

Response to Request for Qualifications

I-81 WIDENING MM 136.6 TO MM 141.8

Roanoke County and City of Salem, Virginia

State Project No.: 0081-080-946, P101, R201, C501, B677, B678, B681, B682, B683, B684, B685, B686, B687, B688

Federal Project No.: NHPP-0812 (323)

Contract ID No.: C00116203DB108

JULY 8, 2020



Submitted by:



In Association with:



3.2: Letter of Submittal



July 8, 2020
Bryan Stevenson, PE, DBIA
Alternate Project Delivery Division
Virginia Department of Transportation
1401 E. Broad Street
Richmond, VA 23219

RE: I-81 Widening MM 136.6 to MM 141.8
Roanoke County and City of Salem, Virginia
State Project No.: 0081-080-946, P101, R201, C501, B677,
B678, B681, B682, B683, B684, B685, B686, B687, B688
Federal Project No.: NHPP-0812 (323)
Contract ID No.: C00116203DB108

Dear Mr. Stevenson:

Archer Western Construction, LLC (AWC) is pleased to share our credentials, experience, and ideas on how to work collaboratively with VDOT, and the community for a successful I-81 Widening Project. This Team was assembled based upon each firm's core strengths and experience to address the needs and challenges of your interstate highway widening project. With **Dewberry Engineers Inc.** (Dewberry) as our Lead Designer, and Kanawha Stone as an exclusive dedicated subcontractor, AWC offers VDOT a veteran Team with a successful track record of delivering DB interstate highway projects on-time and on budget.

3.2.1 - OFFEROR: The full legal name and address of the Offeror is Archer Western Construction, LLC, 13454 Sunrise Valley Drive, Suite 440, Herndon, VA 20171.

3.2.2 - OFFEROR'S PRIMARY CONTACT:

Jeffrey Mays, Program Manager
13454 Sunrise Valley Dr, Suite 440
Herndon, VA 20171
Phone: 301-347-4680 Fax: 301-347-4681
jmays@walshgroup.com

3.2.3 - PRINCIPAL OFFICER OF THE OFFEROR:

EJ O'Neill, Vice President
13454 Sunrise Valley Dr, Suite 440
Herndon, VA 20171
Phone: 301-347-4680 Fax: 301-347-4681
ejoneill@walshgroup.com

3.2.4 - The legal structure of the team is organized such that AWC will be the signatory to the design-build contract with VDOT, as a limited liability company with all financial responsibility. AWC will provide all performance and payment bonds for the project. Dewberry, serving as the Lead Designer, will be a subcontractor to AWC.

3.2.5 - The Lead Contractor is **Archer Western Construction, LLC** and the Lead Designer is **Dewberry Engineers Inc.**

3.2.6 - A complete list of affiliates and subsidiary companies may be found on Attachment 3.2.6.

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

3.2.8 - Archer Western's prequalification ID is A210 and the firm's status is active. Please refer to the Appendix for supporting documentation.

3.2.9 - A surety letter from our bonding company is included in the Appendix, confirming their willingness to provide any and all bonds for this project.

3.2.10 - Virginia State Corporation Commission (SCC) and Virginia Department of Professional and Occupational Regulations (DPOR) registration information for all business entities on our team are included in Attachment 3.2.10 with evidence of the registrations and licenses provided in the Appendix.

3.2.11 - AWC is committed to achieving the 9% DBE goal for the entire value of the contract.

The Archer Western Team is fully qualified and committed to the successful delivery of the I-81 Widening Project! We look forward to working with you on this critical project for the Roanoke Valley area.

Sincerely,
Archer Western Construction, LLC


EJ O'Neill
Vice President

3.3: Offeror's Team Structure

3.3 - OFFEROR’S TEAM STRUCTURE

INTRODUCTION

The Archer Western Team is comprised of industry leading design and construction firms in Virginia and the Southeastern United States with the resources, experience and capabilities to successfully manage the project specific risks, and construct this high-profile transportation project in Roanoke County and City of Salem, Virginia. Our team members have a proven track record and were carefully selected based on previous working relationships and capabilities in providing complementary services and resources in design, construction, quality, utility coordination, and right-of-way acquisitions services. Structured as an integrated organization, our team supports effective communication with established internal and external relationships that will serve as the foundation for our partnership with VDOT. This approach will help us manage the widely varied design and construction requirements necessary to provide VDOT with a project that meets the goals of providing additional capacity, reducing congestion, improving accessibility and mobility, and improving safety.

Archer Western Construction (AWC) is a general contracting, construction management, and design-build firm, that is a member of the Walsh Construction Group, a fourth generation, family owned business dating back 122 years. This \$5 billion per year construction company is ranked as the **Largest Bridge Builder**, the **Largest Southeast Transportation and Design-Build Contractor**, and the **4th Largest Highway Contractor** in the U.S. according to 2019 Engineering News Record. AWC has delivered over \$6.5 billion in DB transportation projects in the southeast over the last five years. AWC has maintained its presence in Virginia since the 1980s, completing design-build projects along the I-95 corridor, I-395 in Arlington, and on I-495 in Tysons. AWC is a self-perform contractor with the experience and resources to provide VDOT and the public a team that has a head-on mentality to tackle the risks and challenges that will likely be encountered on this project.

Our success on design-build projects is due in large part to the selection of personnel and team members, each with strengths that address critical project risks. Further, we bring additional design-build strength to the Project through our partners and specialty firms as shown in Table 1 and our Organizational Chart.

Table 1 - AWC/Dewberry Project Team Members	
Firm	Role on Project
	<p>Dewberry Engineers Inc. (Dewberry) will be the Lead Designer for all engineering design aspects as well as for environmental permitting and permit monitoring during construction. Dewberry will oversee all design subconsultants, ensuring that all design elements and deliverables prepared by them have completed a rigorous QA/QC prior to submission and that interfaces between Dewberry and subconsultant designs are properly coordinated. Dewberry has extensive design-build experience as the Lead Designer on over 20 design-build projects for VDOT, including several interstate widening and rehabilitation improvement projects. Dewberry is a nationally recognized engineering company headquartered in Fairfax, Virginia and is ranked among Engineering News-Record’s Top 25 highway design firms.</p>
	<p>Kanawha Stone Company (Kanawha) will be a dedicated partner with AWC providing this project and team with an experienced and local craft base and along with local resources and equipment. Currently, Kanawha is constructing projects locally in Roanoke and Salem as well as nearby in the cities Lynchburg and Harrisonburg. Kanawha is a second generation, family-owned and operated contractor providing services throughout the Mid-Atlantic region. Kanawha has been successful in constructing projects for VDOT having won the Project of the Year award for VDOT’s Staunton District in 2013, 2014, and 2015</p>

Table 1 - AWC/Dewberry Project Team Members

Firm	Role on Project
	<p>MBP will be responsible for providing QA services on the project. MBP has provided CEI services to VDOT’s Salem District from its Roanoke, VA office since 1996. MBP specializes in construction management and quality assurance and is one of the largest providers of these services to VDOT. They have the ability to resource the project with qualified staff since they have over 40 local inspectors that are fully VDOT and DEQ certified, many of which have experience on Design Build projects in either QA, QC or IA roles. All of MBP’s key staff proposed for this contract have VDOT design build experience and are ideally suited to implement the project specific QA/QC Plan which will be developed for this project in accordance with VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design Build Projects.</p>
	<p>Accumark will complete utility designations and test pits as a subconsultant to Dewberry. They specialize in providing comprehensive subsurface utility engineering services focused on reducing utility conflicts and utility relocation costs.</p>
	<p>Diversified Property Services Inc., (Diversified) is a registered DBE in the Commonwealth of Virginia, and will manage the right-of-way and land acquisition services. As a VDOT prequalified ROW acquisition firm, they will handle all areas of appraisal and appraisal review services, negotiations, acquisition of rights, and relocations.</p>
<p><i>Alvi Associates, Inc.</i></p>	<p>Alvi Associates, Inc. (Alvi), a registered DBE in the Commonwealth of Virginia and a design subconsultant to Dewberry, will provide engineering services for bridge and roadway design elements. All work will be coordinated with Dewberry structural and roadway engineers to ensure proper coordination between design disciplines and throughout all areas of the project. Alvi has extensive experience on bridge and roadway improvements throughout the Commonwealth and recently worked with Dewberry on our bridge replacement contract in the Salem and Staunton District.</p>
	<p>ECS Mid-Atlantic, LLC (ECS), as a subconsultant to Dewberry, will serve as the lead geotechnical firm for our Team, overseeing and completing all geotechnical field investigations and testing, as well as providing all geotechnical recommendations during design. ECS has extensive experience working on and along the I-81 corridor, including addressing risks and challenges associated with karst topography, slope and global stability, and for the widening and rehabilitation of bridge structures.</p>
	<p>McCormick Taylor, as a subconsultant to Dewberry, will provide all noise modeling and analysis services for the project and will also be responsible for coordinating with all utility companies and managing utility designs and relocations during design and construction. They have extensive experience completing both of these services throughout the Commonwealth and in the areas surrounding this project.</p>
	<p>Timmons Group (Timmons), as a subconsultant to Dewberry, will complete all supplemental field surveys and be responsible for development of right-of-way acquisition plans (RW sheets) for impacts to private property. Timmons’ office is located on the I-81 corridor in close proximity to the project site, and they have extensive experience providing these services on numerous VDOT projects.</p>
	<p>Quantum Spatial, Inc.(Quantum), as a subconsultant to Dewberry, will provide aerial mapping as a subconsultant to Dewberry. Quantum is a professional geospatial mapping organization with a proud record of performance providing similar services to multiple state, local, federal, and private organizations.</p>

3.3.1 Key Personnel

Information on Key Personnel in Table 2 is included as Attachment 3.3.1 - Key Personnel Resumes.

Table 2 - Key Personnel		
Key Personnel Position	Name	Firm
Design-Build Project Manager (DBPM)	Jeffrey Mays	Archer Western Construction, LLC
Entrusted Engineer In Charge (EIC)	David Johnson, PE	Archer Western Construction, LLC
Quality Assurance Manager (QAM)	Dale H. Grigg, PE	McDonough Bolyard Peck, Inc.
Design Manager (DM)	Steve Kuntz, PE, DBIA	Dewberry Engineers Inc.
Construction Manager (CM)	Kevin Kegebein	Archer Western Construction, LLC
Incident Management Coordinator (IMC)	Richie Haehn, MS, CSP, CHST	Archer Western Construction, LLC

Each individual was selected because of their extensive experience in the design, construction, and administration of design-build projects, as well as overall design and construction expertise.

