience working together on six VDOT DB projects including the I-581/Elm Avenue and Rolling Road Interchange Improvements projects.
DESIGN BUILD PROJECT MANAGEMENT – DBPM, Tom Heil will be responsible for all aspects of the design and construction of the Project. Reporting directly to Tom are managers for quality assurance, public relations, design and construction management, and schedule. This reporting structure validates Tom’s ability to ensure contractual obligations are met, disputes are avoided and resolved promptly, and effectively coordinate public outreach efforts throughout the Project.

QUALITY ASSURANCE – QAM Matt Weaver will report to DBPM, Tom Heil, with independent oversight by VDOT. Matt will work closely with DM, Keith Weakley, and CM, Ben Bushey, to develop the QA/QC Plan and prepare/maintain the materials notebook. Matt will monitor Myers’ construction QC program to ensure all work, materials, testing, and sampling are performed in accordance with the contract requirements and approved plans and specifications. He will work with VDOT to resolve any quality issues that arise during construction. QA inspectors and the QA lab will report to Matt.

DESIGN – DM, Keith Weakley, will report to DBPM Tom Heil and work closely with CM Ben Bushey to develop a design that is safe, efficient, and consistent with the construction approach. The Design QA/QC Manager will confirm that all documents, plans, and deliverables are completed in accordance with the VDOT-approved QA/QC Plan. Design leads for the various disciplines will all report to the DM. Constructability of the design will be foremost in the development of all designers. Design staff will also work directly with their construction counterparts (e.g., MOT, Utilities Coordination) to implement a seamless transition from design to construction phases.

CONSTRUCTION – CM, Ben Bushey will report to DBPM, Tom Heil, and will communicate directly with DM, Keith Weakley, to ensure design constructability and compliance with the project requirements. Ben will be on-site full-time for the duration of construction and will support public relations by providing reliable information for advanced outreach efforts. Reporting to the CM are the QC manager, bridge and roadway superintendents, safety manager, and task leads for MOT, environmental compliance, and utility coordination. The superintendents will be responsible for all field operations including Myers’ crews and strategic subcontractors. MOT, environmental, and utilities task leads will work with their design counterparts to design and construct a safe, efficient, and quality project.

PUBLIC RELATIONS – Public Relations Manager, Shannon Moody, will work with VDOT Fredericksburg District Communications Team to develop a thorough public outreach and communications plan for the Project which includes key messages, stakeholder identification and outreach plans, and comprehensive communication tools, tactics, and strategies. Outreach strategies are anticipated to include public meetings, email and social media communications, signage and [VDOT] website updates.

TMP/MOT – TMP Manager, Rich Clifton, will oversee the TMP/MOT task force to provide consistency between design and construction, maintain access for businesses along Route 606, coordinate work on and over I-95, sequence ramp construction work to optimize schedule, construct improvements with minimal impacts to the public and local businesses, maintain access for emergency responders, and mitigate cyclist and pedestrian traffic challenges associated with construction. This project location includes popular and frequented gas and food stops for I-95 travelers both northbound and southbound; all efforts will be made through the TMP to maintain access to these. Likewise, accessibility and congestion relief to the recently opened Dominion Raceway event venue will be primary considerations taken into account.
3.4

EXPERIENCE OF TEAM
PROJECT UNDERSTANDING

The Myers Team experience on projects of similar scope and complexity provides an understanding of the challenges presented by each element of the Project:

- Replacement and widening of the Route 606 Bridge over I-95 through phased-construction to provide a four-lane structure with left turn lanes and sidewalk on each side of the bridge;
- Ramp construction and tie-ins to Route 606 and the interstate ramps constructed under traffic; and
- Construction of an innovative intersection roundabout and the relocation of Mallard Road.

RELEVANT FIRM EXPERIENCE

ALLAN MYERS (MYERS) is a vertically integrated, heavy civil contractor that has provided quality construction services for 75 years. With annual revenues in excess of $550M, Myers has been consistently ranked as one of the top three heavy civil contractors in the mid-Atlantic by ENR since 2013. Myers employs 2,000 construction professionals and craft workers throughout the region and has performed more than $2.3B in construction over the last five years. Myers’ experience successfully delivering projects of similar scope and complexity includes design-build (DB) bridge replacement projects over interstates, working along the I-95 corridor, interchange ramp reconstruction, roadway widening, and roundabout construction. Myers’ recent experience with similar scope and complex projects is summarized in Table 3.4.1.

<table>
<thead>
<tr>
<th>Experience</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructed 131 Virginia transportation projects valued at $719M</td>
<td>Committed to assisting VDOT’s goal of growing Virginia’s transportation network</td>
</tr>
<tr>
<td>Entrusted with 16 DB projects in the mid-Atlantic Region, including eight for VDOT</td>
<td>Delivering value, quality, and safety through a proactive DB delivery method</td>
</tr>
<tr>
<td>Managed and built more than $1.2B in bridge construction projects</td>
<td>Experienced bridge builders that understand interstate traffic challenges</td>
</tr>
<tr>
<td>23 Projects along the I-95 corridor in Virginia, Maryland, and Delaware</td>
<td>Substantial experience within the I-95 corridor and interstate construction traffic impacts</td>
</tr>
<tr>
<td>22 Interchange modification projects, six using a DB delivery method</td>
<td>High volume interchange design and construction expertise</td>
</tr>
<tr>
<td>40 roadway widening projects valued at more than $1.5B including six roundabouts</td>
<td>Sensitivity to challenging traffic conditions and complex MOT sequencing</td>
</tr>
</tbody>
</table>

DB bridge replacement projects that Myers delivered on or ahead of schedule include the Route 29 Bridge over Tye River and the Walney Road Bridge. Myers recent interstate bridge replacement experience includes the Contee Road Bridge over I-95 in Prince George’s County, MD and the Elm Avenue Bridge over I-581 in Roanoke, VA. Myers and Volkert are working together to upgrade the loop ramp from Fairfax County Parkway onto Fairfax County Parkway/Franconia-Springfield Parkway by adding a free single right turn lane creating a dual lane loop ramp. In addition, Myers roundabout construction experience includes two roundabouts, each built in six stages to minimize disruptions to traffic, at the Saintsbury Drive/Vienna Metro Station project for WMATA.
In business for 90 years, Volkert is a multidisciplinary transportation engineering and construction management firm. Volkert has more than 800 employees who provide comprehensive transportation engineering services including civil, structural, and traffic engineering; environmental services; and construction management and inspection from 28 offices in 11 states and the District of Columbia. Volkert brings the engineering expertise specifically required to design the replacement bridge over the interstate as well as the ramp and adjacent roadway improvements including a roundabout. Furthermore, Volkert personnel bring inherent familiarity with the DB project process and have worked with Myers on a number of DB projects incorporating constructability reviews and involvement through the construction phase and entire project.

Volkert has participated on teams for 24 DB projects. This includes providing civil, structural, traffic engineering and survey services for DB projects ranging in size up to $210 million. Volkert’s mid-Atlantic region has provided design and quality assurance services for nine design-build projects in Virginia including as lead designer on the I-495 North Shoulder Lane Use ($15M) and I-66 Rehabilitation ($43M), both which included development of Type C TMPs.

Volkert’s recent experience with similar scope and complex projects is summarized in Table 3.4.2.

<table>
<thead>
<tr>
<th>Experience</th>
<th>Benefit</th>
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</thead>
<tbody>
<tr>
<td>25 years of VDOT structural/roadway design and construction inspection services</td>
<td>Experience resolving constructability issues for various project conditions including interstates and congested areas</td>
</tr>
<tr>
<td>Performed on nine VDOT DB projects in design and QAM roles – six with Myers</td>
<td>Understand and practice designer interface throughout construction of DB projects</td>
</tr>
<tr>
<td>Analyzed 623 bridges/overpasses on 6 interstate systems in VA to identify structures for repairs and replacements on bridges ranging in length up to 1,800 feet</td>
<td>Experienced bridge designers that understand interstate traffic challenges</td>
</tr>
<tr>
<td>Designed superstructure replacements and substructure widening of two bridges over a busy interstate – Elm Avenue over I-581 DB</td>
<td>Proficient in large interchange DB design and constructability expertise</td>
</tr>
<tr>
<td>Designed complex TMPs for DB projects in congested areas with 170,000 motorists/day on I-66, I-495, and I-264.</td>
<td>Experienced with TMP design for high volume interstate corridors</td>
</tr>
<tr>
<td>Conducted numerous IJR and IMRs in compliance with VDOT IIM-LD-2007 for alternative interchange configurations (e.g. roundabouts at terminal intersections)</td>
<td>Valuable experience in the conduct of alternatives analysis and subsequent constructability challenges</td>
</tr>
</tbody>
</table>

Volkert’s experience includes successful DB delivery, preliminary and final design, and construction services working along interstate corridors, interchange ramp design and reconstruction, roadway widening and roundabout design. For the Staunton District Bridge Replacement Bundle Design Services, Volkert has provided Stage I, Stage II, and Stage III bridge design services including bridge, bridge lighting, approach roadway, drainage, stormwater management, and TMP (Transportation Management Plan) design; hydraulic
analyses; and geotechnical, survey, and utility location and designation services for the replacement of five deficient steel and concrete bridges ranging in length from 49 feet to 320 feet. The replacement bridges are steel-girder and prestressed-concrete structures with driven steel pile and spread footing foundations. They are located on rural major collector and rural minor arterial roads.

Volkert has experience with the study, design, and construction inspection of roundabouts in Virginia which are similar to the design and construction elements and conditions that exist for the Project. This recent project experience includes design of three roundabouts in the greater Washington Metro Area.

WORK HISTORY FORM SUMMARY

Myers and Volkert have successful experience working together on six public transportation infrastructure DB projects for VDOT. The project experience highlighted in the lead contractor and lead designer work history forms was selected to convey our previous experience working together, experience with DB delivery, and successful delivery of bridge, interchange, and roadway widening projects. The relevance of the work history forms provided in Appendix 3.4 to the Project is highlighted in Table 3.4.3.

Table 3.4.3 – Relevance of Work History for the Lead Contractor/Lead Designer

<table>
<thead>
<tr>
<th>Project Relevance</th>
<th>I-95/Contee Rd Interchange</th>
<th>Walney Rd Bridge Replacement</th>
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3.5

PROJECT RISK
The Myers Team has carefully considered the key work elements for the Project to identify the three most relevant and critical project risks. During this assessment, we considered numerous potential risks to the Project including: geotechnical conditions, utility coordination, bridge rehabilitation and phasing, existing pavement conditions, maintenance of traffic, public safety, stakeholder coordination, permitting, and stormwater management. The Myers Team has considered **constructability, maintenance of traffic, and geotechnical conditions** as three risks which are critical to the success of the Project based on the potential impacts they should not be properly assessed, managed, and mitigated.

**RISK #1 - CONSTRUCTIBILITY**

**RISK DESCRIPTION:** The construction of a multi-phased bridge in close proximity to an existing bridge, in conjunction with a change in vertical grade can pose problems with various aspects of constructability. With no close by alternate routes crossing I-95, the existing structure must remain in service throughout the first phase of construction of the new bridge. The tight spacing of the superstructures (less than 1’ as shown on the RFP plans) during the first phase of construction can also result in interference of construction of the Phase 1 elements. Items such as reinforcing steel laps in the abutments and bridge deck can be problematic. Also, the installation of shoring can be challenging, due to the depth of corrugations in the sheet piling. Furthermore, there is also a potential for further damage to an element that is already structurally deficient. The bridge substructure has a GCR of 4 and the deck is rated a GCR of 5, with some underside deterioration. After construction of the Phase 1 portion of the new bridge, the old bridge will need to be demolished to make way for the remainder of the new structure. With the minimal separation shown in the conceptual plans, demolition is a higher risk and longer duration operation.

The reduction in the number of spans, to accommodate future widening of I-95 has resulted in a deeper superstructure. This increased depth, combined with the cross slope times additional bridge width and the increase in vertical clearance has resulted in proposed elevations at the bridge that are approximately 3.5ft higher than the existing elevations. This grade change creates challenges for maintaining traffic during Phase 1 construction and for tying in the ramps to the Phase 1 construction.

**IMPACTS:** Construction of Phase 1 of the new bridge in close proximity to the existing bridge can create several problems related to geometrics and the structures themselves. These constructability challenges may cause issues during construction that result in potential delays, reduce quality, and present safety hazards.

- **Foundations:** Pile driving operations conducted in the vicinity of the existing structures has the potential to cause issues with the existing piles. The presence of soft clays, coupled with the vibrations produced during pile driving, may induce settlement. The closer proximity of the pile driving can potentially result in loosening spalls and delamination in the underside of the deck, resulting in falling debris which could have a direct impact on safety of the traveling public.

- **Demolition:** Demolition of the existing structure in such proximity to the first stage of construction poses some risk for damage to the newly constructed bridge elements. During stage 2, traffic travelling on the newly constructed bridge will also be in close proximity to these demolition operations. This close proximity to demolition operations increases the risk of debris damage to private vehicles.

- **Ramp Modifications:** The vertical grade changes required to achieve the necessary clearance over the interstate may create challenges for ramps tie-in due to the grade changes and the installation of shoring. This vertical differential can cause difficulties with access from the I-95 ramps. The presence of shoring and placement of fill at this location can add to the already existing sight distance issues.