3.3.2 Organizational Chart

The Organizational Chart at the end of this section outlines the structure of our proposed Team. The “chain of command” shown in the chart by solid lines represents the primary reporting relationships. Dashed lines represent communication relationships between major project disciplines and participants. This structure has been created to specifically address the overall project scope, the anticipated schedule for completion, and risks involved in meeting project objectives. The following narrative describes the functional relationships and communications among our Team:

Design-Build Project Manager (DBPM), Jeffrey Mays will serve as the Design-Build Project Manager and be responsible for the overall project design and construction. Jeff has over 20 years of experience in the industry and has recently served as the DBPM on the \$1.4B METRO Crenshaw / LAX design-build Project in Los Angeles, CA. On the Crenshaw project, Jeff led 1,200 employees, a tremendous public outreach effort, and managed the design, permitting and construction on this very complex project. Jeff will be AWC’s primary decision maker on the project and will assure all disputes are mitigated or resolved quickly and efficiently for all parties. Prior to the Crenshaw Project, Jeff has served as the PM on the \$1B SH 130 and \$136M SH 45/I-35 interstate projects in Texas and is well versed with interstate and highway construction and associated risk mitigation. Additionally, Jeff has previous experience working with VDOT, and our proposed QA firm, MBP, on relevant projects including Route 460 and the Smart Road.

Entrusted Engineer in Charge (EIC), David Johnson, PE, PMP will serve as the Entrusted Engineer In Charge (EIC) and report directly to the DBPM. David has 20 years of experience in the construction industry and has constructed over 20 projects including VDOT and multiple mega-design-build projects. David has served in a similar position (titled Design Coordinator) on the \$500M Design-Build ICC-B Project for the Maryland DOT. On the ICC-B project, he reviewed all designs for constructability, safety and sound engineering principles and provided certification that the RFC plans were complete and accurate. He also oversaw the design for any field modifications or non-conformances requiring engineering. David performed similar design oversight roles in the construction of two combined natural gas generation plants (TVA Allen, Lackawanna Energy Center) valued at a total of over \$1B. The oversight included tasks such as equipment and

vendor coordination with design, permitting, early packages for construction, model reviews, constructability reviews, and discipline task force meetings to resolve conflicts. David is currently working with Jeff on the traffic calming project in Hillsboro, Virginia and previously built the I-95/I-495/Telegraph Road Interchange designed by Dewberry.

Quality Assurance Manager (QAM), Dale H. Grigg, PE reports directly to the DBPM and will oversee both design and construction quality. Through this reporting structure he is completely independent of the design and construction teams. The Lead Roadway and Lead Structure Inspectors report directly to Dale, maintaining their independence as well. As a local citizen of Salem, Dale is a VDOT veteran with over 40 years in the industry with recent QAM experience on VDOT design-build projects including work along the I-81 corridor.

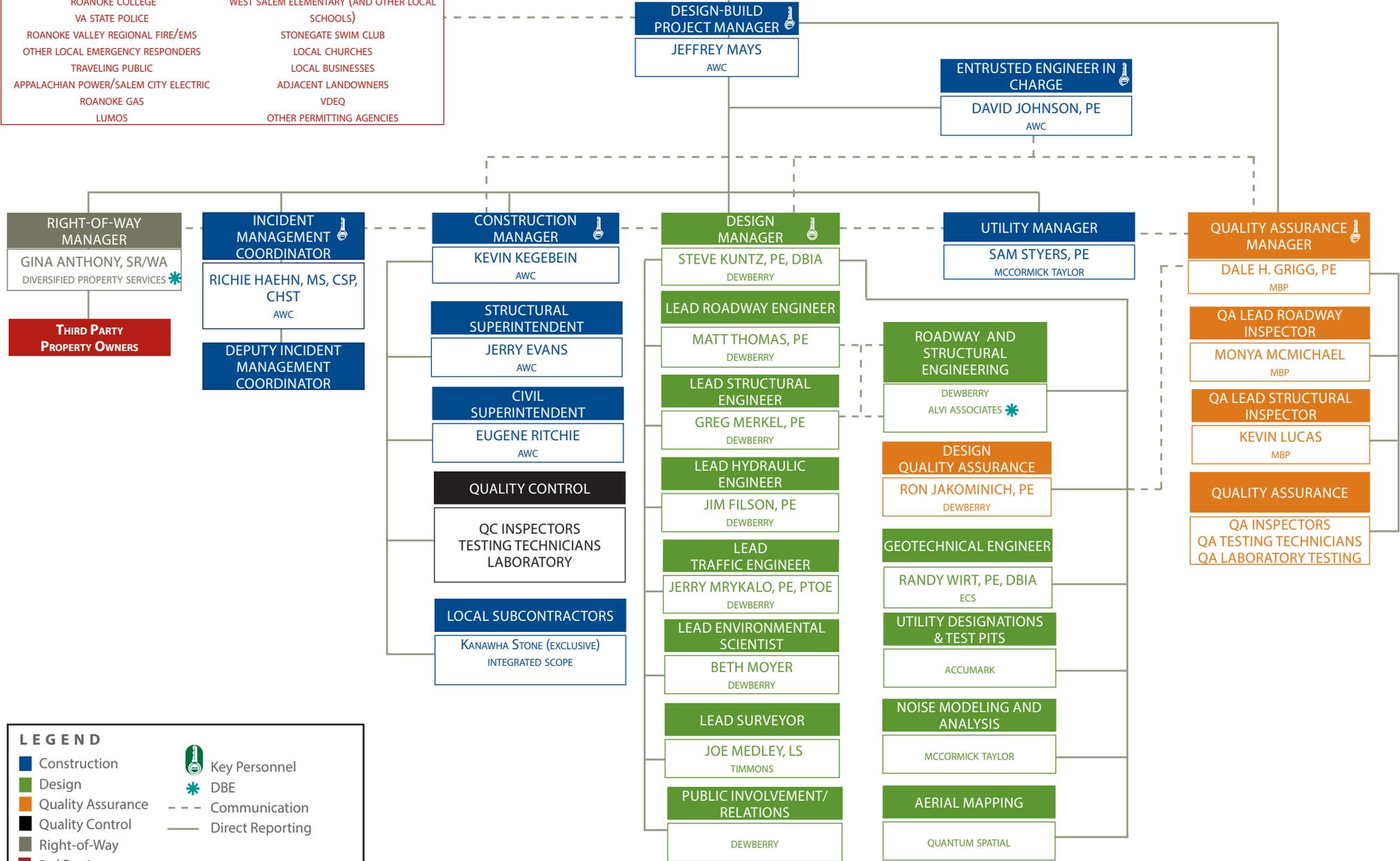
Design Manager (DM), Steve Kuntz, PE, DBIA reports to the DBPM and has overall responsibility for management of the design process. Steve's role includes oversight of design subconsultants and communication with each of the discipline leads identified. Steve will attend progress and coordination meetings with VDOT and any public outreach meetings for the project. Steve will also oversee implementation of the design QA/QC program, which will be followed by Dewberry and all design subconsultant team members. He will remain involved during construction, attending construction progress meetings and ensuring that RFIs, questions, submittals, and shop drawings are routed to the appropriate design discipline for review and response. Steve has extensive experience as a DM, having served in this same role on numerous other VDOT design-build projects, including on the recent I-64 Segment I and Segment III projects.

Construction Manager (CM), Kevin Kegebein will serve as the CM and report to the DBPM. Kevin will have oversight for all construction activities on the project. Kevin will hold the Virginia DEQ Responsible Land Disturber Certification along with the VDOT Erosion and Sediment Control Contractor Certification. Kevin has approximately 15 years of construction experience all with Archer Western / Walsh. He has served in both Project Manager and most recently in the CM role on our South Capitol Street Bridge design-build project outside of Washington DC. Kevin will oversee all construction QC activities and will be involved in reviewing designs for constructability with the EIC and the DM. Kevin has extensive CM experience on interstate highway design-build projects including the Ohio River Bridge (ORB) Downtown project.

Incident Management Coordinator (IMC), Richie Haehn, MS, CSP, CHST is an experienced safety professional who will serve as the IMC for this project. Richie has over 10 years of experience in workplace safety and incident response / management over multiple projects including the \$450 million South Capitol Street Bridge design-build and the \$1.4B METRO Crenshaw / LAX design-build project in Los Angeles, CA. On this project, Richie worked with our proposed DBPM, Jeff Mays, creating and developing the project safety and incident management programs. Richie will report to the DBPM and coordinate with the CM and the DM brainstorming improvements to avoid incidents, as well as determining root causes and solutions for implementation post-incident. The IMC will be trained in the following courses prior to the commencement of construction: FHWA SHRP2 "TIM" Responder Training, FEMA ICS/NIMS 100, 200 & 700, FEMA/VDEM Hazardous Materials Awareness as well as the VDOT Advanced Work Zone Traffic Control Training Certification.



THIRD PARTY STAKEHOLDERS	
TRUCKING INDUSTRY	ROANOKE BROADBAND
ROANOKE CITY	OTHER FIBER
ROANOKE COUNTY	SALEM CITY/WESTERN VA WATER & SEWER
CITY OF SALEM	VDOT SW TRAFFIC OPERATIONS CENTER
ROANOKE COLLEGE	WEST SALEM ELEMENTARY (AND OTHER LOCAL SCHOOLS)
VA STATE POLICE	STONEGATE SWIM CLUB
ROANOKE VALLEY REGIONAL FIRE/EMS	LOCAL CHURCHES
OTHER LOCAL EMERGENCY RESPONDERS	LOCAL BUSINESSES
TRAVELING PUBLIC	ADJACENT LANDOWNERS
APPALACHIAN POWER/SALEM CITY ELECTRIC	VDEQ
ROANOKE GAS	OTHER PERMITTING AGENCIES
LUMOS	



LEGEND	
■ Construction	Key Personnel
■ Design	DBE
■ Quality Assurance	Communication
■ Quality Control	Direct Reporting
■ Right-of-Way	
■ 3rd Parties	

3.4: Experience of Offeror's Team

Please see Attachments 3.4.1(a) Lead Contractor Work History Forms and Attachments 3.4.1(b) Lead Designer Work History Forms in the Appendix.

3.5: Project Risks

3.5 - PROJECT RISKS

CRITICAL RISK #1 - INCIDENT AVOIDANCE AND MANAGEMENT

Why The Risk Is Critical

I-81 is the most crucial north-south artery for local, regional commuter, and long-distance travel in the Roanoke Valley, carrying over 60,000 vehicles per day. Additionally, I-81 is one of the most important and heaviest utilized freight trucking corridors in the US, with an approximately 25% daily truck percentage in the project limits. In order to ensure the maximization of safety (for the public and construction personnel) and the preservation of traffic mobility, it will be critical to avoid incidents during construction. The importance of incident avoidance is further compounded by the fact that this section of I-81 lacks a desirable alternate route for incident management, with detour routing requiring a multi-mile trip through downtown and residential areas of Salem. Therefore, when incidents do occur, it is paramount that they are limited in both the number of lanes blocked as well as the duration. Other detailed project elements our Team has identified that contribute to the criticality of this risk include:

- The coordination of concurrent construction activities with overlapping MOT controls for the adjacent I-81 Auxiliary Lane Extension project during late 2021 and 2022;
- The need for safe access for heavy hauling vehicles into and out of the I-81 median;
- The need to sequence the project in a manner that provides a shoulder area for incident management, vehicle breakdown, and police enforcement; and
- The need to maintain continuous access to interchange ramps adjacent to complex bridge widening / reconstruction, median bifurcation, and profile grade change.