**MYERS TEAM MITIGATION STRATEGIES:** Mitigating potential constructability issues during the design phase will help the Project proceed smoothly during construction. Involvement of construction staff in plan reviews during the design will incorporate construction means/methods into the plans. Potential solutions our Team will evaluate to reduce the constructability risk associated with the Project include:
• **Separation Between Phases:** Increasing the distance between Phase 1 construction and the existing structure provides more room for construction, shoring, and demolition of the existing structure. This can be accomplished by postponing the installation of the sidewalk until a later phase. There is currently no sidewalk present, so delaying the installation to a later phase will have no direct impact on pedestrian traffic. Although this will require a design exception, this is a common sense engineering approach to solve this issue. The delayed construction of the sidewalk also achieves the desired separation without changing the horizontal alignment, which facilitates the future extension on the western side of the interstate. 

*As shown in Figure 3.5.1, the Myers Team concept increases the separation of Phase 1 construction by more than 7*. This approach provides more clear width for Phase 1 traffic, while also providing far greater separation between the Phase 1 construction phase and the existing structure. This will be sufficient for reinforcing steel laps, eliminating the need for mechanical bar splicers, and providing more working room for the contractor, resulting in increased efficiency. The separation of the two phases also provides more distance over which traffic from the ramps can be transitioned over any vertical differential in the grades between the existing alignment and the new vertical alignments.

*Figure 3.5.1 Potential Phase I Construction Approach*

• **Reduction of Grade Differential:** Using steel girders may economize the structure by reducing beam depths. Optimizing the conceptual design to increase the separation between the new and existing structure in Phase I requires an additional girder line. This additional girder results in less load on each girder line, which allows for shallower girders/ reduced superstructure depth, and improves the vertical differential challenges associated with construction. This ultimate bridge configuration, as depicted in Figure 3.5.2, would be provided in the same horizontal location as the approved VDOT concept, with improved vertical alignment. It is important to note that there is another project currently under design for the widening of Rte. 606 to the west of Interstate (UPC 105464). Our Team’s mitigation strategies will strive to minimize any changes to the proposed alignment on the Project, as this would potentially cause increased right of way impacts, encroachments towards to the VOF easement, and may require redesign on the adjacent project to the west, which could result in additional PE cost and delays.

*Management of Similar Constructability Challenges On the I-581/Elm Ave. Bridge Replacement Project in Roanoke, Myers & Volkert constructed the bridge over I-581 in three phases and received a design exception to delay the installation of sidewalks in a common sense engineering approach.*
**Alternate Foundations:** Because of the vibrations associated with pile driving, alternate foundation types are being investigated. Foundations such as drilled shafts can be installed with little or no vibration, minimizing the potential for the issues and risks outlined above. Selecting an alternate foundation, such as a drilled shaft, will eliminate the need for driven sheeting/shoring, as the drilled shafts are “self-shored”, using temporary casing, which can be removed during the concrete placement. This is both a time and cost savings. Myers recent experience constructing these types of foundations in far more challenging geologic conditions with successful results includes dealing with Karst topography on the I-581/Elm Avenue DB project.

**Innovative Construction Methods:** The use of innovative construction methods, such as a roll in/slide in superstructure, would allow for construction at a greater distance away from the existing structure and placement of the structure in its final location. This would mitigate many constructability issues by further separating construction of the new bridge superstructure from the existing structure.

**ROLE OF VDOT AND OTHER AGENCIES:** In addition to the review and approval of the Sequence of Construction plans (SOC) plans, in conjunction with TMP, we anticipate that VDOT will also be involved as a stakeholder as well. The Myers Team will handle integration of constructability reviews during plan development, as well as the submittal of any design waivers/exceptions necessary for implementation. VDOT will be responsible for final approval of any waivers & exceptions. VDOT will also ultimately be responsible for approval of the final work packages, which will incorporate all of these strategies.

**RISK #2 - MAINTENANCE OF TRAFFIC (MOT)**

**RISK DESCRIPTION:** It is vital that adequate capacity be maintained on both Interstate 95 (I-95) and on Route 606 throughout construction of the Project. I-95 serves both interstate through traffic as well as regional commuter traffic oriented to the Washington DC and Richmond metropolitan areas. The Route 606 (Mudd Tavern Road) interchange is one of only two access points to I-95 in Spotsylvania County. Adjacent interchanges along I-95 are located at Route 1 (Jefferson Davis Highway) to the north and at Route 639 (Ladysmith Road) to the south; each approximately eight miles from the Route 606 interchange. Route 606 is a two-lane undivided roadway that provides direct access from I-95 to the community of Thornburg at Route 1. It also provides east-west travel through central Spotsylvania County into Caroline and Orange Counties. Daily traffic volumes at the I-95/Route 606 interchange suggest a strong commuting.
pattern where the majority of traffic from Route 606 enters I-95 to travel northbound towards Washington, DC and Fredericksburg during the AM peak period and in the reverse direction during the PM peak period. Multiple fuel stations, convenience stores, fast food restaurants, and hotels also make this interchange a popular stop for travelers on I-95 throughout the day. A new race track, Dominion Raceway, is projected to open in the spring and is expected to significantly increase interchange volumes on Friday nights and weekends. A truck repair facility on Mallard Road, combined with the aforementioned services, makes this a popular interchange for commercial drivers resulting in high heavy-vehicle percentages.

There are several elements about this project that present MOT challenges:

- **Congested Conditions:** Traffic on I-95 currently flows at the posted speed limit of 70 mph but traffic volumes in the vicinity of the Route 606 interchange are nearing capacity for maintaining free flow conditions. According to the RFQ package, peak period traffic volumes are expected to grow beyond capacity during the project construction period creating potential for congestion and unstable traffic flow through the work area. Similarly on Route 606, nearly all intersection movements throughout the project area currently operate at Level of Service C or better in the peak periods. Planned development is expected to cause substantial traffic growth in the corridor leading to significant congestion and long queues in the peak periods during the project construction period.

- **Work Areas on I-95:** The project will require construction activities in the median of I-95. The median is only 40’ wide with more than half of this width dedicated to shoulders and guardrail. There is little room for the required work to be performed and insufficient room to safely get around the existing bridge pier from within the median work area. The median work area presents a challenge for safe ingress and egress because it requires access from the left lane of the highway. This safety issue is compounded by the narrow median and the obstruction caused by the existing bridge pier.

- **Roundabout Construction:** Since there are no reasonable alternative routes, construction traffic will be maintained through the proposed roundabout area. The roundabout is offset from the existing alignment so most of it can be constructed while maintaining traffic on the existing roadway. However, in order to complete the roundabout, traffic will need to be routed around the work area but traffic cannot yet be shifted into the final configuration since a segment will still be under construction.

- **Commercial Access:** In addition to the travel-related services on Route 606 primarily west of I-95, the interchange provides access to a large RV sales center and a truck repair facility on Mallard Drive on the east side of I-95. Access to all of these businesses must be maintained throughout construction.

- **Public Safety:** The Route 606 interchange provides access to the VDOT Central Region Traffic Operations Center east of the interchange and emergency vehicle access to I-95 from Spotsylvania County Fire Company 8 located near the Route 1/Route 606 intersection. The interchange provides the only access to I-95 for Fire Company 8. The nearest alternative emergency responders for incidents on I-95 are the Ladysmith Volunteer Fire Company located near the I-95/Route 639 interchange and Spotsylvania Fire Company 4 located near the heavily congested I-95/Route 1 interchange.

**IMPACTS:** The maintenance of traffic risk associated with the Project will impact traffic delays, public safety, and construction operation efficiency.

- **Congested Conditions:** Considering the projected growth in traffic in the project area, there is the potential for severe congestion during construction. The presence of a work area and the associated temporary traffic control devices will reduce roadway capacity. Minimizing work areas to maintain traffic flow limits the available work space, which can compromise worker safety and production.

- **Work Areas on I-95:** The proposed bridge construction will require reducing or closing the shoulders on I-95. Shifting the work area between the I-95 median and the outside shoulders is inefficient and would be confusing to motorists who use the corridor regularly. The narrow median on I-95 limits the size of crane that can be used, does not allow for storing materials and equipment, and complicates
access to the work area. Extending the work zone to increase acceleration and deceleration lanes for work site access increases the likelihood of an incident in the work zone.

- **Roundabout Construction:** Shifting traffic for the second phase of the roundabout construction requires running temporary traffic configuration through the center of the roundabout or around the southern portion. Either can cause confusion for motorists when the traffic gets shifted into the final configuration. The radius of the roundabout may need to be modified or temporary pavement may need to be added to safely accommodate two-way, large vehicle traffic around the roundabout. Utilizing temporary pavement will add cost and time to the project.

- **Commercial Access:** Most of the travel related businesses are west of the project limits and their access will not be directly impacted by the Project; however, the work zone could cause traffic to queue through these driveways hurting their access. Backups on the ramps could also cause travelers on I-95 to continue past this interchange and seek these services down the road. Negatively impacting the corridor businesses in this manner will affect public relations for the Project and may affect how these stakeholders interact with the Department as the proposed adjacent project moves forward.

- **Public Safety:** A small delay to emergency responders can have severe consequences to people in need of those services. The MOT plan will need to include provisions to ensure that emergency vehicles can get to and through the project area without delay.

**MYERS TEAM MITIGATION STRATEGIES:** In our recent experience on similar projects, Myers and Volkert have implemented several approaches that assist in minimizing and mitigating the risks associated with maintenance of traffic. Most important is meeting driver expectations by providing consistent traffic patterns with clear directions for safely traversing the work zone. The Myers Team will develop an effective Transportation Management Plan / Maintenance of Traffic plan that accounts for the travel demand through the project area and considers time of day traffic patterns and safe access for adjacent properties as well as work areas. Consideration will be given to construction phasing to ensure adequate space for traffic and work areas. Minimizing the number of traffic switches will maintain consistency through the work zone, generally improve traffic flow, and reducing the potential for incidents in the work zone. Advance notice of upcoming changes will make motorists more aware of what to expect as they enter the project area.

There are several specific considerations which will support safe and productive construction while minimizing traffic impacts during construction of the Project:

- **Maintaining a full shoulder in each direction on I-95:** Providing shoulders has been shown to increase roadway capacity and will help maintain smooth traffic flow. The shoulder will also provide space for disabled vehicles to get out of the flow of traffic. Maintaining a shoulder throughout construction will be accomplished through a combination of sequencing the work and developing a bridge design that provides for this space.

- **Sequencing the work to minimize traffic/work zone shifts:** Completing the work along the outside shoulders of I-95 for the first phase of the new bridge before starting the work in the median will allow the median work zone to remain in place through demolition of the center pier of the existing bridge and completion of the center pier for the new bridge. The work zone will shift back to the outside of I-95 for completion of the new bridge but no additional shifts should be required on I-95.

- **Maintaining three travel lanes and an outside shoulder in each direction:** Rather than closing the outside shoulders when working along the outside of I-95, it may be better to shift traffic partially onto the inside shoulder so that a full shoulder can be maintained on the outside. The advantages of maintaining a full outside shoulder include safer pull-off areas for disabled vehicles, improved

Clear communication with stakeholders and advance notice of MOT changes were key to Myers’ success replacing the Contee Rd Bridge over I-95, which experiences average traffic volumes over 80,000 vehicles per day.
emergency vehicles access in the event of an incident, greater separation between the work area and the travel lanes, and improved work area access by utilizing the shoulder for acceleration/deceleration.

- **Minimizing the footprint of the median work space:** Portions of the inside shoulders will need to be closed just to fit the crane between the barrier services. Additional space is needed to account for the swing of the crane. Options include full closing of the inside shoulder and/or narrowing travel lanes and/or shifting traffic partially onto the outside shoulder or using part time closures of the full inside shoulder and/or adjacent travel lane during working times. The median work area footprint can be further reduced by using single-face MB-10A barrier service (single face) which is narrower and is anchored to the pavement and eliminates the deflection zone behind the barrier.

- **Restricting material deliveries during high volume periods:** Minimizing traffic disruptions caused by work vehicles entering/exiting the site will reduce congestion created by construction traffic during high volume periods and reduce safety hazards created by construction vehicles.

- **Maximizing separation between the existing roadway and the first phase of construction:** Increasing separation is especially critical at the bridge and at the roundabout and can be achieved through adjustments in the final alignment, temporary provisions to accommodate traffic switches, and consideration of what construction work to include in the first phase. Optimization includes adjusting the vertical profile to closely match the existing grades at key points such as the ramp intersections, the proposed race track driveway, and the existing Mallard Road intersection.

**ROLE OF VDOT AND OTHER AGENCIES:** Public awareness is crucial to a successful MOT plan. We anticipated that VDOT will take an active role in communicating the progress of the Project and issues that affect motorists and stakeholders. The Myers Team will work with VDOT public relations staff to keep stakeholders informed of project activities and to provide advance notice of changes to traffic patterns, including clear and concise instructions for navigating safely through the Project.

**RISK #3 - GEOTECHNICAL CONDITIONS**

**RISK DESCRIPTION:** The Myers Team’s through review of the GDR and preliminary site analysis has identified the presence of the following four geotechnical conditions as a critical project risk:

- **Soft soils and high plasticity Potomac clays with slickensides** - According to the GDR, deep (up to 30 ft.) very soft to soft soils are present at the east and west abutments, Pier 1, and Mallard Road Connector. Also, Potomac Clays were identified as present on site.

- **Potentially corrosive soils** - The GDR indicates that a portion of onsite soils are recognized as acidic (pH<5) and or corrosive according to AWWA C-105 Table A.1 and ACI 318 Table 4.3.1.

- **Existing fill soils** – According to the GDR, up to 17 feet of fill soils are present near the existing Shell service station on the east and near the bridge abutment west of I-95. These soils may be contaminated with free products such as petroleum hydrocarbons. Undocumented fills often have low strength, inconsistent strength, inconsistent density, and/or deleterious matter.

- **Shallow groundwater** – Groundwater levels were generally observed to be at depths ranging from 2.5 to 15 feet below ground surface, corresponding to EL 230 and EL 238, respectively. Higher levels were observed in swales, low-lying areas, and seasonal wetlands. Perched water tables could be common due to low permeability clay layers.
IMPACTS: The impacts of the geotechnical conditions in the project area could include long-term settlement, ground improvement measurements, and poor long-term durability if not properly handled in the design approach and construction operations.

The soft clays may cause long-term settlement, if shallow foundations are considered. Therefore, ground improvement or deep foundation alternatives may need to be evaluated and considered to reduce the settlement to acceptable limits, and future maintenance cost. Ground improvement measures during construction or post-settlement repairs would result in adverse cost and schedule impact to the project. In the case of deep foundations, soft clay deposits around the pile may settle due to additional fill loads or due to their ongoing consolidation, which will move downward along the side of the deep foundation, causing negative skin friction, or downdrag, on the deep foundation. Downdrag may impact the existing foundations if they are utilized as part of foundation support system.

Potomac Clays are sensitive, stiff, fissured, high plasticity clays and VDOT requires that the stability of slopes and embankments in these soils be analyzed using residual strength: the lowest possible shear strength of clay soils. High plasticity soils are not suitable for use as roadway subgrade or backfill behind walls due to their high shrink-swell potential. The typical 2H:1V cut slopes for roadways are not feasible within these materials. Permanent slope reinforcement, over-excavation and fill replacement or subgrade improvement may be required in areas where highly plastic soils are encountered. Permanent slope reinforcement, over-excavation and fill replacement or subgrade improvement measures during construction may result in adverse cost and schedule impact to the project.

The presence of potentially corrosive soils means that the concrete and metal structures will need to be designed to mitigate the attack on concrete structures, reinforcement, and metal structural elements and utilities. Leaching of water due to storm water management features or other means through acidic soil could possibly contaminate the groundwater. Erosion of corrosive soils during the construction may have offsite environmental and economic impacts. Construction and disturbance of corrosive soils during wet season may create water-quality problems in surface waters and drainage ways, degrading aquatic habitats.

If the existing fill soils are considered as undocumented fills, they may need to be removed and replaced with approved structural fill. Shallow groundwater may impact the proposed SWM locations and if encountered during excavation may require dewatering.

MYERS TEAM MITIGATION STRATEGIES: The Myers approach to geotechnical risk management for the Project includes conducting a thorough geotechnical investigation immediately after award of the contract to fill the data gaps in the subsurface information. We will maximize the use of both formal and informal over-the-shoulder geotechnical design reviews to resolve issues and concerns proactively. A geotechnical design package will be expedited for construction to begin excavation and identify/resolve any differing conditions as soon as practical. Specific mitigation strategies our Team may implement for the geotechnical conditions presented by the Project include:

**Figure 3.5.4 Corrosion impact on a concrete structure**

**Geotechnical Expertise**

Schnabel engineering has provided geotechnical services on many other projects in the Potomac Formation and locally in the Washington, DC area over the past 60 years, including slope stability analyses of Potomac Formation soils on nearby projects and has establish design soil parameters for Potomac Clay soils for various projects.
- **Soft Soils including Potomac Clays** – Deep foundations such as drilled shafts or driven piles are anticipated due to thick soft clay deposits or Potomac Clays prohibiting the use of shallow foundations.

- **Foundation Downdrag** – To mitigate the potential effects of foundation downdrag, deep foundations may be designed for higher capacity and the resulting settlement will be accommodated in the deep foundation design. Alternatively, a surcharge preload program with wick drains may be designed and implemented prior to installation of deep foundations to reduce long-term settlement.

- **Slopes and Retaining Walls** – The overburden above the Potomac Clays may be sloped at 2H:1V, or flatter, provided that there are no site constraints. If laying back the slopes is not achievable, then delineation of location and depth of soft Potomac Clays will be identified during the additional subsurface exploration, so that the needs and location of any retaining walls can be identified.

- **Potentially Corrosive Soils** – A specialty corrosion consultant will be utilized by the Myers Team to characterize the corrosiveness of the soils and recommend the appropriate treatment methods. Soil treatment will be provided when the lime demands exceed 4 tons per 1,000 tons of soil, as determined by acid-base accounting for both structural fill and landscaping. In addition, the following treatment methods may be utilized:
  - Development of a soil management program with special handling procedures to observe and document areas where corrosive soils are present.
  - Corrosion-resistant design of subsurface structures in contact with corrosive soils which could include sacrificial anodes, sulfate resistant concrete, and corrosion resistant coating on steel reinforcing bars, and/or addition of sacrificial steel.
  - Additional testing to delineate the acid sulfate soils and confirm that lime-treated soils have been successfully treated.
  - Use of low permeability clay linings to prevent the leaching of groundwater through the acidic soils into surface water bodies.

- **Existing Fill Materials** – The extent of fill material will be delineated and where fill underlies the bridge or roadway, it may be removed and replaced with structural fill or improved. During the design phase, sampling and geotechnical investigation will determine appropriate remediation methods. The use of deep foundation will reduce schedule impacts associated with unsuitable fill materials. Structural backfill material for an MSE structure should have minimum resistivity, chloride concentration and sulfate established for the project.

- **Shallow Groundwaters** – Temporary piezometers will be installed and monitored during the next phase to better estimate the depth to the groundwater table. Earthwork will be conducted during dry times as much as feasible. Diversion of surface water will help avoid delays and additional costs. Relocation of SWM and pre-emptive de-watering measures may mitigate groundwater impacts on the design and during construction.

**ROLE OF VDOT AND OTHER AGENCIES:** Located within the Potomac Formation, cut and fill slopes will be designed using residual strength parameters. Consolidation or repeated Consolidated Drained Direct Shear testing or Ring Shear testing will be conducted by the Myers Team and the results will be submitted to VDOT for review and approval. VDOT’s review and timely agreement will be required for selection of strength parameters to be used in design of slopes. Data will be shared with VDOT’s geotechnical reviewer to develop the most applicable and cost-effective measures to manage geotechnical risks.

VDOT and Stafford County policies will be followed to properly address the soils identified as acidic. To minimize the volume of soils that need to be excavated or treated with lime, VDOT’s reviewers should be involved in the approach to mitigate the potential environmental risks associated with the soils of concern. We will engage VDOT to provide review comments and concurrence in over the shoulder reviews to minimize additional work and adverse impact on the schedule.
APPENDIX 3.2.6
AFFILIATED/SUBSIDIARY COMPANIES
## Affiliated and Subsidiary Companies of the Offeror

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

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

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<td>2011 Bel Air Rd, P.O. Box 278, Fallston, MD 21047</td>
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</table>
APPENDIX 3.2.7

DEBARMENT FORMS
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

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

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

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

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

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

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

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

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

Signature  Aaron T. Myers  Date  02/01/2016

Vice President/General Manager
Title

Allan Myers VA, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form. The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

Signature

Date

President

Title

Athavale, Lystad & Associates, Inc.

Name of Firm
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] 1/29/16 [Vice President]

[Name of Firm]
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

JAMES B. GORDON
Signature 1/27/10
Date

NE REGION TRANSPORTATION MANAGER
Title

GAI CONSULTANTS
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] October 26, 2016 [Date] [Vice President] [Title]

H&B Surveying and Mapping, LLC
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature]
Date: 1/29/16
[Senior Vice President]
Title

[Schnabel Engineering, LLC]
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

Dennis C. Morison 2/4/16
Signature Date

Senior Vice President
Title

Volkert, Inc.

Name of Firm
CERTIFICATE OF QUALIFICATION

ALLAN MYERS VA, INC.

Vendor Number: G303

In accordance with the Regulations of the Virginia Department of Transportation, your firm is hereby notified that the following Rating has been assigned to your firm:

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; ASPHALT CONCRETE PAVING; MINOR STRUCTURES; ROADWAY MILLING; SURFACE TREATMENT

Issue Date: January 31, 2016

This Rating and Classification will Expire: July 31, 2016

Suzanne FR Lucas, State Prequalification Officer

Don E. Silles, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.
APPENDIX 3.2.9

EVIDENCE OF OBTAINING BONDING
February 1, 2016

Commonwealth of Virginia
Virginia Department of Transportation (VDOT)
1401 East Broad Street
Richmond VA 23219

Re: Contract ID Number: C00105463DB89; Route 606 Bridge Replacement Over I-95 with 606 Improvements, Spotsylvania County, VA – A Design Build Project

To whom it may concern:

Please be advised that Allan Myers VA, Inc. is a highly regarded and valued client of Fidelity and Deposit Company of Maryland, Zurich American Insurance Company, and Arch Insurance Company.

As sureties for Allan Myers VA, Inc., with A.M. Best Financial Strength Rating and Financial Size Category as listed below, and authorized to transact business in the Commonwealth of Virginia, Allan Myers VA, Inc. is capable of obtaining a 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction for approximately Thirteen Million Six Hundred Thousand and No/100 ($13,600,000.00) Dollars, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

Please be advised that this authorization is subject to standard underwriting throughout the RFQ process, including a review of the contract terms, bond forms, project financing and any other pertinent underwriting information.

Sincerely,

Fidelity and Deposit Company of Maryland (AM Best Rating A+ (XV))
Zurich American Insurance Company (AM Best Rating A+ (XV))
Arch Insurance Company (AM Best Rating A+ (XV))

Julia R. Burnet
Attorney-in-Fact

cc: Paul McCarthy, Zurich American Insurance Company
    Kevin McDowell, Arch Insurance Company

A member of the Zurich Financial Services Group
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 Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by GERALD F. HALEY, 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 Harry C. ROSENBERG, David C. ROSENBERG, Matthew J. ROSENBERG, Denise M. BRUNO, Julia R. BURNET, Michelle G. HIGGINS, Joyce M. HOUGHTON, Jonathan F. BLACK and Elizabeth P. CERVINI, all of King of Prussia, Pennsylvania, EACH 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 13th day of January, A.D. 2016.

ATTEST:

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

[Seals]

By: [Signature]
Michael McKibben
Secretary

Vice President
GERALD F. HALEY

State of Maryland
County of Baltimore

On this 13th day of January, A.D. 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, GERALD F. HALEY, Vice President, and MICHAEL MCKIBBEN, 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, deposeth 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.

[Seal]

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019

POA-F 156-2186A
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 of 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 hereto subscribed my name and affixed the corporate seals of the said Companies, this 1st day of February, 2018.

[Seals and signatures]

Michael Bond, Vice President
THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE BACKGROUND.

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. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

David A. Johnson, David C. Rosenberg, Denise M. Bruno, Elizabeth P. Cervini, Harry C. Rosenberg, Jonathan F. Black, Joyce M. Houghton, Julia R. Burnet, Matthew J. Rosenberg, Michelle G. Higgins and Sherri L. Faeney of King of Prussia, PA (EACH)

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars ($90,000,000.00).

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 29th day of December, 2015.

Attested and Certified

Patrick K. Nails, Secretary

Arch Insurance Company

David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

Helen Szafran, Notary Public
My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated December 29, 2015 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 1st day of February, 2016.