Impact on the Project

The impact of inadequately implementing incident avoidance techniques or improperly executing timely and comprehensive incident management during construction could have substantial consequences including:

- Degradation of safety for drivers, construction personnel and/or Route 311 pedestrians;
- Additional travel delays;
- Potential schedule and project completion delays;
- Loss of lane capacity and/or emergency responder access;
- Driver confusion caused by conflicting MOT devices due to the lack of full coordination with the adjacent project;
- Community impacts to the City of Salem along incident management detour routes; and
- Driver frustration and loss of community support.

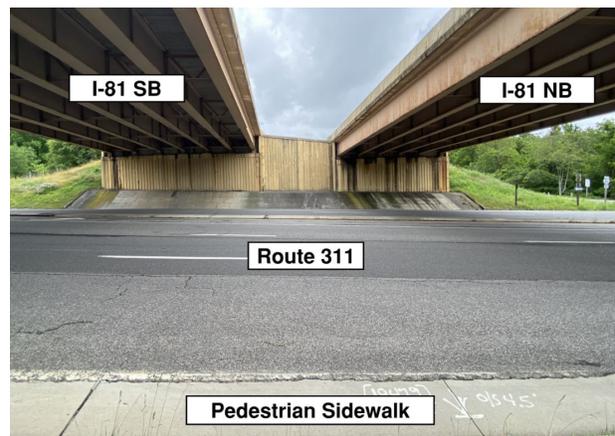


Figure 3.5.1: Bridge work over Route 311 will require maintenance of I-81 thru lanes, ramp movements, underpass traffic, and pedestrian traffic.

Mitigation Strategies

Our Team is adamant about maintaining the highest possible levels of traffic mobility and safety within our work zones. We are committed to making mobility and safety our top priorities, and to exceeding the standard project requirements by implementing the following mitigation strategies:

- 1. *Assembling An Industry Leading MOT Team:*** Our Team is well versed in the development of Transportation Management Plans (TMPs) for Type C “significant” projects, as well as the development of site-specific Temporary Traffic Control plans per VDOT’s IIM-LD-241.7 (Work Zone Safety and Mobility) process. All of our TTC, TMP and traffic analysis processes will be supervised by our Lead Traffic Engineer, Jerry Mrykalo, PE, PTOE who is also a VDOT- certified TTC Training Instructor. He has led the implementation of an in-house training program for our engineers, allowing all of our engineers involved in MOT design to achieve VDOT Advanced Work Zone Traffic Control certification. Jerry also has recent relevant MOT design experience along I-81 as well as for several interstate median widening projects. Additionally our proposed IMC, Richie Haehn, has extensive interstate design-build experience on some of the most congested interstates in Virginia and the US including I-495, I-295, and I-405.
- 2. *Focusing on Site-Specific Enhanced Incident Avoidance Strategies:*** These efforts begin by studying the preconstruction safety concerns and crash statistics, and then making interim safety enhancements as part of the first stage of our MOT plans in order to deliver immediate improvements to the traveling public. A preliminary review already completed by our Team has found that there were 312 crashes (including four fatalities) within the project limits along I-81 within the past three years. Given this high number of crashes, including many rear-end, sideswipe, and run-off-road crashes, we have identified the following enhancements that will be considered for implementation to maximize safety and reduce the frequency of incidents:
 - Temporary raised pavement markers and “wet reflective” pavement markings for increased visibility;
 - Designing a temporary geometry to match the full 60 mph posted speed (exceeding the minimum standards) as avoidance of abrupt transitions is especially important to minimize side-swipe crashes;
 - Utilizing durable pavement marking materials that retain their visibility longer and minimize temporary lane closures required to refresh markings;
 - Performing a clear zone safety assessment and installing additional temporary guardrail where warranted to avoid high severity run-off-road crashes;
 - Using temporary CCTV cameras to fill in gaps in existing coverage in order to quickly detect incidents and determine the correct level of incident response required;
 - Using Portable Changeable Message Signs (PCMS), overhead Dynamic Message Signs, and/or Advance Queue Detection systems to detect and alert drivers of slow or stopped traffic and new traffic patterns; and
 - Pre-staging incident management detour signs to allow the quick diversion and queue minimization of I-81 traffic to Route 11 / Route 460 if a incident temporarily closes I-81 and/or ramps.
- 3. *Designing and Sequencing the Work in a Manner that Maintains Shoulders:*** Wherever possible, we will strive to maintain a full paved shoulder along at least one side of I-81. Maintenance of a shoulder helps avoid incidents by providing an escape zone for potential rear-end collisions, as well as providing a forgiving roadside for potential run-off-road crashes. It also significantly aids in incident management by providing space for incident

staging outside of the travel lanes, space for vehicle breakdown, and space for police enforcement of work zone speed limits. This shoulder area can be provided by several alternatives that our Team will explore, such as by sub-staging the construction with partial width paving completed before setting barrier or temporarily sliver widening the existing paved shoulders to result in a full shoulder after lanes are shifted for barrier placement.

Additionally, temporary pull offs can be carved into the work area by sub-staging the work, as was done recently on the I-64 widening projects designed by Dewberry. These median pull offs were also lengthened from minimum requirements in order to provide required acceleration length for construction traffic.

4. ***Implementing a Construction Access Plan that minimizes interaction with traffic:*** To mitigate the potentially dangerous speed differentials between trucks entering and exiting the median and high-speed traffic in the left lane, we will:
 - Eliminate access from mainline I-81 as much as possible by installing construction access points where work can be accessed in a safer manner. For median work, access can be accomplished directly from cross streets (such as Texas Hollow Road).
 - Where direct I-81 access is required, providing full AASHTO acceleration / deceleration lengths for trucks as feasible to minimize slow truck interaction with high speed traffic.
 - Where high volumes of direct I-81 access is required, AWC will plan work operations to occur during non-peak hours to mitigate risk.
5. ***Verifying That Acceptable Operations Will Be Maintained for Off-Peak Temporary Lane Closures.*** We accomplish this by collecting current traffic volumes and analyzing all potential MOT operations using software such as Quick Zone and HCS to ensure temporary lane closures are limited to the hours of least impact. This strategy holds true for customizing lane closure schedules to account for seasonal variations in traffic volumes that occur on I-81. By ensuring that temporary lane closures are limited to the hours of least disruption, the frequency and duration of traffic backups are minimized, helping to avoid congestion related rear-end crashes.
6. ***Coordinating Concurrent Projects:*** In order to ensure full coordination of the design and construction activities for the adjacent Auxiliary Lane Extension, we will work directly with VDOT, the contractor, and all applicable third parties to ensure full coordination of safety, mobility, construction sequencing, and design features. This commitment provides drivers with a seamless “one project” look while traveling the corridor, and any “rework” of an adjacent project by others is minimized or avoided.
7. ***Dedication of a Deputy Incident Management Coordinator:*** Recognizing that work zone operations will take place both during the day and overnight, we will train and assign a Deputy Incident Management Coordinator (DIMC) who is available to support the full-time Incident Management Coordinator (IMC). Strengthening the manpower of this position helps ensure timely and coordinated response to incidents and urgent maintenance needs 24 hours a day. Our IMC and DIMC, will serve as the point of contact to quickly coordinate and deploy resources for incidents that require an urgent response to maintain safety and mobility on this critical corridor. They will also establish and maintain lines of communication with VDOT construction, VDOT maintenance, and emergency responder staff.

Role of VDOT and Other Agencies

We do not anticipate any additional requirements of VDOT beyond normal roles and responsibilities. It is expected that VDOT will be involved from a review and approval

standpoint during the development of the plans. We will coordinate the analysis of traffic volumes and travel patterns, proposed construction sequencing, and incident management plan development with VDOT during the design development process to determine the acceptability of the proposed configurations. During construction we anticipate VDOT will be a critical partner in incident avoidance, detection, and management. Specifically, our Team expects to work in conjunction with VDOT Safety Service Patrol and the Traffic Operations Center (TOC). We also anticipate coordinating MOT operations and incident management during construction with other agencies, such as Roanoke County and the City of Salem emergency responders.

CRITICAL RISK #2 - ROADWAY BIFURCATION AND GRADE CHANGES

Why The Risk Is Critical

This segment of I-81 consists of rolling terrain and large bifurcation between the northbound and southbound travel lanes through large areas of the project. While the existing median is wide enough to accommodate open channel drainage in combination with this bifurcation, the proposed median widening will eliminate the majority of these open channels and require construction of retaining walls and barriers to maintain drainage and provide safe roadside protection. Complicating the existing bifurcation is the vertical adjustment of I-81 which is proposed in separate areas totaling approximately a half mile and will also require adjustments to the profiles of several interchange ramps and one of the local roadway underpasses (Route 635 – Goodwin Avenue). The combination of existing grades and bifurcations and proposed profile adjustments represents a critical risk to the project. If the adjustments and proposed widening is not properly sequenced, operations on the interstate and local roadways will be negatively impacted and safety of the interstate could be compromised, especially during adverse weather events.

Impact on the Project

The impact of not accounting for or addressing the existing bifurcation and proposed grade changes could be extensive for traffic operations and safety of the interstate, as well as operational impacts to local roadways and a loss of public support due to degradation of access to local residences and properties. Specific impacts include:

- Inadvertently trapping water on the I-81 travel lanes;
- Reduced capacity associated with loss of a travel lane due to roadway flooding;
- Need to implement temporary, emergency lane closures;
- Unsafe travel conditions during adverse weather events;
- Long-term closure of Goodwin Avenue;
- Community access impacts;
- Driver frustration; and
- Loss of local community support

Mitigation Strategies

Having recently developed solutions for the vertical adjustment, horizontal adjustment and reduced bifurcation on I-64 through Williamsburg, we know the numerous considerations which must be accounted for during design to safely and efficiently widen and reconstruct a heavily travelled interstate. Each element of the bifurcation and grade change risk can be addressed through detailed design, including comprehensive coordination between roadway, hydraulic, and traffic engineering staff, as well as construction staff who will ultimately successfully implement the design approach. Specific mitigation strategies to address all aspects of this risk include:

1. **Using grade profiles to replicate existing conditions:** The majority of the conceptual plans identify a geometrically defined profile for I-81 which may require variable depth build-up of the existing pavement. Since the majority of the existing roadway profile appears to be adequate to achieve the 65 mph design speed, use of a “spline” grade to more closely match existing conditions would minimize the amount of variable depth build-up. By developing an alternate vertical profile, the overall cost of the project can be reduced, and more importantly the profile for the median widening can be developed to match the existing pavement elevations. By eliminating any grade differences along the existing inside edge of travel lane, ponding of water at the edge of the active travel lanes, adjacent to the median construction areas, can be eliminated. This will avoid concerns associated with excessive spread in the left travel lanes. Should build-up of the existing pavement be required to provide the permanent pavement section and adequate structural pavement thickness, overlay of the existing lanes can be completed earlier during construction. This would raise the existing pavement elevations in relation to the adjacent construction area, providing further drainage relief during construction, and avoiding a possible condition where the permanent median widening is constructed to an elevation above the existing pavement.