Patrick K. Nails, Secretary

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

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102
APPENDIX 3.2.10

SCC AND DPOR REGISTRATION DOCUMENTATION
## ATTACHMENT 3.2.10

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

**SCC and DPOR Information**

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

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>DPOR Registered Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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<tr>
<td>Allan Myers VA, Inc.</td>
<td>0133780-1</td>
<td>Corporation</td>
<td>Active</td>
<td>301 Concourse Blvd., Ste 300 Glen Allen, VA 23059</td>
<td>Class A Contractor</td>
<td>2701009872</td>
<td>12-31-2016</td>
</tr>
<tr>
<td>DMY Engineering Consultants, Inc.</td>
<td>0768895-5</td>
<td>Corporation</td>
<td>Active</td>
<td>45662 Terminal Dr., Ste 110 Dulles, VA 20166</td>
<td>Business Entity</td>
<td>0407005631</td>
<td>12-31-2017</td>
</tr>
<tr>
<td>G A I Consultants, Inc.</td>
<td>F039601-2</td>
<td>Corporation</td>
<td>Active</td>
<td>618 E. South St., Ste 700 Orlando, FL 32801</td>
<td>Business Entity</td>
<td>0407004210</td>
<td>12-31-2017</td>
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<tr>
<td>H &amp; B Surveying and Mapping, LLC</td>
<td>S290560-4</td>
<td>Limited Liability Corporation</td>
<td>Active</td>
<td>612 Hull St., Ste 101B Richmond, VA 23224</td>
<td>Business Entity</td>
<td>0407005432</td>
<td>12-31-2017</td>
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</tbody>
</table>
## SCC and DPOR Information

### SCC & DPOR Information for Businesses (RFQ Sections 3.2.10.1 and 3.2.10.2) - Continued

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<tr>
<th>Business Name</th>
<th>SCC Information (3.2.10.1)</th>
<th>DPOR Information (3.2.10.2)</th>
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<td>SCC Number</td>
<td>SCC Type of Corporation</td>
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<tr>
<td>Schnabel Engineering Consultants, Inc.</td>
<td>0712674-1</td>
<td>Corporation</td>
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### DPOR Information for Individuals (RFQ Sections 3.2.10.3 and 3.2.10.4)

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Individual's Name</th>
<th>Office Location Where Professional Services will be Provided (City/State)</th>
<th>Individual's DPOR Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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</thead>
<tbody>
<tr>
<td>Allan Myers VA, Inc. [DBPM]</td>
<td>Thomas M. Heil</td>
<td>Glen Allen, VA</td>
<td>318 E. Mason Ave Alexandria, VA 22301</td>
<td>Professional Engineer</td>
<td>0402044111</td>
<td>01-31-2017</td>
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<tr>
<td>Volkert, Inc. [DM]</td>
<td>Keith Paul Weakley</td>
<td>Springfield, VA</td>
<td>124 Meadow Lane Stanley, VA 22851</td>
<td>Professional Engineer</td>
<td>0402031697</td>
<td>01-31-2018</td>
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<tr>
<td>Volkert, Inc. [QAM]</td>
<td>Matthew John Weaver</td>
<td>Springfield, Va</td>
<td>43285 John Danforth Court Ashburn, VA 20147</td>
<td>Professional Engineer</td>
<td>0402042650</td>
<td>01-31-2017</td>
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</table>
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office with the following details:

**Commonwealth of Virginia**

**State Corporation Commission**

**Corporation Data Inquiry**

**CORP ID:** 0113780-1  **STATUS:** 00 ACTIVE  **STATUS DATE:** 11/19/13

**CORP NAME:** Allan Myers VA, Inc.

**DATE OF CERTIFICATE:** 10/06/1967  **PERIOD OF DURATION:** 00

**STATE OF INCORPORATION:** VA VIRGINIA  ** STOCK INDICATOR:** S STOCK

**MERGER IND:** CONVERSION/DOMESTICATION IND:

**GOOD STANDING IND:** Y  **MONITOR INDICATOR:**

**CHARTER FEE:**  **MON NO:**  **MON STATUS:**  **MONITOR DTE:**

**R/A NAME:** CT CORPORATION SYSTEM

**STREET:** 4701 COX ROAD, SUITE 285  **AR RTN MAIL:**

**CITY:** GLEN ALLEN  **STATE:** VA  **ZIP:** 23060-0000

**R/A STATUS:** 5 B.E. AUTH IN VI EFF. DATE: 10/04/13  **LOC:** 143

**ACCEPTED AR#:** 215 14 8299  **DATE:** 09/28/15  **HENRICO COUNTY**

**CURRENT AR#:** 215 14 8299  **DATE:** 09/28/15  **STATUS:** A  **ASSESSMENT INDICATOR:** 0

**YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES**

| 15 | 670.00 | 0 | 0 | 0 | 0 | 100,000 |

(Screen Id:/Corp_Data_Inquiry)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2016

NUMBER
2701009872

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS* H/H

ALLAN MYERS VA INC
301 CONCOURSE BLVD
SUITE 300
GLEN ALLEN, VA 23059

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office with the Screen ID:/Corp_Data_Inquiry.

---

**CORPORATE DATA INQUIRY**

**CISM0180**  
**CORP DATA INQUIRY**  
**01/28/16**  
**14:48:35**

**CORP ID:** F060584 - 2  
**STATUS:** 00 ACTIVE  
**STATUS DATE:** 03/02/89

**CORP NAME:** ATHAVALE, LYSTAD & ASSOCIATES, INC.

**DATE OF CERTIFICATE:** 03/02/1989  
**PERIOD OF DURATION:**  
**INDUSTRY CODE:** 00

**STATE OF INCORPORATION:** MD MARYLAND  
**STOCK INDICATOR:** S STOCK

**MERGER IND:**  
**CONVERSION/DOMESTICATION IND:**

**GOOD STANDING IND:** Y  
**MONITOR INDICATOR:**

**CHARTER FEE:**  
**MON NO:**  
**MON STATUS:**  
**MONITOR DTE:**

**R/A NAME:** REES BROOME, PC

**STREET:** 1900 GALLOWS RD STE 700  
**AR RTN MAIL:**

**CITY:** TYSONS CORNER  
**STATE : VA ZIP:** 22182-0000

**R/A STATUS:** 5  
**B.E. AUTH IN VI EFF. DATE:** 09/01/12  
**LOC : 129**

**ACCEPTED AR#:** 215 05 1891  
**DATE: 03/12/15**  
**FAIRFAX COUNTY**

**CURRENT AR#:** 215 05 1891  
**DATE: 03/12/15**  
**STATUS: A**  
**ASSESSMENT INDICATOR: 0**

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(Screen Id:/Corp_Data_Inquiry)
COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
0407002804

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

PROFESSIONS: ENG

ATHAVALE, LYSTAD AND ASSOCIATES INC
8180 GREENSBORO DRIVE
#550
MCLEAN, VA 22102

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk’s Office with the following details:

**Corporate Data Inquiry**

**Corp ID:** 0768895 - 5  **STATUS:** 00 ACTIVE  **STATUS DATE:** 10/23/14

**Corp Name:** DMY ENGINEERING CONSULTANTS INC.

**Date of Certificate:** 09/06/2013  **Period of Duration:** 00  **Industry Code:** 00

**State of Incorporation:** VA VIRGINIA  **Stock Indicator:** S STOCK

**Merger Ind:** CONVERSION/DOMESTICATION  **Ind:** Y

**Good Standing Ind:** Y  **Monitor Indicator:**

**Charter Fee:** 50.00  **Mon No:**  **Mon Status:**  **Monitor Dte:**

**R/A Name:** WEIYI MA

**Street:** 45662 TERMINAL DRIVE
**Suite:** 110

**City:** DULLES  **State:** VA  **Zip:** 20166-0000

**R/A Status:** 1 DIRECTOR  **Eff. Date:** 09/06/13  **Loc:** 153

**Accepted AR#:** 215 13 6121  **Date:** 08/31/15  **Louloudoun County**

**Current AR#:** 215 13 6121  **Date:** 08/31/15  **Status:** A  **Assessment Indicator:** 0

**Year Fees:** 15  **Penalty:** 130.00  **Interest Taxes:** 10,000

**Balance Total Shares**
COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

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

PROFESSIONS: ENG

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

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk’s Office.

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**Commonwealth of Virginia**

**State Corporation Commission**

---

**CISM0180**

**CORPORATE DATA INQUIRY**

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**DATE OF CERTIFICATE:** 11/04/1981

**PERIOD OF DURATION:**

**INDUSTRY CODE:** 00

**STATE OF INCORPORATION:** PA PENNSYLVANIA

**STOCK INDICATOR:** S STOCK

**MERGER IND:**

**CONVERSION/DOMESTICATION IND:**

**GOOD STANDING IND:** Y

**MONITOR INDICATOR:**

**CHARTER FEE:**

**MON NO:**

**MON STATUS:**

**MONITOR DTE:**

**R/A NAME:** NATIONAL CORPORATE RESEARCH, LTD.

**STREET:** 250 BROWNS HILL COURT

**CITY:** MIDLOTHIAN

**STATE:** VA

**ZIP:** 23114-0000

**R/A STATUS:** 5  B.E. AUTH IN VI EFF. DATE: 10/19/12 LOC : 120

**ACCEPTED AR#:** 215 54 1544 DATE: 11/13/15 CHESTERFIELD CO

**CURRENT AR#:** 215 54 1544 DATE: 11/13/15 STATUS: A ASSESSMENT INDICATOR: 0

**YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES**

| 15 | 1,270.00 | 200,000 |

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(Screen Id:/Corp_Data_Inquiry)
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Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk’s Office.

CORPORATE DATA INQUIRY

CORP ID: 0712674 - 1 STATUS: 20 MERGED STATUS DATE: 01/01/16
CORP NAME: Schnabel Engineering Consultants, Inc.

DATE OF CERTIFICATE: 08/12/2009 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: N NON-SURVIVOR CONVERSION/DOMESTICATION IND: GOOD STANDING IND: N MERGED MONITOR INDICATOR: 
CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE: R/A NAME: CT CORPORATION SYSTEM

STREET: 4701 COX ROAD, SUITE 285 AR RTN MAIL:
CITY: GLEN ALLEN STATE : VA ZIP: 23060-0000
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 10/04/13 LOC : 143
ACCEPTED AR#: 215 11 4977 DATE: 07/17/15 HENRICO COUNTY
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15 130.00 10,000

(Screen Id:/Corp_Data_Inquiry)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

SCHNABEL ENGINEERING CONSULTANTS, INC
9800 JEB STUART PKWY
STE 100
GLEN ALLEN, VA 23059

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THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

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

THOMAS M HEIL
318 E MASON AVE
ALEXANDRIA, VA 22301

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COMMONWEALTH OF VIRGINIA

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION

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

PROFESSIONAL ENGINEER LICENSE

KEITH PAUL WEAKLEY
124 MEADOW LANE
STANLEY, VA 22851

EXPIRES ON
01-31-2018

NUMBER
0402031697

Status can be verified at http://www.dpor.virginia.gov
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

NUMBER
0402042650

EXPIRES ON
01-31-2017

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

MATTHEW JOHN WEAVER
43285 JOHN DANFORTH COURT
ASHBURN, VA 20147

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
APPENDIX 3.3.1
KEY PERSONNEL RESUMES
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: THOMAS HEIL, P.E., DESIGN-BUILD MANAGER
b. Project Assignment: DESIGN-BUILD PROJECT MANAGER (DBPM)
c. Name of Firm with which you are now associated: ALLAN MYERS (MYERS)
d. Employment History: With this Firm 3 Years With Other Firms 27 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):

   ALLAN MYERS, DESIGN MANAGER; 2013–PRESENT: Tom supports Myers’ Design Build program by leading DB pursuits, managing pre-construction, and overseeing construction to ensure successful completion and close-out of DB projects. He works closely with the designer of record, construction personnel, and estimators to ensure schedule commitment and budget compliance, design consistency with the project’s contractual/technical requirements, and QA/QC management in coordination with the QAM, CM and construction QC manager. Over the past three years, he has served as DBPM, Myers Design Manager, and VDOT liaison on four Myers VDOT DB projects.

   RK&K, DIRECTOR, TRANSPORTATION; 2006 - 2012: Tom managed RK&K’s Fairfax office which served the transportation needs of VDOT, NOVA counties, cities, and other local, state and federal clients. His responsibilities included client coordination, design plan development, resolving design/construction challenges, stakeholder coordination/outreach, and ensuring client quality standards and guidelines were met. He served as Project Manager and primary client liaison for the VDOT L&D and Traffic Engineering and FCDOT Planning and Design On-call contracts.

   RK&K, ENVIRONMENTAL ASSOCIATE; 2002 - 2006: Tom was responsible for company-wide environmental support, serving as the environmental subject matter expert and preparing/supporting NEPA documents (CEs, EAs and EIS’s) and environmental permitting efforts for critical infrastructure projects throughout the mid-Atlantic region.

   POTOMAC CROSSING CONSULTANTS (RK&K/PB/URS JV), ENVIRONMENTAL MANAGER; 1997-2002: Tom was responsible for all natural resource aspects of reconstruction of the main bridge and four interchanges on the Woodrow Wilson Bridge project. He supported FHWA in preparation of draft and final SEIS, CEs, and reevaluations; led efforts for permitting, wetland/stream mitigation, Section 4(f) / 106 treatment; and acquired the Section 404/401/10 permit.

   SUMMARY OF RELEVANT EXPERIENCE

   - 30 years of experience including working with VDOT since 1997
   - Design support / plan revisions during construction
   - Design-build issue resolution / VDOT coordination
   - Key staff on four successfully completed VA DB projects
   - Quality (QA/QC) management
   - Third party coordination

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
   - University of Maryland, College Park / MS / 1996 / Civil Engineering (Water Resources)
   - University of Maine, Orono / BS / 1986 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
   - 1994 / Professional Engineer / 044111; 2015 / DBIA / (Pending)

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

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

   VDOT WALNEY ROAD BRIDGE WIDENING AND WIDENING DB, FAIRFAX CO., VA ($11.3M)

   i. Project Highlights: Widening of 1.4 miles of Walney Road from two to four lanes, providing bicycle and pedestrian facilities, and replacing/widening the functionally obsolete, 85-foot-long Walney Road bridge.

   Role: Design-Build Project Manager and main point of contact with VDOT and focused on contract administration, design and construction issue resolution, quality management, and stakeholder outreach/coordination.

   Impact on the Project: Partnered with VDOT and utility owners to overcome construction challenges and schedule critical utility operations. Tom was responsible for company-wide environmental support, serving as the environmental subject matter expert and preparing/supporting NEPA documents (CEs, EAs and EIS’s) and environmental permitting efforts for critical infrastructure projects throughout the mid-Atlantic region.