2. **Using temporary wedge pavement overlays:** Where superelevation or proposed profile adjustments will require construction of the median widening above existing pavement elevations, one technique we plan to utilize will be to place temporary asphalt on the inside lanes to convey water to the outside of the roadway. By diverting flow away from the median, concerns associated with ponding of water in the travel lanes and immediately adjacent to the construction site will be eliminated. Drainage patterns and facilities on the outsides of the road will be investigated to ensure they can accommodate the temporary drainage patterns. Not only does this avoid ponding of water on the active travel lanes, it also reduces the amount of water that needs to be accommodated within the construction area, simplifying construction and reducing the potential that roadway subgrade preparation is impacted by storm events. Diverting flow to the outside of the road also improves snow clearing operations during winter months, since plowing of snow towards the temporary concrete barrier (with minimal shoulder/offset widths) is avoided.

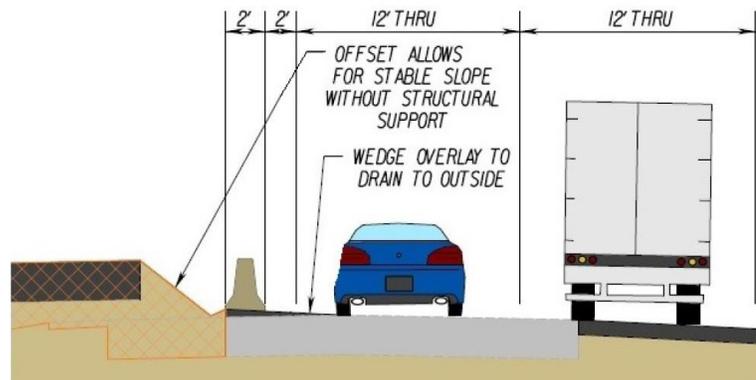


Figure 3.5.2: Temporary wedge overlay would eliminate water ponding concerns during construction.

3. **Developing an alternate vertical profile:** In two locations along I-81, a new vertical profile is proposed to address substandard vertical profile elements or to improve underpass clearances (on Goodwin Avenue). However, these areas of vertical profile adjustment also correspond to areas of existing bifurcation, and the proposed adjustments are further increasing the bifurcation where the median width is also being reduced. To improve these situations, we will investigate the ability of developing alternate profiles that not only provide the vertical profile enhancements required, but also minimize the bifurcation between directions of travel. By reducing the bifurcation between the northbound and southbound lanes on I-81, we will be able to reduce the limits of non-standard and/or

variable height barriers which will reduce project costs and simplify the ability to convey drainage in closed systems below the median barrier.

Where I-81 passes over Goodwin Avenue, alternate profiles will be investigated to avoid reconstruction and lowering of Goodwin Avenue. Ideally, lowering Goodwin Avenue would be done as an advance stage, or at least over a relatively short extended closure to minimize impacts to the local roadway network. However, closure and lowering of Goodwin Avenue prior to replacement of the existing bridges could undermine the existing bridge pier foundations. Waiting until the end of bridge replacement to complete the Goodwin Avenue reconstruction isn't feasible since the southbound I-81 bridge, which provides the least vertical clearance, is shown to be partially reconstructed to the outside, which would further reduce vertical clearance in a temporary condition. Since neither of these options is feasible, a long-term closure of Goodwin Avenue throughout virtually the entire construction duration would be necessary. To avoid this impact, and since the profiles of I-81 are proposed to be vertically adjusted in this area already, consideration will be given to further vertical adjustment to provide adequate vertical clearance over the existing road and eliminating the need to reconstruct Goodwin Avenue. As this area of I-81 is also bifurcated by nearly 8-foot, development of new profiles will also investigate the possibility of reducing the bifurcation between northbound and southbound I-81 to improve drainage configurations and reduce areas of non-standard or variable height barriers.

4. *Developing alternative horizontal alignments:* Recognizing that areas of significant vertical profile adjustment will require the complete replacement of the existing pavement, reconstruction of the pavement does not need to occur in the same horizontal footprint/alignment of the existing road. Similar to the enhancements designed by Dewberry on our I-64 Segment III project, we will look to develop alternate horizontal alignments in these areas to avoid the following situations:

- Temporary shoring between the existing roadway and new elevated pavement associated with the ultimate roadway;
- Additional shifting of traffic away from the median to accommodate temporary embankment slopes for the proposed roadway behind temporary traffic barrier; and
- Ponding of water on the existing travel lanes and need for temporary drainage within the proposed roadway section to temporarily maintain drainage patterns.

By developing alternate horizontal alignments, we may also be able to simplify the sequence of bridge construction for the reconstructed overpasses and simplify the roadway reconstruction, reducing the areas of temporary shoulder strengthening on the outside as an initial construction stage. Alternate horizontal alignments may also result in increased median widths, helping to minimize the amount of barrier protection required in areas of bifurcation between the northbound and southbound lanes.

5. *Phasing drainage installations:* One of the challenges with interstate widening is ensuring drainage is



Figure 3.5.3: Alternate horizontal alignments can improve ability to maintain full width shoulders during construction, as implemented on I-64.

properly conveyed through all stages of construction. This becomes especially complicated when median construction represents the majority of the scope of work that needs to occur in the earlier construction stages, and all of the drainage outfalls are located along the outside of the interstate. Implementing wedge overlays as previously described reduces or eliminates flow from the median construction area and improves constructability as well as safety for the travelling public. Permanent drainage facilities installed with median construction will be designed to utilize existing outfalls, even if only for a temporary configuration until the permanent outfalls and cross culverts are completed in later stages of construction. In areas of deep fills or where culverts are required at excessive depths below the road to maintain drainage patterns and outfalls, jack & bore installation will be considered to advance their installation, allowing storm sewers to be tied into those locations to provide acceptable outfalls through all stages of construction.

- 6. *Resequencing of Bridge Construction:*** Near the bridge replacements and widenings, alternate construction sequencing will be investigated to reduce the number of temporary crossovers during construction or eliminate them completely. This could be feasible by constructing a wider bridge than is required for the permanent configuration, but which would allow shifting of traffic onto the new section of bridge while the existing bridge is demolished. Ultimately a wide shoulder would be provided in the permanent configuration, but this would eliminate the challenges associated with temporary crossovers in areas of significant bifurcation between the northbound and southbound lanes. As currently planned, temporary crossovers would need to be constructed in areas of minimal grade differentials, resulting in longer areas of opposing traffic running immediately adjacent to each other.

Role of VDOT and Other Agencies

We do not anticipate any additional requirements of VDOT beyond normal roles and responsibilities. We understand that VDOT will be involved with plan review and approval of all plan submissions and construction documents. Development of alternate profiles and alignments will be discussed with VDOT staff as they are developed and with an understanding that minimization and avoidance of additional right-of-way impacts are desired along the entire project length. Review of temporary and permanent drainage patterns, and proper consideration for stormwater management, adequate outfall, and erosion & sediment control measures for all stages of construction will also be completed by VDOT hydraulic staff as part of plan submissions and prior to plan approval. Determination of the ability to reuse existing pipes will also be made by VDOT based on submission of hydraulic and structural condition as part of the initial survey activities completed during design.

CRITICAL RISK #3 - RESOURCE AVAILABILITY/ WORKFORCE DEVELOPMENT (CRAFT PERSONNEL)

Why The Risk Is Critical

The I-81 corridor is set for large expansion over the next couple of years and the cultivation of available workforce along with the recruiting and training of the future workforce along the corridor is key to successful delivery of these projects.

Approximately 200 craft personnel will be required to construct the I-81 Widening Project from MM 136.6 to 141.8. This project is in rural Virginia where the craft pool for construction projects is not as large as in a more densely populated area. AWC is prepared to recruit and train local craftspeople and draw talent from the surrounding region to supplement our current workforce in order to have a successful project. These relationships formed will help to serve AWC and VDOT on the future projects in the I-81 corridor.

Impact on The Project

A skilled workforce achieves our goal of “No One Gets Hurt” on our project. Proper staffing of a skilled workforce allows AWC to meet production goals, thus meeting our schedule requirements. Lastly, a skilled workforce provides VDOT and the traveling public with quality workmanship needed to achieve the longevity expected and required of the project. Along with a skilled workforce, we will also need to augment our crews with new trainees. These trainees will be the next wave of skilled construction workers needed for the I-81 Corridor Program.

Mitigation Strategies

Within a 200-mile radius of this project AWC has over 720 experienced skilled craftsmen. Transportation projects in Northern Virginia, Western North Carolina, and Northeastern South Carolina will all have resources available to transfer to the I-81 project. As the need for additional craft personnel increases, AWC will utilize several strategies to recruit, train, and retain the additional workforce. AWC is open to new ideas and will host a kick-off meeting with various stakeholders, exploring additional recruitment and training concepts. VDOT is invited and welcome to participate in this process. Below is a list of initial concepts/strategies to grow our workforce in the area:

- 1. Recruiting at local high schools** – AWC will participate in career days at the local high schools like Glenvar, Salem, Northside, Patrick Henry and William Fleming to assure the teachers and counselors know who we are and what type of career students could have with AWC in the construction industry. Currently, AWC and Virginia Tech are involved in a task exploring focused opportunities to recruit high schoolers to the construction industry. Our task force will utilize these programs in the Roanoke and Salem high schools.
- 2. Recruit/Train at vocational schools** – The Burton Center for Arts and Technology in Salem has programs centered around the Building Trades, Welding and Masonry. AWC will work with this school, enter the classroom to assist with training, and bring the students to the project for some hands-on experience. Similarly, on the Crenshaw/LAX DB project, Jeff Mays, DBPM, was successful in working with the Los Angeles Trade Technical College to recruit and train prospective students.
- 3. Recruit local talent** – One of Southwest Virginia’s major economic contributors was coal. With the usage of coal on the decline in this country, many of these coal miners are looking for work. The good news is these future employees already have much of the training needed to be a great construction worker. AWC will focus on local communities in Southwest Virginia, looking for skilled operators and laborers who have lost their jobs in the mining industry or due to the current pandemic.
- 4. Partner with Local Programs** – AWC will partner with local workforce development programs and community groups and be active in the Chamber of Commerce to provide opportunity for trainees to get the experience they need in the career fields of their choice. AWC is involved in various community workforce development programs throughout the country including FDOT Statewide Workforce Development, Los Angeles Urban League Construction Careers, and with the All Faith Consortium in Washington DC.
- 5. On-the Job Training programs** – Safety will be first and foremost and all employees will receive safety training applicable to their roles on the project including first aid and CPR, operator, rigging, confined space, work zone traffic control, safe driving, environmental, and 10-hour OSHA Orientation. Along with safety training, unskilled tradespeople will work for more experienced employees throughout the job and continue to hone their skills and improve their performance with constant and consistent feedback. These training programs are standard on every AWC project and helps ensure safety, quality and productivity on our projects.