   Relevance to the Project
   - DBPM on VDOT DB Project
   - Bridge replacement
   - Roadway widening
   - Intersection construction
   - Bicycle/Pedestrian accommodations
   - Maintenance of traffic
   - Public involvement/relations
   - Geotechnical challenges
relocations related to severe 2015 winter conditions. This required supplying the utility subcontractor with Myers clearing and grubbing, E/SC, and traffic management support to expedite relocations. Additionally, led drainage, roadway, and bridge foundation plan revisions during construction to avoid active utility lines scheduled for future relocation. Provided additional Myers resources to recover schedule and deliver the project on-time and within budget (Final project was green on dashboard).

**VDOT PM:** Arif Rahman, 703-259-1940, MD.Rahman@VDOT.Virginia.gov

2. Allan Myers  

<table>
<thead>
<tr>
<th><strong>VDOT ROLLING ROAD/FRANCONIA SPRINGFIELD PARKWAY INT. IMPROVEMENTS, FAIRFAX CO. VA, ($9.8M)</strong></th>
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| **1. Project Highlights:** Upgrades the loop ramp from Fairfax County Parkway onto Fairfax County Parkway/Franconia-Springfield Parkway by adding a free single right turn lane creating a dual lane loop ramp. Improvements include bridge rehabilitation, retaining wall construction, median improvements, removal of unsuitable soils, and sidewalk/shared use path improvements.  
**Role:** Design-Build Project Manager responsible for overall project design, construction quality management and contract administration for the project.  
**Impact on the Project:** The design required continuous pedestrian access to and across the work zone to ensure continuity of the “Cross County Trail” and other local pedestrian movements within the project limits. Tom worked closely with the Engineer of Record to develop a phased MOT construction approach that preserved the trail system, balanced the interaction between vehicles and pedestrians, and prioritized the through trail movements.  
**VDOT PM:** Arif Rahman, 703-259-1940, MD.Rahman@VDOT.Virginia.gov  
2. Allan Myers  
3. March 2014 – May 2016 (Anticipated) |

<table>
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<tr>
<th><strong>VDOT L95 AT TEMPLE AVE, INTERCHANGE DESIGN-BUILD, COLONIAL HEIGHTS, VA($13.3M)</strong></th>
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| **1. Project Highlights:** Realignment/extension of the existing interchange ramps, roadway widening, bridge demolition, and replacement of the signalized intersection with a three-lane roundabout.  
**Role:** Pre-construction Manager responsible for oversight of all design functions and primary liaison with VDOT, City of Colonial Heights, and stakeholders. He is overseeing all utility relocations and will support the CM during construction by resolving design issues through plan modifications.  
**Impact on the Project:** Working closely with the DM, VDOT, City, and Kroger, he was able to mitigate a significant project risk by developing a design and construction approach that accommodated the construction of a 100,000 SF Kroger Superstore adjacent to and concurrent with the VDOT DB Project. He directed the incorporation of a single face temporary wire wall into the MOT design to expedite construction, reduce congestion, and fast-track completion.  
**VDOT PM:** Harold Dyson, A. Morton Thomas, (804)720-7471, harold.dyson@vdot.virginia.gov  
2. Allan Myers  

<table>
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<th><strong>ROUTE 7 WB TCL DB BRIDGING DOCUMENT: LOUDOUN COUNTY, VIRGINIA ($36.4M)</strong></th>
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| **1. Project Highlights:** 2.57 mile Rte. 7 WB TCL improvements from Market St. to Rte. 9 interchanges, including realignment of the W&OD Trail, interchange bridge reconstruction, frontage roads and Rte. 7 cross-over design, and roundabout analysis and design.  
**Role:** Design Project Manager responsible for design management through FI/RW plans, provided design concepts/coordination with NVRPA for the re-aligned W&OD Trail through the Rte. 9 Interchange, and assisted VDOT with outreach to local HOAs/Loudoun County/Leesburg. Prepared the RFQ Bridging Documents.  
**Impact on the Project:** Prepared the RFQ Bridging Documents in support of VDOT that resulted in an initial 10% project cost savings when the resulting DB project was awarded. His direct management and relationships with VDOT helped to facilitate local/County project support.  
**VDOT PM:** Mark Gibney, Program Manager, 800-367-7623, Mark.Gibney@VDOT.Virginia.gov  
2. RK&K  

* 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. *Tom is committed meeting the Project objectives by overseeing design, construction, quality management, and contract administration for the Project.*
ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

| a. Name & Title: MATTHEW WEAVER, PE, CCM, CONSTRUCTION MANAGER |
| b. Project Assignment: QUALITY ASSURANCE MANAGER |
| c. Name of Firm with which you are now associated: VOLKERT, INC. |
| d. Employment History: With this Firm: 1 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):

**VOLKERT, INC., QUALITY ASSURANCE/CONSTRUCTION MANAGER; 2014–PRESENT:** Responsible for management of construction inspection projects, including the supervision of inspection personnel; and, Quality Assurance (QA) activities including preparatory inspection meetings and resolution of nonconformance issues to assure compliance with VDOT standards and client satisfaction. Matt is a construction engineer and certified construction manager with multiple years of experience specializing in QA. He manages QA inspection and testing services including coordination with testing laboratory, review of testing results, evaluation of material documentation from suppliers to confirm compliance with specifications, application and tracking of DBT numbers, and verification of accurate and complete testing documentation including the materials notebook.

Additional experience and skills include working with the contractor and QC team on resolution of field and plans issues; providing cost-effective resolution of nonconforming materials and construction work; preparing noncompliance reports for items that do not meet specifications; monthly QA summary report development; confirming item payments; reviewing and approving nonconformance recovery plans; monitoring corrective actions and retests; conducting preparatory and hold point inspection meetings prior to specific construction activities; reviewing contractors’ pay applications; and coordinating with owners, PMs, and OIA/OVST inspectors.

**MBP, CONSTRUCTION / PROJECT MANAGER; 2007–2014:** Provided construction management services for transportation improvement projects for VDOT and local county agencies, as well as facility projects for federal agencies up to over $1 billion. He worked collaboratively with VDOT, engineers, and contractors to resolve design, construction, and quality issues. His responsibilities included contractor management; coordination of inspection staff; reviewing designs, submittals schedules, and budgets; and developing and executing work orders.

**CH2M HILL CONSTRUCTION, INC., CONSTRUCTION MANAGER; 2005–2007:** Coordinated and scheduled subcontractors to successfully deliver projects on time and under budget. He developed scopes of work, priced and procured subcontractors and managed payments during the project. He also managed change orders with the client as well as with subcontractors. He created and managed the project baseline schedule.

**SHIRLEY CONTRACTING COMPANY, CONSTRUCTION / PROJECT MANAGER; 1997–2005:** Participated in project estimating, developing scopes of work for subcontractors, and executing subcontracts. He developed baseline schedules and managed SCC crews as well as subcontractors during construction. Matt was responsible for monthly project budget updates and equipment utilizations. He executed the project in accordance with the contract and negotiated change orders with the owner and subcontractors.

### SUMMARY OF RELEVANT EXPERIENCE

| 18 years of construction management experience | QAM for two VDOT DB projects | Efficient project, personnel, and client coordination |
| QA/QC plan development and implementation | Complex-projects experience |

**e. Education:** Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Lafayette College, Easton, PA / B.S. / 1996 / Civil & Environmental Engineering

**f. Active Registration:** Year First Registered/ Discipline/VA Registration #:
2007 / Professional Engineer / Virginia # 0402 042650

**g. Document the extent and depth of your experience and qualifications relevant to the Project.**

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

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

**Rolling Road / Franconia-Springfield Parkway Interchange, Springfield, VA ($10M)**

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<td>VDOT design-build</td>
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<tr>
<td>Bridge construction</td>
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<td>Interchange/ramp reconstruction</td>
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<tr>
<td>Geotechnical challenges</td>
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**Project Highlights:** QAM services and structural design to support the 1.1-mile design-build improvements to the Rolling Road and Springfield-Franconia Parkway interchange. Plans for the bridge rehabilitation, including demolition and adjustment of the bridge median; overlaying the existing bridge deck with latex concrete; and...
repairs to the super-and-sub-structures, including pier protection. The project also included an additional through-lane; a free-flow single right-turn lane creating a dual-lane loop ramp, new shoulders along the loop ramp, off-ramps and median work; traffic signal upgrades; and shared-used path improvements.

**Role:** Matt’s responsibilities as the project’s **Quality Assurance Manager** are described in the introduction above under his current employer section and include all VDOT quality assurance management qualifications.

**Impact on the Project:** Mitigation measures were determined to resolve areas of unsuitable soils during excavation. Potential solutions included geo-grid to reinforce the soil, replacement of soil with on-site suitable soil, and replacement with suitable soil with lime and other amendments. The MOT plan was modified to increase safety and efficiency; replaced barrels with concrete barriers; and eliminated need to put up and take down a safety wedge of dirt and stone to protect motorists from a 12-in. drop off.

**Owner PM:** Arifur Rahman, PE, (703) 259-1940, md.rahman@vdot.virginia.gov

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<tr>
<td>Project Highlights: QA inspections and testing services during the design and construction of interchange improvements that include a roundabout, roadway widening/realignment, establishment of new ramps to I-95 tying into a roundabout, and demolition/removal of the existing Atlantic Coastline Railroad Corridor bridges.</td>
<td></td>
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<tr>
<td>Role: Matt’s responsibilities as the project’s <strong>Quality Assurance Manager</strong> are described in the introduction above under his current employer section and include all VDOT quality assurance management qualifications.</td>
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<td>Impact on the Project: Reviews and approves nonconformance recovery plans, monitors corrective actions and retests, and works with contractor on plan to make sure the problem does not reoccur.</td>
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<tr>
<td>Owner Reference – Construction Manager: Harold Dyson, 804-720-7471, <a href="mailto:dyson@vdot.virginia.gov">dyson@vdot.virginia.gov</a></td>
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<tr>
<td>Owner PM: Volkert, Inc.</td>
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<th>Relevance to the Project</th>
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<td>Project Highlights: These three tasks were part of the Construction Support Services contract for Loudoun County that included roadway realignment and widenings, SWM, extensive ESC and drainage.</td>
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<tr>
<td>Role: As the <strong>Quality Manager,</strong> Matt provided oversight and coordination of the on-site inspection staff. He ensured proper QA oversight, inspection coordination, and that the project was documented in accordance with Loudoun County and VDOT LAP requirements. He maintained the budget and reviewed submittals.</td>
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</tr>
<tr>
<td>Impact on the Project: Worked with the contractor and QC team to anticipate and resolve field issues minimizing schedule and budget impacts and to resolve nonconforming materials and construction work in an efficient and cost-effective manner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner Reference – Construction Manager: Harold Dyson, 804-720-7471, <a href="mailto:dyson@vdot.virginia.gov">dyson@vdot.virginia.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner PM: Volkert, Inc.</td>
<td>December 2014 – present</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Impact on the Project</th>
<th>Relevance to the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAIR LAKES PARKWAY INTERCHANGE, FAIRFAX, VA ($58M)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Highlights: The project involved widening Fairfax County Parkway from four lanes to six lanes with bridges located at the intersections of Fair Lakes Parkway and Monument Drive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role: While serving as the <strong>Quality Engineer,</strong> Matt maintained all project documentation, including civil rights documents, FHWA/ARRA documentation, RFI’s, monthly estimates, and correspondence in accordance with VDOT and FHWA standards. He monitored schedules, attended meetings, and oversaw environmental compliance. He coordinated with the inspection staff to ensure proper coverage and specification compliance in the field.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact on the Project: This project received federal funding under the American Recover and Reinvestment Act of 2009 and included earthwork, E&amp;S controls, bridges, retaining walls, sound walls, storm drainage, utility relocations, signalized intersections, roadway lighting, overhead signage, guardrail, roadway typical section, asphalt paving and pavement marking. Matt successfully executed the project with no final quantity adjustments after the final audit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner PM: Sanjeev Suri, PE, PMP 703-259-2232 <a href="mailto:sanjeev.suri@vdot.virginia.gov">sanjeev.suri@vdot.virginia.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner Reference – Construction Manager: Harold Dyson, 804-720-7471, <a href="mailto:dyson@vdot.virginia.gov">dyson@vdot.virginia.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner PM: MBP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Matt is available and committed to ensuring quality design and construction of the Project.**
KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: KEITH WEAKLEY, PE, DBIA, CHIEF ENGINEER
b. Project Assignment: DESIGN MANAGER
c. Name of Firm with which you are now associated: VOLKERT, INC.
d. Employment History: With this Firm 5 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):

VIRGINIA DEPARTMENT OF TRANSPORTATION, SENIOR STRUCTURAL ENGINEER; 1994–2004:
Managed bridge design, maintenance/repair, and project management for the Staunton District Bridge office. He worked with municipalities and contractors to solve construction problems; and managed and negotiated consultant contracts. He was responsible for QA/QC and constructability of bridge plans.