6. **Craft Led Safety** – At AWC, our craft people lead our safety program. A committee of craft will tour the project at least once a week and be the spokespersons for our entire craft workforce. After the tour each week the committee will sit with the DBPM to discuss safety concerns, requests, or needs. The craft can rest assured we will have a safe job and their success is ultimately in their hands. AWC has begun implementing this safety program across the country realizing improved safety results on each project. Through empowerment of our craft workforce, AWC is meeting one of our company values to be the “Employer of Choice.”
7. **Technology** – New technology attracts the new workforce. On this project we will look at automated grade control for equipment, leading indicator analysis programs for safety, and tablets in the field for digital plan access. Embracing new technology can be a cost and schedule savings and AWC will look at any options available to better our craft force and our project.
8. **Partnering Locally** – Local partners play a key role in fulfilling a portion of the skilled craft positions on the project. AWC has met with local subcontractors in the asphalt, electrical and civil fields to discuss the project and their roles and resources available. Kanawha Stone, a three-time VDOT project of the year award winner (Staunton District) will be an exclusive dedicated subcontractor on our team, providing local craft and resources from their ongoing projects in the Salem and Roanoke areas. Together with AWC, these partners will help to recruit and train workforces in their respective areas of expertise.
9. **Craft Compensation** – AWC will provide competitive pay in order to attract the local craftsmen, as well as craft from surrounding regions such as Northern Virginia, Tennessee, West Virginia, North Carolina, and Richmond. Along with pay rates, AWC provides our craft with a competitive 401K program, top of the line insurance packages and two-weeks of Paid Time Of (PTO) each year. These benefits have improved our recruiting and retention by over 18.5%.

Role of VDOT and Other Agencies

We do not anticipate any additional requirements of VDOT beyond normal roles and responsibilities. During the design and construction of our project, AWC will work with local high schools and vocational schools to train and recruit local young professionals. AWC invites VDOT to attend and assist with any of the workforce development events. While this project is short-term, VDOT is a constant in the Salem/Roanoke area and being present at our events will help continue the tradition at the conclusion of this project. The future of our workforce in construction depends on the constantly recruiting and continuing the training of these future construction tradespeople.

ATTACHMENT 3.1.2

Project: 0081-080-946

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

Project: 0081-080-946

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	N/A
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	N/A
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	N/A
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	N/A
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	N/A
Key Personnel Resume – Entrusted Engineer in Charge	Attachment 3.3.1	Section 3.3.1.2	no	N/A
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.3	no	N/A
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.4	no	N/A
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.5	no	N/A
Key Personnel Resume – Incident Management Coordinator	Attachment 3.3.1	Section 3.3.1.6	no	N/A
Organizational chart	NA	Section 3.3.2	yes	6

ATTACHMENT 3.1.2

Project: 0081-080-946

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Organizational chart narrative	NA	Section 3.3.2	yes	4-5
Experience of Offeror's Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	N/A
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	N/A
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	7-15

ATTACHMENT 2.10

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00116203DB108
PROJECT NO.: 0081-080-946

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 – May 29, 2020
(Date)
- 2. Cover letter of RFQ - June 18, 2020
(Date)
- 3. Cover letter of _____
(Date)



SIGNATURE

July 02, 2020

DATE

EJ O'Neil

PRINTED NAME

Vice President

TITLE

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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

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

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

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

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

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



07/03/2020

Vice President

EJ O'Neill

Date

Title

Archer Western Construction, LLC

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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

	7/3/2020	Executive Vice President
Signature	Date	Title

Dewberry Engineers Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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



Signature

June 17, 2020
Date

Vice President/Transportation Services Leader
Title

MBP
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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

<u>Thomas J. Kirtledge</u>	<u>July 1, 2020</u>	<u>President</u>
Signature	Date	Title

Kanawha Stone Company, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

 _____	6/26/20 _____	President & Chief Engineer _____
Signature	Date	Title

Alvi Associates, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

	6/24/20	Vice President
_____ Signature	_____ Date	_____ Title

ECS Mid-Atlantic, LLC

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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



Signature

6/25/2020

Date

Chief Visionary Officer

Title

McCormick Taylor, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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

Marlin R. Zook
Signature

6/24/2020
Date

Vice President
Title

Quantum Spatial, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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



Signature

06/24/2020

Date

Vice President

Title

Accumark, Inc

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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



<hr/>	<hr/>	<hr/>
Signature	6/24/2020 Date	Principal Title

Timmons Group, Inc.
Name of Firm



Vendor ID: A210
Vendor Name: ARCHER WESTERN CONSTRUCTION, LLC
Prequal Level: Prequalified
Prequal Exp: 01/31/2021

-- PREQ Address --

13454 SUNRISE VALLEY DRIVE SUITE 440
HERNDON, VA 20171
Phone: (301)347-4680
Fax: (301)347-4681

Work Classes (Listed But Not Limited To)

002 - GRADING
003 - MAJOR STRUCTURES
006 - PORTLAND CEMENT CONCRETE PAVING
007 - MINOR STRUCTURES

Bus. Contact: TALLEY, SAM
Email: AWCESTIMATING@WALSHGROUP.COM

-- DBE Information --

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



Travelers Bond
215 Shuman Blvd.,
Naperville, IL 60563
Telephone: (630) 961-7052
Fax: (630) 961-7020

June 29, 2020

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

**RE: I-81 Widening MM 136.6 to MM 141.8
Contract ID Number: C00116203DB108**

Dear Mr. Stevenson:

We have been advised that **Archer Western Construction, LLC** is submitting a Statement of Qualifications in response to the Request for Qualifications for the above mentioned project. **Travelers Casualty and Surety Company of America** is pleased to recommend **Archer Western Construction, LLC** as a professional, well-financed construction company.

Travelers Casualty and Surety Company of America is currently providing **Archer Western Construction, LLC** with bonding support of \$400 million dollars on single contracts and \$8 billion dollars for an aggregate work program.

As surety for **Archer Western Construction, LLC**, **Travelers Casualty and Surety Company of America** with A.M. Best Financial Strength Rating A++ and Financial Size Category XV, is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated current estimated cost of construction of approximately \$225,000,000. Said bonds will cover the project and any warranty periods as provided for in the contract documents on behalf of **Archer Western Construction, LLC**, in the event **Archer Western Construction, LLC** is the successful bidder and enters into a contract for this project. All issuance of bonds is subject to the review and approval of all contract terms, conditions and bond forms.

Should you have any questions, or need additional information, please feel free to contact me.

Yours truly,
Travelers Casualty and Surety Company of America

By: 

Sheryl Solomon, Attorney-in-Fact





**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

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

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **17th** day of **January**, 2019.



State of Connecticut

City of Hartford ss.

By: 
Robert L. Raney, Senior Vice President

On this the **17th** day of **January**, 2019, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Anna P. Nowik, Notary Public

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

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

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

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

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

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

Dated this 29 day of **June**, 2020




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.**

ATTACHMENT 3.2.10

State Project No. 0081-080-946

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Archer Western Construction, LLC	T0437006	Foreign Limited Liability Company	Active	929 W. Adams St. Chicago, IL 60607	Class A Contractor	2705141795	07/31/2021
Dewberry Engineers Inc.	F100462-3	Corporation	Active	8401 Arlington Blvd. Fairfax, VA 22031	Business Entity Branch Office	0411000941	2/28/022
McDonough Bolyard Peck, Inc. (d/b/a MBP)	03518008	Corporation	Active - In good standing	711 D Fifth Street, NE Roanoke, VA 24016	Professional Engineers	0411000605	2/28/2022
Kanawha Stone Company, Inc.	F1339573	Stock Corporation	Active	409 Jacobson Drive, Poca, WV 25159	Contractor Class A	2705041075	1/31/2021
Alvi Associates, Inc.	F1799750	Foreign	Active, In Good Standing	110 West Road, Suite 250, Towson, MD 21204	Professional Engineers	407002864	12/31/2020
Accumark, Inc.	04450745-8	Corporation	Active, In Good Standing	9500 King Air Court, Ashland, VA 23005	Professional Engineers	407005172	12/31/2021
Accumark, Inc.	04450745-8	Corporation	Active, In Good Standing	9500 King Air Court, Ashland, VA 23005	Land Surveyor	411000864	02/28/2021
Diversified Property Services, Inc.	F130410	S corp	Active	20 E Timonium Road, Ste111 Timonium, MD 21093	Appraisal Business	4008001190	11/30/2020
ECS Mid-Atlantic, LLC	S1208216	Limited Liability Company	Active	7670 Enon Dr., Suite 101 Roanoke, VA	Business Entity Branch	411000381	2/28/2022
ECS Mid-Atlantic, LLC	S1208216	Limited Liability Company	Active	2119 N. Hamilton St. Richmond, VA	Business Entity Branch	411000384	2/28/2022
Timmons Group	0264043-1	C, Corporation	Active, In Good Standing	1001 Boulders Parkway, Suite 300 Richmond, VA 23225	Professional ENG/LS/LA	0405000456	12/31/2021

ATTACHMENT 3.2.10

State Project No. 0081-080-946

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.

Timmons Group	0264043-1	C, Corporation	Active, In Good Standing	608 Preston Ave. Suite 200 Charlottesville, VA 22903	Professional ENG/LS/LA	0410000161	8/28/2022
McCormick Taylor	F1296914	Stock Corporation	Active	2001 Market St. Two Commerce Square, Philadelphia, PA 19103	Business Entity Branch Office Registration	0411000771	2/28/2022
McCormick Taylor	F1296914	Stock Corporation	Active	2001 Market St. Two Commerce Square, Philadelphia, PA 19103	Business Entity Registration	0407004111	12/13/2021

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Archer Western Construction, LLC	Entity ID: T0437006
Entity Type: Limited Liability Company	Entity Status: Active
Formation Date: N/A	Reason for Status: Active
VA Qualification Date: 06/30/2010	Status Date: 06/30/2010
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: IL	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: N/A

Registered Agent Information

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

Principal Office Address

Address: 929 W ADAMS ST, CHICAGO, IL, 60607 - 0000, USA

Principal Information

Management Structure: N/A

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: McDonough Bolyard Peck, Inc.
Entity Type: Stock Corporation
Formation Date: 12/29/1989
VA Qualification Date: 12/29/1989
Industry Code: 0 - General
Jurisdiction: VA
Registration Fee Due Date: Not Required

Entity ID: 03518008
Entity Status: **Active**
Reason for Status: Active and In Good Standing
Status Date: 01/17/2020
Period of Duration: Perpetual
Annual Report Due Date: N/A
Charter Fee: \$500.00

Registered Agent Information

RA Type: Individual
RA Qualification: Member of the Virginia State Bar
Name: REES BROOME, PC

Locality: FAIRFAX COUNTY
Registered Office Address: 1900 GALLOWS RD STE 700, TYSONS CORNER, VA, 22182 - 0000, USA

Principal Office Address

Address: 3040 Williams Dr Ste 300, Fairfax, VA, 22031 - 4654, USA

Principal Information

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Dewberry Engineers Inc.	Entity ID: F1004623
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 06/13/1989	Status Date: 10/21/2015
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: NY	Annual Report Due Date: 06/30/2020
Registration Fee Due Date: 06/30/2020	Charter Fee: \$50.00

Registered Agent Information

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

Principal Office Address

Address: 8401 ARLINGTON BLVD, FAIRFAX, VA, 22031 - 0000, USA

Principal Information



Entity Information

Entity Information

Entity Name: KANAWHA STONE COMPANY, INC.