VIRGINIA DEPARTMENT OF TRANSPORTATION, DISTRICT STRUCTURE & BRIDGE ENGINEER; 2007–2010:
Directed all aspects of the bridge program for VDOT’s Staunton District; supervised a staff of over 60 people; managed a $14 M maintenance budget; and oversaw a $180 million construction program; managed consultant contracts, and served on the Statewide Project Controls Committee and the Jointless Bridge Committee.

VIRGINIA DEPARTMENT OF TRANSPORTATION, ASST. DIST. STRUCTURE & BRIDGE ENGINEER FOR DESIGN; 2004–2007:
Managed bridge design, maintenance/repair, and project management for the Staunton District Bridge office. He worked with municipalities and contractors to solve construction problems; and managed and negotiated consultant contracts. He was responsible for QA/QC and constructability of bridge plans.

VIRGINIA DEPARTMENT OF TRANSPORTATION, SENIOR STRUCTURAL ENGINEER; 1994–2004:
He designed highway and pedestrian bridges, earth retaining and other highway structures in VDOT’s Staunton District. He conducted estimating and construction coordination, and participated in the consultant selection process.

Summary of Relevant Experience

- 22 years’ experience, including 17 years for VDOT
  - Development and monitoring of design QA/QC programs
  - Analyzed/designed 100s of bridges over interstates in VA
  - Managed bridge design, maintenance/repair, and project management for the Staunton District Bridge office.
  - Directed all aspects of the bridge program for VDOT’s Staunton District; supervised a staff of over 60 people; managed a $14 M maintenance budget; and oversaw a $180 million construction program.

- DM on two VDOT DB projects;
  - LSE on two VDOT DB projects
  - In-depth knowledge of common sense engineering - low maintenance structural options

- In-depth knowledge of common sense engineering - low maintenance structural options

Education:
- University of Virginia, Virginia / M.E. / 2006 / Civil Engineering (Structural);
- Virginia Polytechnic and State University, Virginia / B.S. / 1993 / Civil Engineering

Active Registration: Year First Registered/Discipline/VA Registration #:
- 1998 / Professional Engineer / Virginia #0402 031697

Document the extent and depth of your experience and qualifications relevant to the Project.
1. Note your role, responsibility, and specific job duties for each project, not those of the firm.
2. Note whether experience is with current firm or with other firm.
3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.
   (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)

1. Project Highlights: The design-build team provided a design for rehabilitation and widening of two bridges over I-581 and the NS Railroad, as part of this interchange improvements Project.
   Role: As Structural Design Manager, Keith managed the superstructure replacements and substructure widening design elements. He provided technical supervision, prepared design waivers, monitored the design schedule/budget, and conducted constructability reviews. He coordinated with key stakeholders such as NSRR and VDOT officials.
   Impact on the Project: The design for I-581 converted a simple span prestressed-concrete box-beam bridge to a fully jointless continuous steel structure with a new pier in the median to increase vertical clearance and provides a long-term low-maintenance benefit. Due to variable geological conditions encountered during construction, drilled-shaft foundations were redesigned to driven steel H piles for one bridge pier.
   VDOT PM: Robert Phlegar, 504-378-5038, r.phlegar@vdot.virginia.gov

2. Volkert, Inc.


[Letterhead image]
### Project Highlights:
- Structural design services to support 1.1-mile design-build improvements. Developed plans for bridge rehabilitation including demolition and adjustment of bridge median; overlaying existing bridge deck with latex concrete; and repairs to super- and sub-structures including pier protection.

### Role:
As Lead Structural Engineer, Keith led the bridge design effort, coordinated with the prime designer, and led the retaining wall design. He is handling constructability items for the structural work items.

### Impact on the Project:
- Inclusion of a special-design MSE wall improved the roadway design and reduced traffic impacts. The structural design integrated with other project elements including an additional through-lane; a free-flow single right-turn lane creating a dual-lane loop ramp with new shoulders; and off-ramps and median work.

**VDOT PM:** Arifur Rahman, PE, (703) 259-1940, md.rahman@vdot.virginia.gov

2. Volkert, Inc. 3. January 2014 – present

### 1-495 Northern Section Shoulder Lane Use Design-Build, Fairfax County, VA ($15M)

#### 1. Project Highlights:
- A shoulder-lane control system was designed to regulate use of a 1.8-mile segment of NB I-495 shoulder lane during AM/PM peak periods. The project involved development of roadway, drainage, barrier modification, ITS, sign, signal, and pavement marking plans; and the development of a Type C TMP.

#### Role:
As the Design Manager, Keith managed roadway design and conducted quality assurance reviews for the control system design. He confirmed that all technical requirements were met; potential alternatives were explored; and constructible design solutions were developed.

#### Impact on the Project:
- Keith’s team met an accelerated design schedule of two months in order to meet a substantial construction completion date of December 31, 2014.

**VDOT PM:** Paul Nishimoto, (703) 259-2362, paul.nishimoto@vdot.virginia.gov

2. Volkert, Inc. 3. April 2014 – December 2014

### Route 11 Over North River, Rockingham County, VA ($4.4M)

#### 1. Project Highlights:
- Stage I and II design and construction phase services for a 320’ long continuous, steel-girder structure. Stage II involved development of final plans; special provisions; scour analyses; cost estimate; permit sketches; time determination report; and a TMP.

#### Role:
As the Project Manager, Keith managed design and construction phase services and evaluated steel and concrete alternatives, low maintenance options, and span arrangements.

#### Impact on the Project:
- The design provided best-value options with semi-integral abutments (minimizing maintenance) and span arrangements (minimized stream impacts.) Keith determined that two phases of construction provided the most cost-efficient and operationally efficient method for maintaining traffic.

**VDOT PM:** John-Allen Ennis, PE, (540) 332-7891, Johnallen.ennis@vdot.virginia.gov


### Route 58 Courtland Interchange, Southampton, VA ($14.9M)

#### 1. Project Highlights:
- The project involved development of an IJR and design of new interchange on Route 58 which included two new prestressed concrete bulb-t bridges, two roundabouts, ramps, roadway improvements, retaining walls, constructed wetlands, erosion and sediment controls, signs, and pavement markings.

#### Role:
As the Project Manager, Keith managed the IJR and infrastructure design; implemented a QA/QC plan and coordinated all design disciplines: civil, structural, hydraulic, traffic, and geotechnical engineers. Responsibilities included technical supervision; reviewing plans/shop drawings/specifications; monitoring budget and schedule; and overseeing constructability reviews.

#### Impact on the Project:
- This design reduced wetland and right-of-way impacts, eliminated left turns, provided safer access, and calmed traffic. The innovative SWM design included 1.5 acres of surface-flow constructed wetlands. This cost-effective and innovative wetland technology was ideal for the high groundwater elevations in the area, as it is capable of removing more than 9 lbs. of pollutants per year while expanding the natural ecosystem.

**VDOT PM:** Ty Lee, PE, (757) 494-5485, nelson.lee@vdot.virginia.gov

2. Volkert, Inc. 3. April 2012 – February 2014

* 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. Keith is available and committed to the Project and will provide periodic onsite presence as necessary to support construction activities.
## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>BENJAMIN BUSHEY, CONSTRUCTION MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>CONSTRUCTION MANAGER</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>ALLAN MYERS (MYERS)</td>
</tr>
<tr>
<td>d. Employment History: With this Firm</td>
<td>8 Years With Other Firms 9 Years</td>
</tr>
</tbody>
</table>

- Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

**ALLAN MYERS, CONSTRUCTION MANAGER (2013 – PRESENT):** Manages all aspects of his projects including planning and scheduling work activities; coordination with owners & other stakeholders, design consultants, and utility owners; and public outreach for all phases of construction. Oversees construction engineering; submittals; pay estimates; coordination with subcontractors and suppliers; and safety for all phases of construction. He monitors the construction schedule to ensure project milestones are achieved, production goals are met, and additional resources are provided when necessary. He oversees construction QC and ensures material used and work performed meets or exceeds contract requirements and AFC plans and specs. He manages multiple project engineers and superintendents to ensure project delivery meets or exceeds all expectations of quality, safety, schedule, and budget.

**ALLAN MYERS, PROJECT ENGINEER (2007 – 2012):** Responsible for detailed operation planning, material procurement, schedule management, and subcontractor oversight. He managed project cost reporting, quantity and material tracking, and project management documentation. In addition, Ben was responsible for inspection of erosion and sediment control measures, maintenance of traffic operations, and quality control. His experience includes projects ranging from $12M to $173M.

### SUMMARY OF RELEVANT EXPERIENCE

- Eight years construction management experience
- Quality management
- Four VDOT DB projects
- Design coordination
- MOT planning/execution
- Three interstate interchange projects
- Roundabout experience

**e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:**

- Pennsylvania State University, State College, PA/Bachelor of Science/2007/Civil Engineering

**f. Active Registration: Year First Registered/ Discipline/VA Registration #:**

- 2015/Responsible Land Disturber/#RLD02781
- ESCCC certification will be obtained prior to commencement of construction

**g. Document the extent and depth of your experience and qualifications relevant to the Project.**

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

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

**VDOT I-581/ELM AVENUE INTERCHANGE DESIGN-BUILD, ROANOKE, VA ($20.4M)**

<table>
<thead>
<tr>
<th>1. Project Highlights: This project improved traffic flow along I-581 and Elm Avenue by reducing congestion at the interchange. Improvements added a lane to both off-ramps, extended turning lanes, widened/replaced two bridges, and reconstructed all four ramps.</th>
<th><strong>Relevance to the Project</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role: Construction Manager</strong> responsible for schedule management, contract administration, quality control, safety performance, and stakeholder coordination including the City of Roanoke and NSRR.</td>
<td>- VDOT design-build project</td>
</tr>
<tr>
<td><strong>Impact on the Project:</strong> Ben’s leadership has resulted in schedule improvements and productivity gains through adjustment of MOT sequencing and changes/additions to project resource allocations. He worked collaboratively with VDOT and the City to minimize construction impacts for motorists and pedestrians without compromising schedule. He value-engineered a micro-tunneling operation to a tunnel boring alternative.</td>
<td>- Bridge replacement</td>
</tr>
<tr>
<td><strong>VDOT PM:</strong> Robert Phlegar, 504-378-5038, <a href="mailto:r.phlegar@vdot.virginia.gov">r.phlegar@vdot.virginia.gov</a></td>
<td>- Interchange/ramp reconstructions</td>
</tr>
</tbody>
</table>

| 2. Allan Myers | 3. April 2013 – August 2015 (Substantial) and Feb 2016 (Final) |

- Roadway widening
- Intersection modifications
- Bike/pedestrian accommodations
- Maintenance of traffic
- Public involvement/relations
- Geotechnical challenges
VDOT I-95 at Temple Ave, Interchange Design-Build, Colonial Heights, VA ($13.3M)

1. **Project Highlights:** Realignment/extension of the existing interchange ramps, roadway widening, bridge demolition, and replacement of the signalized intersection with a three-lane roundabout.

   **Role:** Assistant Construction Manager responsible for schedule management, scope validation, cost management, safety performance, and coordinating utility relocations and acquiring right of way.

   **Impact on the Project:** Ben worked closely with the design engineer to ensure efficient constructability. He has also played an integral coordinating role with Kroger on scope, schedule, and cost for the addition to ensure efficient constructability.

   **Allan Myers** - Construction Manager

   - **VDOT PM:** Harold Dyson, A. Morton Thomas, (804)720-7471, harold.dyson@vdot.virginia.gov
   - **Date:** September 2014 – December 2017 (Anticipated)

   **Relevance to the Project**
   - VDOT design-build project
   - Interchange reconstruction
   - Roadway widening
   - Intersection construction
   - Roundabout design/construction
   - Maintenance of traffic
   - Public outreach
   - Geotechnical challenges

VDOT Route 1 Bridge Replacement over CSX RR, Chesterfield County, VA ($10.8)

1. **Project Highlights:** The project includes reconstruction and widening of one mile of Route 1. Project includes 16” waterline relocation, 80,000 cu yd of fill placement, drainage enhancements, complete reconstruction of a 180’ bridge over two CSX tracks, demolition of the existing bridge, two large MSE walls, a large concrete retaining wall, and new roadway lighting, signage, and signals. Myers coordinated with the County for the waterline relocation work, which included two jack and bore operations and approximately 1500 feet of 8” waterline. Extensive coordination with CSX includes submission and approval of work plans for all operations in close proximity to the tracks. The scope of work includes signal modifications and new lighting along Route 1. Drainage work includes roadway crossings which were open cut across Route 1 using night-operations.

   **Role:** Construction Manager responsible for all aspects of construction including schedule, management, contract administration, quality control, safety performance, and stakeholder coordination including the County and CSX.

   **Impact on the Project:** Ben’s leadership has built a strong working relationship with CSX representatives and is anticipated to provide completion of the project five months ahead of schedule.

   **Allan Myers** - Construction Manager

   - **VDOT PM:** Eric Thornton, (804)674-2347, Eric.Thornton@VDOT.Virginia.gov
   - **Date:** September 2014 – December 2016 (Anticipated)

   **Relevance to the Project**
   - Bridge replacement
   - Roadway widening
   - Bicycle/pedestrian accommodations
   - Maintenance of traffic

Richmond Airport Connector Road Design-Build, Richmond, VA ($39.4M)

1. **Project Highlights:** Approximately 1.6 miles of new four-lane roadway that provides motorists with direct access to the Richmond International Airport from Route 895. Myers worked together with key stakeholders to provide innovative value engineering solutions including adjusting the roadway alignment to reduce overall excavation, altering the storm water management design for ease of constructability, and shortening the length of the bridges to reduce future maintenance costs.

   **Role:** Construction Engineer responsible for all aspects of bridge and MSE wall construction (valued at approximately $10M) including QA/QC, owner and engineer communications, construction oversight, schedule, and safety. Completed detailed operation planning and managed multiple crews and subcontractors.

   **Impact on the Project:** The bridges were on critical path for the project schedule. Ben’s detailed operation planning and innovative construction solutions supported delivery of the Project two months ahead of schedule. He oversaw settlement monitoring and developed an innovative construction approach to constructing a rectangular shaped MSE wall which stockpiled backfill materials within the wall, reduced settlement durations, and removed equipment from the top of the wall with cranes once construction was complete.

   **Richard Prezioso,** Transurban, 804-822-3460, rprezioso@transurban.com

   - **Date:** February 2009 – September 2010

   **Relevance to the Project**
   - VDOT design-build project
   - Bridge construction
   - Interchange/ramp construction
   - Maintenance of traffic
   - Public outreach
   - Geotechnical challenges

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

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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. Mr. Bushey will be on-site full time for the duration of construction to support the successful delivery of the Project. His current assignments are as follows:

- **Route 1 Bridge Replacement, Construction Manager, December 2016**
- **I-95/Colonial Parkway Interchange Improvements, Assistant CM, November 2016**
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement. (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-95 at Contee Road (Konterra Drive) Interchange Design-Build</td>
<td>Name: Wallace Montgomery &amp; Associates</td>
<td>Name of Client: Owner: MD State Highway Administration</td>
<td>10/2014</td>
<td>11/2014</td>
<td>Owner directed changes to scope led to an approved schedule extension</td>
<td>$30,777</td>
</tr>
<tr>
<td>Location: Prince George’s County, MD</td>
<td>Phone: 301-513-7300</td>
<td>Phone: 301-513-7372</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:Koberheim@sha.state.md.us">Koberheim@sha.state.md.us</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VERIFIABLE EVIDENCE OF GOOD PERFORMANCE**

- Myers applied innovative and cost-effective solutions that resulted in more than $2 million in cost savings. These solutions included shortening the bridge, refining roadway geometrics and SWM features to reduce earthwork, minimizing utility impacts, and reducing impacts to environmental features.
- Completion of the new bridge and demolition of existing bridge over I-95 allowed for the completion of the ICC’s collector-distributor roadways with I-95 which was vital to the success of Project. Myers’ coordination of an expedited design resulted in completion of the new bridge four weeks ahead of the required interim milestone.
- The Team’s proactive approach to safety resulted in zero traffic incidents during construction. An additional Interim MOT Phase properly maintained traffic for a water main bettement that conflicted with the proposed road alignment. Myers used detailed TMPs, limited construction access points, and limited work to specific areas at a time in order to minimize safety risks to the traveling public.
- Project partnering included MSHA representatives, utility owners, subcontractors, and the Design-Builder.

This project consisted of the design and construction of an urban arterial roadway, Contee Road (now known as Konterra Drive), and its grade separated connection with I-95 using a partial cloverleaf interchange. Contee Road was constructed parallel to the north of the existing Van Dusen Road and replaced the crossing over I-95. The interchange connects within the I-95 collector-distributor roadway system between MD 198 and the Intercounty Connector (ICC) - MD 200. The project limits along Contee Road are from east of the Van Dusen Road intersection to approximately 0.5 mile west of Sweitzer Lane for a distance of approximately 1.5 miles. The work included constructing a four-span bridge over I-95, two interchange directional ramps and two cloverleaf ramps, and the relocated at-grade connections of Sweitzer Lane and Van Dusen Road. The 520’ long bridge included three piers with aesthetic archway features, architectural finishes, and structural steel girders. The design approach included accelerating design and construction of the new bridge, effective maintenance of traffic, optimization of earthwork, reduction of potential impacts to utilities, consideration of ultimate intersection operations, and coordination with adjacent projects. The construction approach divided the project into distinct work areas based on site constraints to progress design and construction in a rolling fashion with minimal impact to the traveling public.

Allan Myers VA, Inc.’s affiliated company Allan Myers MD, Inc. was the Lead Contractor for this project. While Myers contracts under different entities in different states for accounting purposes, all entities share the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of this work can be considered accordingly. *For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.*

**Lessons Learned for the Project**

- The Team delivered design and construction of the interchange with the innovations proposed by the Design-Build Team, therefore achieving its profitability, while maintaining mobility and access to adjacent projects and existing properties within the region. This resulted in a project that was welcomed by stakeholders." – Kevin Oberheim, District 3 Area Engineer
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Walney Road Bridge Replacement Design-Build</td>
<td>Name: Whitman, Requardt &amp; Associates</td>
<td>Name of Client: Owner: Virginia Department of Transportation Phone: 800-376-7623 Project Manager: Ari Rafman Phone: 703-259-1940 Email: <a href="mailto:MD.rahman@VDOT.Virginia.gov">MD.rahman@VDOT.Virginia.gov</a></td>
<td>12/2015</td>
<td>12/2015</td>
<td>$11,222</td>
<td>$12,148</td>
</tr>
</tbody>
</table>

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

EVIDENCE OF GOOD PERFORMANCE

- Myers maintained an all green VDOT dashboard throughout the project. The project finished on time and within budget.
- Myers successfully implemented a roadway closure and detour with only one traffic incident and minimal comments from the traveling public (less than 10).
- Myers performed the final bridge safety inspection and opened the Walney Road bridge to traffic prior to the contract required date of September 1st, 2015.
- Project was completed with zero recordable safety incidents.
- Myers received a positive endorsement from VDOT for a Heavy Construction Contractors Assoc. (HCCA) excellence award for the project.

This project consisted of the design and construction of the replacement of an existing two-lane bridge on Walney Road over Flatlick Branch with a four-lane bridge. The scope included widening 1.4 miles of Walney Road to a four-lane section with a variable median; addition of an on-road, 5’ wide bicycle lane on both sides of Walney Road; a 12’ wide shared use path, and a 6’ wide sidewalk. The new bridge is a single span prestressed box beam bridge (85’ long by 76’ wide) with architectural treated walls and predrilled pile bearing abutments. The project utilized a four-month complete closure and detour for bridge demolition and replacement through a highly commercial area with significant daily commuter traffic of 21,000 vehicles per day. The design approach included the full replacement of the two-lane Walney Road Bridge, built in 1980 and functionally obsolete, with a new four-lane bridge. The most efficient way to demolish the existing facility and construct the new, wider structure was to install a complete closure and detour. Due to the temporary closure requirements in the contract, the Myers construction approach focused on concurrent utility relocations with roadway and bridge construction. Bridge construction could not begin until the six utilities that crossed Flatlick Branch at the existing bridge were relocated. This effort required constant coordination with public and private utility providers and VDOT to maintain the schedule critical relocation effort by achieving right-of-way clearance, phased utility relocation, systematic bridge demolition, and roadway work including clearing and grubbing, E&S, drainage and roadway work.

LESSONS LEARNED FOR THE PROJECT

- Maintenance of Traffic – In order ensure public safety during the temporary Walney Road closure, the MOT/TMP design was expedited, Myers provided constructability reviews, and VDOT criticality reviewed and approved each MOT phase. During the closure, no construction or traveling public safety issues were reported.
- Public Outreach – The Myers Team implemented a public outreach campaign that included seven message boards, media coordination, web updates, and direct communications with key stakeholders such as property owners and local elected officials. This proactive campaign kept stakeholders informed and resulted in minimal comments from the traveling public.
- Geotechnical Challenges – Myers worked with the geotechnical engineer to significantly reduce undercut areas through the use of geosynthetic fabrics and identification of suitable fill sources. This proactive approach to dealing with unsuitable soils allowed the earthwork operations to proceed ahead of schedule and eliminated the risk of delaying the roadway opening.

“Since Project completion, traffic congestion and traffic flow to and along the Route 28 corridor (one of the more congested corridors within VDOT’s Northern Virginia District) has improved. The success of this Project lies squarely with the dedication, professionalism, and commitment of the entire Allan Myers Team.” – Ari Rafman, VDOT

Reference to the Project
- VDOT design-build project
- Bridge replacement
- Roadway widening
- Bike/pedestrian accommodations
- Maintenance of traffic
- Public outreach
- Geotechnical challenges
- ROW acquisition
- Utility relocations

Team member involvement
- Allan Myers
- Volkert
- H&R
- Tom Heil, PE*
- Matt Weaver, PE*
- Sandra Genter
- Thomas Lewis
- Key Staff proposed for Route 606

Placing of box beams for bridge replacement

Road widening and bicycle lane
# LESSONS LEARNED FOR THE PROJECT

This project reduced traffic congestion, increased bridge clearances over I-581 and NSRR, restored and widened two bridges, and modernized downtown Roanoke. The overall project design.

## VERIFIABLE EVIDENCE OF GOOD PERFORMANCE

- Construction reached substantial completion on schedule and will be delivered within budget.
- There have been zero incidents or injuries for more than 772 days and 65,250 construction man-hours.
- Myers provided a $100K cost savings to VDOT for value-engineering which changed the proposed micro-tunneling under I-581 to a tunnel boring operation.

## LESSONS LEARNED FROM THE PROJECT

- Stakeholder Coordination – Communication early and often with the City of Roanoke minimized construction impacts for local events and provided construction progress updates during critical operations including a local demolition. Coordination with FHWA included plan reviews and change orders approvals.
- Maintenance of Traffic – Myers, VDOT, and the City worked collaboratively to maintain traffic flow throughout construction. To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Pavement markings were proactively refreshed to provide clear direction for traffic flow.
- Utility Coordination – Coordination was required with several utilities, including the Western Virginia Water Authority (public water and sanitary sewer), Roanoke Gas, and Appalachian Power Company. Installation of new lighting and signals was complicated since the location of the existing utility lines was not documented correctly. The Myers Team coordinated with the City to maintain existing signals and lighting for pedestrians while installing the new utility lines. Coordination efforts included Myers, VDOT, the City, and Myers’ electrical subcontractor performing the work.
- Constrained Site Access – Staging areas for structures work on Elm Avenue were very limited due to adjacent intersections and limited space between the two bridges. Myers utilized a project yard for construction materials and equipment and used night-time lane closures to stage materials and equipment in the work area.

---

**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement. (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-581/Elm Avenue Interchange Improvements</td>
<td>Rinker Design Associates</td>
<td>Virginia Department of Transportation Phone: 540-378-5038 Project Manager: Robert Phlegar Phone: 540-378-5038 Email: <a href="mailto:r.phlegar@vdot.virginia.gov">r.phlegar@vdot.virginia.gov</a></td>
<td>06/2015</td>
<td>08/2015*</td>
<td>$20,369</td>
<td>$20,772</td>
</tr>
</tbody>
</table>

---

**Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement.**

- **Utility Coordination:**
  - Modifications to three signals on Elm Ave were coordinated with the City for locations and permits.
  - UFI meetings, development of easement requirements, and monitoring the utility relocations including Norfolk Southern’s signal line.
  - New inch pipe crossing under I-581 with an 84-inch pipe.

- **Public outreach:**
  - Stakeholder Coordination
  - Public outreach

- **Geotechnical challenges:**
  - Stakeholder Coordination
  - Geotechnical challenges

- **Intersection modifications:**
  - Stakeholder Coordination
  - Intersection modifications

- **Bike/pedestrian accommodations:**
  - Stakeholder Coordination
  - Bike/pedestrian accommodations

- **VDOT design-build project:**
  - Stakeholder Coordination
  - VDOT design-build project

- **Interchange/ramp reconstruction:**
  - Stakeholder Coordination
  - Interchange/ramp reconstruction

- **Roadway widening:**
  - Stakeholder Coordination
  - Roadway widening

- **Maintenance of traffic:**
  - Stakeholder Coordination
  - Maintenance of traffic

- **VCC (Value-Engineering Change) Work:**
  - Myers provided a $100K cost savings to VDOT for value-engineering which changed the proposed micro-tunneling under I-581 to a tunnel boring operation.

- **Construction:**
  - Construction reached substantial completion on schedule and will be delivered within budget.
  - There have been zero incidents or injuries for more than 772 days and 65,250 construction man-hours.

- **Maintenance of Traffic:**
  - Myers, VDOT, and the City worked collaboratively to maintain traffic flow throughout construction. To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Pavement markings were proactively refreshed to provide clear direction for traffic flow.

- **Utility Coordination:**
  - Coordination was required with several utilities, including the Western Virginia Water Authority (public water and sanitary sewer), Roanoke Gas, and Appalachian Power Company. Installation of new lighting and signals was complicated since the location of the existing utility lines was not documented correctly. The Myers Team coordinated with the City to maintain existing signals and lighting for pedestrians while installing the new utility lines. Coordination efforts included Myers, VDOT, the City, and Myers’ electrical subcontractor performing the work.

- **Constrained Site Access:**
  - Staging areas for structures work on Elm Avenue were very limited due to adjacent intersections and limited space between the two bridges. Myers utilized a project yard for construction materials and equipment and used night-time lane closures to stage materials and equipment in the work area.