Entity ID: F1339573

Entity Type: Stock Corporation

Entity Status: **Active**

Formation Date: N/A

Reason for Status: Active and In Good Standing

VA Qualification Date: 05/29/1998

Status Date: 06/13/2012

Industry Code: 0 - General

Period of Duration: Perpetual

Jurisdiction: WV

Annual Report Due Date: N/A

Registration Fee Due Date: Not Required

Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity

Locality: HENRICO COUNTY

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

Name: C T CORPORATION SYSTEM

Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 -
6808, USA

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https://www.scc.virginia.gov/alk/alk_contact.aspx

Principal Office Address

Address: 409 JACOBSON DRIVE, ROCK BRANCH IND
PK, POCA, WV, 25159 - 0000, USA

Principal Information

Title	Director	Name	Address	Last Updated
ASST SECRETARY	No	ASHLEY L LIOI	P O BOX 503, NITRO, WV, 25143 - 0000, USA	05/10/2019
PRESIDENT/CEO	Yes	THOMAS Y KITTREDGE	POB 503, NITRO, WV, 25143 - 0000, USA	05/10/2019
ASST TREASURER	No	AMELIA L RANDOLPH	P O BOX 503, NITRO, WV, 25143 - 0000, USA	05/10/2019
VP/SECRETARY	Yes	VIRGINIA L KING	POB 503, NITRO, WV, 25143 - 0000, USA	05/10/2019
Treasurer	Yes	ARTHUR L KING	POB 503, NITRO, WV, 25143 - 0000, USA	05/10/2019

Current Shares

Total Shares: 25000

[Filing History](#)

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Commonwealth of Virginia



State Corporation Commission

I Certify the Following from the Records of the Commission:

DIVERSIFIED PROPERTY SERVICES OF VIRGINIA, INC. (USED IN VA BY: DIVERSIFIED PROPERTY SERVICES, INC.), a corporation existing under the laws of MARYLAND, holds a certificate of authority to transact to transact business in Virginia, and is in good standing.

The certificate was issued on August 05, 1997.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
August 18, 2009*

Joel H. Peck

Joel H. Peck, Clerk of the Commission

Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Timmons Group, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is November 30, 1984;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
July 3, 2019*

Joel H. Peck

Joel H. Peck, Clerk of the Commission

Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That McCORMICK TAYLOR, INC., a corporation incorporated under the law of Pennsylvania, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on June 2, 1997; and

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

Nothing more is hereby certified.



Signed and Sealed at Richmond on this Date:

August 5, 2014

Joel H. Peck
Joel H. Peck, Clerk of the Commission

Entity Information

Entity Information

Entity Name: ACCUMARK, INC.

Entity ID: 04407458

Entity Type: Stock Corporation

Entity Status: **Active**

Formation Date: 01/30/1995

Reason for Status: Active and In Good Standing

VA Qualification Date: 01/30/1995

Status Date: 02/07/2015

Industry Code: 0 - General

Period of Duration: Perpetual

Jurisdiction: VA

Annual Report Due Date: N/A

Registration Fee Due Date: Not Required

Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity

Locality: HANOVER COUNTY

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

Name: Unisearch, Inc.

Registered Office Address: 7288 HANOVER GREEN DR,
MECHANICSVILLE, VA, 23111 - 0000, USA

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https://www.scc.virginia.gov/clk/clk_contact.aspx

Principal Office Address

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

Principal Information

Title	Director	Name	Address	Last Updated
President	Yes	S CRAIG MARTIN	9500 KING AIR CT, ASHLAND, VA, 23005 - 0000, USA	02/08/2018
Vice President	No	Ryan Martin	9500 King Air Ct., Ashland, VA, 23005, USA	01/03/2020
President	Yes	Mark Burel	9500 King Air Ct, VA, 23005, USA	01/03/2020
Chief Financial Officer	Yes	Bruce Lux	9500 King Air Ct, VA, 23005, USA	01/03/2020

Current Shares

Total Shares: 500

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Entity Information

Entity Information

Entity Name: ALVI ASSOCIATES, INC.

Entity ID: F1799750

Entity Type: Stock Corporation

Entity Status: **Active**

Formation Date: N/A

Reason for Status: Active and In Good Standing

VA Qualification Date: 08/13/2009

Status Date: 08/13/2009

Industry Code: 0 - General

Period of Duration: Perpetual

Jurisdiction: MD

Annual Report Due Date: 08/31/2020

Registration Fee Due Date: 08/31/2020

Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity

Locality: HANOVER COUNTY

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

Name: INCORP SERVICES, INC.

Registered Office Address: 7288 HANOVER GREEN DR,
MECHANICSVILLE, VA, 23111 - 0000, USA

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Principal Office Address

Address: 110 WEST ROAD SUITE 250, TOWSON, MD, 21204 - 0000, USA

Principal Information

Title	Director	Name	Address	Last Updated
President	Yes	IRFAN A. ALVI	110 WEST ROAD SUITE 250, TOWSON, MD, 21204 - 0000, USA	08/20/2019
Vice President	No	ANNABELLE B. ALVI	110 WEST ROAD, SUITE 250, TOWSON, MD, 21204 - 0000, USA	08/20/2019

Current Shares

Total Shares: 1000

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(https://www.scc.virginia.gov/clk/clk_contact.aspx)

Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, April 16, 2004

This is to certify that the certificate of organization of

**Engineering Consulting Services - Mid-Atlantic,
LLC**

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: April 16, 2004



State Corporation Commission

Attest:

Joel H. Peck
Clerk of the Commission

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND, AUGUST 5, 2004

The State Corporation Commission has found the accompanying articles submitted on behalf of

ECS - Mid-Atlantic, LLC
(formerly known as Engineering Consulting Services - Mid-Atlantic, LLC)

to comply with the requirements of law, and confirms payment of all required fees. Therefore, it is ORDERED that this

CERTIFICATE OF AMENDMENT

be issued and admitted to record with the articles of amendment in the Office of the Clerk of the Commission, effective August 5, 2004.

STATE CORPORATION COMMISSION

By

A handwritten signature in black ink that reads "Mark L. Christie". The signature is written in a cursive style with a large initial "M".

Commissioner

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

07-31-2021

NUMBER

2705141795

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS CBC H/H RBC



ARCHER WESTERN CONSTRUCTION LLC
929 W ADAMS ST
CHICAGO, IL 60607



Mary Brod-Vaughan
Mary Brod-Vaughan, Acting Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS
CONTRACTOR

CLASSIFICATIONS CBC H/H RBC

NUMBER: 2705141795 EXPIRES: 07-31-2021

ARCHER WESTERN CONSTRUCTION LLC
929 W ADAMS ST
CHICAGO, IL 60607



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411000941

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

PROFESSIONS: ARC, ENG, LA



DEWBERRY ENGINEERS INC
8401 ARLINGTON BLVD
FAIRFAX, VA 22031



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411000605

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

PROFESSIONS: ENG



MCDONOUGH BOLYARD PECK INC
711D FIFTH ST NE
ROANOKE, VA 24016



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000605 EXPIRES: 02-28-2022
PROFESSIONS: ENG
MCDONOUGH BOLYARD PECK INC
711D FIFTH ST NE
ROANOKE, VA 24016



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2021

NUMBER

2705041075

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS H/H



KANAWHA STONE COMPANY, INC.
PO BOX 503
NITRO, WV 25143



Jay W. DeBoer
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS
CONTRACTOR

CLASSIFICATIONS H/H

NUMBER: 2705041075 EXPIRES: 01-31-2021

KANAWHA STONE COMPANY, INC.
PO BOX 503
NITRO, WV 25143



(FOLD)

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

DPOR-PC (02/2017)

LICENSE PRIVILEGES AND INSTRUCTIONS

This license, certificate, or registration is issued to the individual or business named on the front of this document and is **NOT TRANSFERABLE**. Notify the Board of changes to name (individual, business, and/or trade), mailing address, or location.

The privileges of this license, certificate, or registration are hereby granted to the individual or business to operate in accordance with the terms of the license, certificate, or registration herein designated and the applicable statutes of the Commonwealth of Virginia and the regulations of the Board.

The privileges conferred by this license, certificate, or registration shall continue until the expiration date. However, the license, certificate, or registration may be suspended or revoked prior to expiration.

Information about our agency, boards, and programs can be found at <http://www.dpor.virginia.gov>. Any questions relative to the issuance, privileges and maintenance of your license, certificate, or registration should be addressed to the Board.

THIS DOCUMENT AND POCKET CARD CONTAIN SECURITY FEATURES. ALTERATION OF THIS DOCUMENT OR A POCKET CARD, USE AFTER EXPIRATION, OR USE BY ANOTHER INDIVIDUAL OR BUSINESS MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

THIS DOCUMENT AND POCKET CARD
CONTAIN SECURITY CARD FEATURES.
ALTERATION OF THIS DOCUMENT
OR POCKET CARD, USE AFTER
EXPIRATION, OR USE BY ANOTHER
INDIVIDUAL OR BUSINESS MAY
RESULT IN CRIMINAL
PROSECUTION UNDER THE
CODE OF VIRGINIA.

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

11-30-2020

NUMBER

4008001190

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION



DIVERSIFIED PROPERTY SERVICES OF VIRGINIA INC
20 E TIMONIUM ROAD
SUITE 111
TIMONIUM, MD 21093-0000



Jay W. DeBoer
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION
NUMBER: 4008001190 EXPIRES: 11-30-2020

DIVERSIFIED PROPERTY SERVICES OF VIRGINIA INC
20 E TIMONIUM ROAD
SUITE 111
TIMONIUM, MD 21093-0000



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0410000161

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

PROFESSIONS: ENG



TIMMONS GROUP INC
608 PRESTON AVE STE 200
CHARLOTTESVILLE, VA 22903



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION
NUMBER: 0410000161 EXPIRES: 02-28-2022
PROFESSIONS: ENG
TIMMONS GROUP INC
608 PRESTON AVE STE 200
CHARLOTTESVILLE, VA 22903



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
12-31-2021

NUMBER
0405000456

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

PROFESSIONS: LA, LS, ENG



TIMMONS GROUP INC
1001 BOULDERS PKWY STE 300
RICHMOND, VA 23225



Mary Brock-Vaughan
Mary Brock-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
PROFESSIONAL CORPORATION REGISTRATION
NUMBER: 0405000456 EXPIRES: 12-31-2021
PROFESSIONS: LA, LS, ENG
TIMMONS GROUP INC
1001 BOULDERS PKWY STE 300
RICHMOND, VA 23225



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2021

NUMBER

0407004111

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

PROFESSIONS: ENG



MCCORMICK TAYLOR INC
2001 MARKET ST
TWO COMMERCE SQUARE
PHILADELPHIA, PA 19103



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

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DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407004111 EXPIRES: 12-31-2021
PROFESSIONS: ENG
MCCORMICK TAYLOR INC
2001 MARKET ST
TWO COMMERCE SQUARE
PHILADELPHIA, PA 19103



(FOLD)

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

DPOR-PC (02/2017)

PATENTS 6,187,206 5,344,119

COMMONWEALTH of VIRGINIA

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

EXPIRES ON
02-28-2022

NUMBER
0411000771

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



MCCORMICK TAYLOR INC
2001 MARKET ST
TWO COMMERCE SQUARE
PHILADELPHIA, PA 19103



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)
(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000771 EXPIRES: 02-28-2022
PROFESSIONS: ENG
MCCORMICK TAYLOR INC
2001 MARKET ST
TWO COMMERCE SQUARE
PHILADELPHIA, PA 19103



(FOLD)

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

DPOR-PC (02/2017)

PATENTS 8,119,786 5,340,159

DPOR License Lookup

License Number 0411000864

License Details

Name	ACCUMARK INC
License Number	0411000864
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	9500 KING AIR COURT, ASHLAND, VA 23005
Initial Certification Date	2011-09-15
Expiration Date	2022-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0403001810	RICHARDSON, FRANK R II	Land Surveyor License	Land Surveying	2021-06-30

Showing 1 to 1 of 1 entries

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DPOR License Lookup build 1,377 (built 2020-05-13 05:28:12).

DPOR License Lookup

License Number 0407005172

License Details

Name	ACCUMARK INC
License Number	0407005172
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	9500 KING AIR CT, ASHLAND, VA 23005
Initial Certification Date	2008-03-28
Expiration Date	2021-12-31

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402010372	LABAUGH, W C III	Professional Engineer License	Engineering	2021-08-31

Showing 1 to 1 of 1 entries

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DPOR License Lookup build 1,377 (built 2020-05-13 05:28:12).

DPOR License Lookup License Number

0407002864

License Details

Name	ALVI ASSOCIATES, INC.
License Number	0407002864
License Description	Business Entity Registration
Rank	Business Entity
Address	110 WEST RD STE 250, TOWSON, MD 21204
Initial Certification Date	1988-04-04
Expiration Date	2021-12-31

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402033361	ALVI, IRFAN AHMAD	Professional Engineer License	Engineering	2021-02-28

Showing 1 to 1 of 1 entries

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411000384

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

PROFESSIONS: ARC, ENG



ECS MID-ATLANTIC LLC
2119-D NORTH HAMILTON ST
RICHMOND, VA 23230




Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2022

NUMBER

0411000381

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

PROFESSIONS: ENG



ECS-MID-ATLANTIC LLC
7670 ENON DR STE 101
ROANOKE, VA 24019



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

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COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000381 EXPIRES: 02-28-2022
PROFESSIONS: ENG
ECS-MID-ATLANTIC LLC
7670 ENON DR STE 101
ROANOKE, VA 24019



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

05-31-2021

NUMBER

0402059643

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



DAVID WAYNE JOHNSON
17350 ARROWOOD PLACE
ROUND HILL, VA 20141



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR AP/LS/CID/LA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402059643 EXPIRES: 05-31-2021

DAVID WAYNE JOHNSON
17350 ARROWOOD PLACE
ROUND HILL, VA 20141



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

06-30-2022

NUMBER

0402039440

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



STEVEN KLINE KUNTZ
14571 STONY CREEK COURT
HAYMARKET, VA 20169



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402039440 EXPIRES: 06-30-2022

STEVEN KLINE KUNTZ
14571 STONY CREEK COURT
HAYMARKET, VA 20169



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

06-30-2022

NUMBER

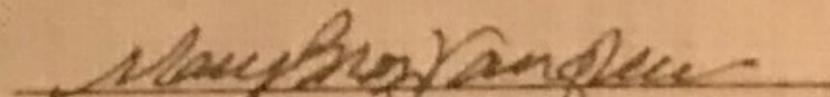
0402023310

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



DALE HARDY GRIGG JR
509 RAMBLEWOOD RD
FOREST, VA 24551




Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Jeffrey Mays – Program Manager
b. Project Assignment: Design-Build Project Manager
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Archer Western Construction, LLC
d. Employment History: With this Firm 17 Years With Other Firms 3 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): Archer Western Construction, LLC, 2019-Present, Program Manager As a Program Manager, Mr. Mays is responsible for overall direction, completion and financial outcome of specific large-scale projects and/or multiple projects in the Mid-Atlantic, including leading multidisciplinary teams, actively collaborating with business development, and providing strategic direction across business group initiatives. He represents the organization's interests and forges critical relationships with a specific target client base. Archer Western Construction, LLC, 2012-2019, Senior Project Manager As a Senior Project Manager, Mr. Mays was responsible for overall project delivery including coordination and management of: design-build policies/procedures, safety processes, risk mitigation, quality management, stakeholder coordination, subcontractor solicitation, negotiation, award and contract administration; cost control for self-performed work and subcontractors; design and maintenance of Primavera CPM schedule; material/equipment procurements; monthly job status summaries; estimating; chaired weekly progress and coordination meetings; training staff; and execution of monthly pay applications. Archer Western Construction, LLC, 2004-2012, Project Manager: As a Project Manager, Mr. Mays was responsible for project administration, including project start-up, staffing, and contract negotiation with subcontractors and suppliers. He oversees maintenance of quality control systems, schedule requirements, construction of the project, cost accountability, and the establishment of management systems. It was Mr. Mays' duty to ensure close coordination among all project team members, ensuring owners a successful project delivery.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Tech, Blacksburg, VA / Bachelor of Science / 2002 / Civil and Environmental Engineering University of Texas, Austin, TX / Master of Science / 2003 / Construction Engr and Project Mgmt
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) METRO Crenshaw/LAX Light Rail Project (DB), (\$1.4B), Los Angeles, CA Role: DB Project Manager Firm: Walsh Construction (AWC Affiliate) Dates: 2016-2019 <ul style="list-style-type: none">• Led a staff of over 200 supervisors and 1,000 self-performing craft workers.• Responsible for Risk Management and Mitigation strategies• Supervised the design, permitting, and construction on the fast-tracked design-build project• Coordinated with multiple stakeholders utilizing oral, written, and social media outlets to assure public and all stakeholders were informed

- Managed the project control and document control systems
- Managed labor and procured subcontractors and materials in time to meet a demanding schedule
- Applied safety, environmental, and quality plans
- Administered schedule to ensure milestones were met

The project is an 8.5-mile light rail line that includes 5.5 miles of at-grade track, 3,600 feet of cast-in-place bridge structures, 4,600 feet of U-wall, 4,700 feet of cut and cover trench and approximately 6,000 feet of dual bored tunnels. In addition, the project includes 8 stations and a signature parabolic bridge over I-405, the busiest and most congested freeway in the U.S., where Walsh used innovative design and construction techniques to temporarily shore the new parabolic bridge structure off an existing rail bridge to drastically minimize impacts to traffic and mitigate project risks.

Similarities to I-81 Project: *Design-Build delivery, bridge construction, retaining walls, asphalt, drainage, Interstate and roadwork, utility relocations, multi-phase traffic management, workforce development, procurement coordination, schedule management, environmental considerations, stakeholder coordination, DBE coordination*

CTxHC SH 130 Segments 5 & 6 (DB), (\$1.0B), Lockart, TX

Role: Project Manager

Firm: Archer Western Construction

Dates: 2009-2011

- Responsible for Risk Management and Mitigation strategies
- Developed and managed the project control and document control systems
- Managed labor and procured subcontractors and materials in time to meet a demanding schedule
- Applied safety, environmental, and quality plans
- Administered schedule to ensure milestones were met including constructing 68 bridges in 2 years.
- Provided constructability reviews on design to minimize conflicts that could affect schedule

This privately developed Design-Build project spanned over 40 miles of private toll road from Mustang Ridge through Lockhart to IH-10 in Seguin, Texas. AWC's scope included 68 bridges, 31 retaining walls, and over 40 miles of roadway including work along Interstate 10 and 183.

Similarities to I-81 Project: *Design Build, interstate highway construction, bridge construction, retaining walls, multi-phase due to permitting, stormwater management considerations, environmental considerations, innovative design and construction techniques, stakeholder coordination*

TxDOT SH45 – I-35 & Hester's Crossing (\$136M), Austin, TX

Role: Project Manager

Firm: Archer Western Construction

Dates: 2004-2008

- Managed labor and procured subcontractors and materials in time to meet a demanding schedule
- Applied safety, environmental, and quality plans
- Administered schedule to ensure milestones were met
- Developed and managed the project control and document control systems
- Tracked quantities, cost accounting, coordinate weekly client meetings, assure work planning was completed
- Managed self-perform crews, heavy equipment, and subcontractors to assure schedule was met

This project included 2.3 miles of new interstate highway construction and widening, interchange reconstruction, direct connectors, frontage roads, ramps, and toll plaza facilities. Additional scope included retaining walls, concrete and asphalt paving, storm sewers, stormwater management facilities, MBGF, sign structures, MOT, electrical work, and ITS communication.

Similarities to I-81 Project: *Interstate highway widening, bridge construction, retaining walls, utility relocations, drainage multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

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

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

Not applicable for this position

- Applied safety, environmental, and quality plans
- Administered schedule to ensure milestones were met

This design-build 1485 MW natural gas plant included drilling and blasting, excavations and grouting karst type voids while completing auger cast pile foundations. Project consisted of three of GE's latest technology 7HA.02 Gas Turbines, 3 Heat Recovery Steam Generators, and a Steam Turbine. Project peaked at over 800 craft employees onsite.

Similarities to I-81 Project: *Design-Build delivery, multiple trades & subcontractor coordination, procurement coordination, schedule management, environmental considerations, stakeholder coordination*

Intercounty Connector B (DB), (\$550M), Beltsville, MD

Role: Design Integration Manager

Firm: MD-200 Constructors (Kiewit / Wagman / Corman JV)

Dates: 2009-2010

- Oversight of 120 designers on this design-build project.
- Acquired permits in multiple phases to allow for rapid construction to meet schedule
- Coordinated design and delivery of ITS/TTMS equipment to meet schedule requirements
- Provided constructability reviews on design to minimize conflicts that could affect schedule
- Supported the DBPM while supervising the design, permitting, and construction activities

This design-build project involved the construction of approximately 7 miles of new 6-lane toll road. The work includes 2.4 million cu. yd. of excavation, 1.7 million cu. yd. of embankment, 500,000 sq. yd. of new pavement section, 20 retaining walls or 3000 LF ranging from 5 to 28 ft tall, over 80,000 LF of drainage, and 15 Bridges totaling over 600,000 sf of deck over environmentally sensitive land.