---

**Myers provided a $100K cost savings to VDOT for value-engineering which changed the proposed micro-tunneling under I-581 to a tunnel boring operation.**

---

*“The Myers approach to project management has served the Department well. [Myers] is committed to project safety… Project scheduling is done on site and involves input from superintendents which improves the efficiency of planning construction in an urban setting where many smaller but detailed work activities have to be performed in a particular sequence using multiple stages. “* - Robert Phlegar, VDOT DB Project Manager, January 2015
Volkert performed all structural engineering design as a subconsultant on this project with personnel from their Springfield, VA office.

Two lanes of traffic were maintained in each direction by employing three stages of construction for both bridges. The development of the sequence of construction of both bridges to eliminate joints at the abutments. The widening of the piers are supported by drilled shaft foundations and widening of abutments are supported by driven steel H piles. Buried approach slabs were employed to reduce maintenance and minimize disruptions to traffic.

A jointless bridge was produced by replacing simple-span, concrete, box beams with three-span, continuous, steel girders. Deck extensions were used on both bridges to eliminate joints at the abutments, reducing maintenance needs.

Phased Construction – The design approach centered on developing a sequence of construction that would work for both bridges. The RFP requirements established a very tight footprint in which traffic could be maintained and the structures could be widened and/or reconstructed. The DB Team developed an economical and systematic approach that allowed the Project to be built efficiently with the least amount of disruption to the public.

Stakeholder Coordination – Communication early and often with the City of Roanoke minimized construction impacts for local events and provided construction progress updates during critical operations including a local detour. Coordination with FHWA included plan reviews and change orders approvals.

Maintenance of Traffic – The DB Team, VDOT, and the City worked collaboratively to maintain traffic flow throughout construction. To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Pavement markings were proactively refreshed to provide clear direction for traffic flow.

LESSONS LEARNED FOR THE PROJECT

- Unsuitable Soils – On this project, borings needed to be taken very extensively to accurately deal with the respective soil conditions. Bridge foundations were initially designed as drilled shafts adjacent to existing footings. Field probes identified massive rock with elevations as deep as 100’. The design was modified based on field conditions and utilized H-piles in lieu of drilled shafts. Albeit in constrained site conditions; driven piles were the most appropriate solution based on both the soil conditions and required space restrictions.
- Phased Construction – The design approach centered on developing a sequence of construction that would work for both bridges. The RFP requirements established a very tight footprint in which traffic could be maintained and the structures could be widened and/or reconstructed. The DB Team developed an economical and systematic approach that allowed the Project to be built efficiently with the least amount of disruption to the public.
- Stakeholder Coordination – Communication early and often with the City of Roanoke minimized construction impacts for local events and provided construction progress updates during critical operations including a local detour. Coordination with FHWA included plan reviews and change orders approvals.
- Maintenance of Traffic – The DB Team, VDOT, and the City worked collaboratively to maintain traffic flow throughout construction. To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Pavement markings were proactively refreshed to provide clear direction for traffic flow.

VERIFIABLE EVIDENCE OF GOOD PERFORMANCE

- Volkert met an extremely compressed time schedule for the original design of both bridges and delivered the project foundation re-designs within an extremely quick turnaround time.
- The use of deck extensions on both bridges eliminated joints at the abutments, reducing maintenance needs.
- Volkert performed all structural engineering design as a subconsultant on this project with personnel from their Springfield, VA office.

Project Description

This project was designed to improve traffic flow along I-581 and Elm Avenue by reducing congestion at the interchange. Located in the heart of Roanoke, I-581 is Virginia’s most heavily travelled roads west of Richmond, and these mobility and accessibility improvements benefit the entire region. Improvements included adding one lane to both off ramps from I-581, extending the left turn lane in each direction on Elm Avenue, and widening two bridges on Elm Avenue. The design converted a four-lane urban highway structure to a six-lane bridge including sidewalks and lighting. Volkert designed superstructure replacements and substructure widening of two bridges over a busy urban interstate and the Norfolk Southern Railroad tracks to add a new turn lane and correct the substandard vertical clearance. A new pier in the median was added to the existing layout to convert three spans of simple steel girders to a four-span, continuous and jointless steel-girder bridge in order to meet current vertical clearance criteria. The design also converted a four-lane urban highway structure to a seven-lane bridge over the Norfolk Southern Railroad tracks including sidewalks and lighting.

A jointless bridge was produced by replacing simple-span, concrete, box beams with three-span, continuous, steel girders. Deck extensions were used on both bridges to eliminate joints at the abutments. The widening of the piers are supported by drilled shaft foundations and widening of abutments are supported by driven steel H piles. Buried approach slabs were employed to reduce maintenance and minimize disruptions to traffic.

Two lanes of traffic were maintained in each direction by employing three stages of construction for both bridges. The development of the sequence of construction plan and transportation management plan took the high-volume, high-speed traffic on the interstate below as well as time and closure restrictions into account.

Volkert performed all structural engineering design as a subconsultant on this project with personnel from their Springfield, VA office.
**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/ general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Start Date</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</th>
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<tbody>
<tr>
<td>Fairfax County, VA</td>
<td>Name: Allan Myers</td>
<td>Name: VDOT</td>
<td>05/2016</td>
<td>05/2016 Anticipated</td>
<td>$9,800</td>
<td>$133 Design Fee $400 (QAM)</td>
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<td></td>
<td>Location: Rolling Road / Franconia- Springfield Parkway Interchange Design Build</td>
<td>Phone: (703) 259-1940</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Project Manager: Arifur Rahman, PE</td>
<td>Phone: (703) 259-1940</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:arifur.rahman@vdot.virginia.gov">arifur.rahman@vdot.virginia.gov</a></td>
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</table>

**LESSONS LEARNED FOR THE PROJECT**

- Developing a partnering protocol facilitated early approval of submissions, as it did with the joint material bag mix.
- Critical to the success of the pre-construction prep meetings is having the proper personnel from the contractor participating as they will have the proper understanding of the features of the work entailed and how the specs will be applied.
- Coordinated with adjacent projects early on with regard to lane closures.
- In the median area, the approved solution used to mitigate unsuitable soils was to reinforce the on-site backfill with a geogrid material. This reduced the depth of the undercut and was the most practical solution since the area in question was too small for in-place soil amendments.

**VERIFIABLE EVIDENCE OF GOOD PERFORMANCE**

- Cohesive and collaborative team used strategic risk avoidance measures during the design process, resulting in a project that is on schedule, within budget, and with no major issues
- Identified and resolved issue with the sequence of joint reconstruction without affecting schedule or budget

**PROJECT DESCRIPTION**

Volkert provided structural design and continued quality assurance (QA) management services to support the design-build project delivery of improvements to the interchange at Rolling Road and the Springfield-Franconia Parkway. Volkert developed plans for the rehabilitation of the 241-foot long, 3-span, steel girder, concrete slab bridge, including the demolition and adjustment of the bridge median, overlaying the existing bridge deck with latex concrete, and repairs to the superstructure and substructure, which included pier protection. The project length of 1.1 miles also involved the design of retaining walls; an additional through-lane; a free-flow single right-turn lane creating a dual-lane loop ramp; new shoulders along the loop ramp; off-ramps and median work; traffic signal upgrades; and shared-use path improvements.

Volkert developed the QA/QC plan, testing matrix, and inspection checklists. During construction, Volkert’s QA manager and inspector conduct QA inspection and materials testing including:

- Preparation of the QA testing plan, review and approval of the QC testing plan, coordination with testing laboratory, review of testing results, and evaluation of material documentation from suppliers to confirm compliance with specifications
- Confirmation of accurate maintenance of testing documentation
- Verification of correct and effective implementation of the TMP to maintain traffic on a congested, limited-access roadway
- Maintenance of project records and documentation including the materials notebook
- Independent preparatory, intermediate, and final inspections
- Coordination with OIA/OVST inspectors

Volkert’s QA manager works with the contractor and quality control team to anticipate and resolve field issues before schedule and budget are affected. For example, Volkert’s QA manager reviewed the contractor’s sequence of construction plans and found that it was out of sequence for the proper joint reconstruction. This issue was identified and quickly resolved without causing delays. In addition, Volkert determined mitigation measures to resolve areas of unsuitable soils during excavation including using geo-grid to reinforce the soil, replacement of soil with on-site suitable soil, and replacement with suitable soil with lime and other amendments. In the median area, the approved solution used to mitigate unsuitable soils was to reinforce the on-site backfill with a geogrid material. This reduced the depth of the undercut and was the most practical solution since the area in question was too small for in-place soil amendments. Volkert assisted with the modified temporary traffic control plans to increase safety and efficiency. Replacing barrels with concrete barriers protects motorists from a 12-inch drop off, and eliminated the need to put up and take down a safety wedge of dirt and stone.

**Maintainability**

- Volkert’s QA manager works with the contractor and quality control team to anticipate and resolve field issues before schedule and budget are affected. For example, Volkert’s QA manager reviewed the contractor’s sequence of construction plans and found that it was out of sequence for the proper joint reconstruction. This issue was identified and quickly resolved without causing delays. In addition, Volkert determined mitigation measures to resolve areas of unsuitable soils during excavation including using geo-grid to reinforce the soil, replacement of soil with on-site suitable soil, and replacement with suitable soil with lime and other amendments. In the median area, the approved solution used to mitigate unsuitable soils was to reinforce the on-site backfill with a geogrid material. This reduced the depth of the undercut and was the most practical solution since the area in question was too small for in-place soil amendments.

**Relevance to the Project**

- VDOT design-build project
- Bridge over congested limited-access facility
- Ramp modifications
- Signal upgrades
- Bicycle/pedestrian accommodations
- Staged construction
- Maintenance of traffic
- Public outreach
- Structural design
- Quality assurance
- Resolution of field issues

**Team Member Involvement**

- Volkert
- Allan Myers
- DMT
- H&B
- Keith Weakley, PE, DBIA *
- Matt Weaver, PE, CCMP*
- Tom Heil, PE*
- Sandra Genter
- Thomas Lewis
- Jeff Miller
- * Key Staff proposed for Route 606

**Maintenance of traffic for 47,000 motorists per day and pedestrians, including access to the Cross County Trail, was an important aspect of the project. Volkert recommended modifications to the TMP to increase safety and efficiency.**
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)

<table>
<thead>
<tr>
<th>Name: Route 11 Bridge Replacement (North River Bridge)</th>
<th>Name: Crossroads Bridge, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Rockingham County, VA</td>
<td>Phone: (540) 332-7891</td>
</tr>
<tr>
<td>Project Manager: John Allen Ennis, PE</td>
<td>Phone: (540) 332-7891</td>
</tr>
<tr>
<td>Email: <a href="mailto:johnallen.ennis@vdot.virginia.gov">johnallen.ennis@vdot.virginia.gov</a></td>
<td>07/2015</td>
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<tr>
<td>07/2017</td>
<td>$4,680</td>
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<tr>
<td>Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</td>
<td>$671</td>
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</tbody>
</table>

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

VERIFIABLE EVIDENCE OF GOOD PERFORMANCE

- Volkert’s design minimized maintenance requirements, stream impacts, and impacts to a historic property.
- The transportation management plan and sequence of construction plan maintains access to several adjacent properties and availability as an emergency detour route for Route 11.
- Volkert received four VDOT performance ratings with an average rating of 3.75, exceeding expectations in most categories.

"Volkert has continued to perform at a high level on these projects. All 5 projects are either on schedule or ahead of schedule. Plan submittals continue to be high quality and they have been very responsive and diligent in addressing comments and issues as they arise." John Allen Ennis, PE, July 2014

PROJECT DESCRIPTION

The Route 11 replacement bridge is a jointless, 2-span continuous, steel-girder structure (320 feet in length). The bridge is founded on end bearing steel H-piles and minimizes maintenance with semi-integral abutments, high-performance concrete-resistant steel, and span arrangements that minimize stream impacts. The design minimizes grade changes; superstructure girder depth for the required hydraulic opening; and the weight of girder sections for erection.

The hydraulic and roadway design decrease flooding to a nearby residence within the flood plain.

The existing bridge has two 11-foot lanes with narrow shoulders and ditches. The 33-foot wide and 314-foot long bridge includes a taper for a left-turn lane. The new bridge will be 320-feet long and have two 12-foot lanes, with a 12-foot center turn lane. The shoulders will have a four-foot wide paved surface to accommodate bicycle traffic. The total shoulder width, including non-paved areas, will be 8 feet wide. The new bridge will be located east of the existing structure. During construction, two-lane traffic will be maintained. Bridge construction will be in staged phases with traffic shifting to the new structure followed by the demolition of the old bridge.

The traffic volumes at this location in 2009 were 5,100 vehicles per day. The projected traffic volume in 2037 is 7,200 vehicles per day, of which four percent will be trucks.

Volkert performed the design services on this project as the lead designer utilizing staff from their Springfield, VA office.

LESSONS LEARNED FOR THE PROJECT

- Calculate deflections to get the proper bolsters and camber between the phases for staged construction. This more accurately accounts for portions of the slab that are cured at different times.
- Multi-phase construction should be considered for cost-efficiency as well as operational efficiency and safety.
- Volkert structural engineer met with contractor and VDOT at pre-construction meetings and continues to provide constructability consultation during construction phase on this bid-build project.