Similarities to I-81 Project: *Design Build, bridge construction, retaining walls, utility relocations, multi-phase due to permitting, environmental considerations, sound walls, stakeholder coordination*

I-495/95 Telegraph Road Interchange (\$230M), Alexandria, VA

Role: Asst. Project Manager

Firm: CK Constructors (Corman / Kiewit JV)

Dates: 2008-2009

- Supported the PM while supervising the design, permitting, and construction
- Provided constructability reviews on all design to assure limited issues occurred in the field that would affect performance and schedule
- Worked with designers and public information specialists to assure project plans were communicated to all stakeholders for review and comment
- Administered the contract and managed schedule to assure disputes were resolved and project was completed timely
- Tracked quantities, cost accounting, coordinate weekly client meetings, assure work planning was completed
- Managed self-perform crews, heavy equipment, and subcontractors to assure schedule was met

This project included the construction of 11 bridges (3 structural steel, 8 AASHTO), two box culverts, new ramp alignments, roadway drainage system, multiple utility relocations (gas, water, sewer), and support of excavation installation. Project was located at the I-495 / Telegraph Road Interchange.

Similarities to I-81 Project: *Interstate highway workzone, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, sound walls, stakeholder coordination*

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

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

Current Assignments:

- Route 9 Traffic Calming Project, Hillsboro, VA, Senior PM, through December 2020
- Back River Wastewater Treatment ENR 4, Baltimore, MD, Senior PM, through October 2020

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Dale H. Grigg, PE/Service Executive
b. Project Assignment: Quality Assurance Manager (QAM)
c. Name of the Firm with which you are employed at the time of submitting SOQ.: MBP
d. Employment History: With this Firm 9 Years With Other Firms 38 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): MBP: (4/2011-Present) As Branch Manager and Service Executive - oversees a variety of transportation programs, providing direct client coordination and quality assurance (QA) for a staff of more than 60 construction professionals. NXL: (01/2008 – 4/2011) As Director for Construction Management Services, served as Contract Manager and directed quality assurance and quality control (QA/QC) activities on all forms of transportation projects. Assessed project needs and coordinated construction engineering and inspection (CEI) staff. Independent QAM for joint design-build projects ensuring all contract requirements and specifications were appropriately administered and applied; all required QC testing and independent QA/IA/IV was carried out in accordance with applicable requirements ensuring construction quality standards were met; and payments appropriately processed. VDOT, Lynchburg District: (09/2006 – 12/2007) As Acting District Administrator, responsibilities included oversight of construction, maintenance, and operations activities for primary and secondary road networks employing over 650 full time employees and contract services with an annual budget of \$150 million. VDOT, Lynchburg District: (06/1995 – 08/2006) - District Construction Engineer. Program Manager for all Preliminary Engineering, R/W, Construction and Post-Construction activities administered by the District.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University/Blacksburg, VA/BS/1976/Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1992/Professional Engineer/Civil/VA #0402023310
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) Odd Fellows Rd/ US Rte 29/460 Interchange (DB) (\$30M), Lynchburg, VA Role: Quality Assurance Manager Firm: MBP Dates: 2014-2019 <ul style="list-style-type: none">• Provided Quality Assurance services (developed the project's QA/QC plan)• Provided Quality Assurance inspection and testing, and project records management services during the construction phase.• Prepared, maintained, and submitted project documentation including diaries, EEO, ARRA, materials notebook/documentation, as-built sketches, and monthly pay documents including verifying and approving monthly pay packages; prepared and submitted final records• Managed the QA inspection team• Coordinated QA with the design builder's QC inspection staff

This design-build project includes the construction of a new diamond interchange for route 29/460 and Odd Fellows Road. Project elements included a new bridge over a divided highway, improvements to existing Odd Fellows Road, and the construction of two new roundabouts.

Similarities to I-81 Project: *Design-Build delivery, interstate highway construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

I-81 Operational Improvements MM 120-125 (DB), (\$70M), Salem, VA **Role:** Quality Assurance Manager
Firm: NXL **Dates:** 2010-2011

- Provided Quality Assurance services (developed the project's QA/QC plan)
- Provided Quality Assurance inspection and testing, and project records management services during the construction phase.
- Prepared, maintained, and submitted project documentation including diaries, EEO, ARRA, materials notebook/documentation, as-built sketches, and monthly pay documents including verifying and approving monthly pay packages; prepared and submitted final records
- Managed the QA inspection team
- Coordinated QA with the design builder's QC inspection staff

The project involved the construction of a parallel truck climbing lane including drainage and roadway shoulder improvements, retaining walls, and the replacement of three bridges.

Similarities to I-81 Project: *Design-Build delivery, interstate highway construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

Route 36 Improvements Design-Build (\$8.2M), Richmond, VA **Role:** Quality Assurance Manager
Firm: NXL **Dates:** 2010-2011

- Provided Quality Assurance services (developed the project's QA/QC plan)
- Provided Quality Assurance inspection and testing, and project records management services during the construction phase.
- Prepared, maintained, and submitted project documentation including diaries, EEO, ARRA, materials notebook/documentation, as-built sketches, and monthly pay documents including verifying and approving monthly pay packages; prepared and submitted final records
- Managed the QA inspection team
- Coordinated QA with the design builder's QC inspection staff

This VDOT/ARRA design-build project included construction improvements to Route 36 and Route 144 near Fort Lee's Sisisky Gate located in Prince George County, VA.

Similarities to I-81 Project: *Limited access highway type construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

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

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

Current Assignments:

- Currently serving in the role of Project Manager for multiple locally administered projects (LAP), which will be completed by February 2021
- City of Lynchburg, Lakeside Drive Over Blackwater Creek DB Project, Executive oversight to QAM, assignment concludes upon award of I-81 DB project.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Steven K. Kuntz, PE, DBIA, Vice President
b. Project Assignment: Design Manager (DM)
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Dewberry Engineers Inc.
d. Employment History: With this Firm 21 Years With Other Firms 0 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Dewberry Engineers Inc.; 2018-Present, Business Unit Manager/Project Manager/Design Manager: Responsible for oversight of Dewberry’s mid-Atlantic transportation design group (“Business Unit” (BU)) including roadway, structural, hydraulic, traffic, and environmental disciplines in the Fairfax, Gainesville and Richmond offices in Virginia and Baltimore office in Maryland. Responsibilities include oversight of project managers and senior staff, oversight of financial status of the BU, decision making for project pursuits and business opportunities, and coordination with other BU leaders within the company. Project management responsibilities are associated with several design-build and design-bid-build projects, for which Steve remains responsible for project oversight, contract management, signing & sealing final deliverables, implementation of QA/QC plans, and attendance at progress meetings. Dewberry Engineers Inc, 2004-2018, Project Manager/Design Manager: Responsible for design oversight and management for multiple design-build and design-bid-build projects, including coordination with subconsultants and all discipline leads required for project completion. Discipline lead coordination included internal design services for roadway, structural, hydraulic, traffic and environmental permitting services. Led internal design meetings with project team members and attended meetings with design-build partners and clients/owners for each of the projects serving in a management role. Responsible for signing and sealing roadway plans as the roadway engineer and hydraulic engineer for roadway drainage elements. Early responsibilities during this period included development of horizontal alignments and vertical profiles, superelevation calculations, roadway drainage computations and design, development of grading plans and cross sections, erosion & sediment control plans, preparation of roadway construction plans and right-of-way acquisition plans, and coordination with other project engineers for completion of comprehensive transportation infrastructure plan sets.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute & State University, Blacksburg, VA / BS / 1999 / Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2004 / Professional Engineer / Virginia #0402 029440 2010 / Design Build Institute of America (DBIA) Designated Design-Build Professional
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"><i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i><i>Note whether experience is with current firm or with other firm.</i><i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>I-64 Capacity Improvements, Segment I Design-Build, Newport News, Virginia Role: Design Manager Firm: Dewberry Engineers Inc.; Dates: 3/2015 – 12/2017 Responsibilities & Specific Job Duties: Steve oversaw all elements of design and ensured that roadway, traffic, structure, and stormwater management elements were coordinated. Steve led the design effort to incorporate shoulder strengthening through the eastern portion of the project to facilitate future use as a “managed” lane in an effort to provide additional congestion relief in peak periods. Steve also coordinated directly with design subconsultants to provide updated aerial mapping, utility designations and test pits, geotechnical investigations and recommendations, and noise analysis, and developed the public outreach information and graphics for the noise barrier public coordination and voting process for over 2 miles of new noise barriers. Steve develop the complex spreadsheets used for calculation and derivation of proposed pavement elevations to ensure longitudinal and cross-slopes were within tolerances, algebraic changes were acceptable over every 25’ increment, minimum and maximum overlay thicknesses were achieved, and rideability requirements could be met. During construction, Steve attended monthly progress meetings and oversaw construction support efforts to respond to questions and review shop drawings.</p>

Similarities to I-81 Project: Design of interstate median widening with a bifurcated typical section; minimization of right-of-way impacts through design enhancements; design of noise barriers; closed system drainage facility design and analysis; modifications of interchange ramps within project limits; development of multi-phased temporary traffic control plans; coordination with adjacent projects.

I-64 Capacity Improvements, Segment III Design-Build, York County, Virginia **Role:** Design Manager & Responsible Charge Engineer

Firm: Dewberry Engineers Inc.;

Dates: 1/2018 – 2/2020 (design), 12/2021 (construction support)

Responsibilities & Specific Job Duties: Steve oversaw all design activities and led design coordination efforts to ensure that roadway, structure, stormwater management, traffic, and environmental permitting elements were coordinated. During preliminary design, Steve led the development of alternate horizontal alignments for I-64 which eliminated the need for a 1,300 linear foot retaining wall in the median of I-64. By shifting the travel lanes slightly to the outside (possible since the entire existing pavement structure was to be demolished and replaced), the bifurcation between travel lanes could be accommodated with “open-section” grading and standard barriers in-lieu of the retaining wall. Steve coordinated directly with subconsultants providing updated aerial mapping, utility designations and test pits, geotechnical investigations, and noise analysis. Based on the final noise analysis, three additional noise barriers totaling approximately 6,500 linear feet were required to be added to the plans. Steve oversaw plan revision efforts to incorporate the additional noise barriers by adding closed system drainage facilities and modifications to minimize additional right-of-way acquisitions and environmental permit modifications for the additional scope. He also attended each of the public outreach meetings to explain and discuss the noise analysis process and results to the adjacent communities and impacted and benefitted property owners. Now that all design efforts are complete and the project is under construction, Steve continues to attend monthly progress meetings and oversee construction support services to provide responses to questions and review of shop drawings.

Similarities to I-81 Project: Design of interstate median widening with a bifurcated typical section; minimization of right-of-way impacts through design enhancements; design of noise barriers; closed system drainage facility design and analysis; modifications of interchange ramps within project limits; development of multi-phased temporary traffic control plans; coordination with adjacent projects.

I-95/Route 630 Reconstruction & Widening Design-Build, Stafford County, Virginia **Role:** Design Manager & Responsible Charge Engineer

Firm: Dewberry Engineers Inc.;

Dates: 11/2016 – 7/2020

Responsibilities & Specific Job Duties: Steve oversaw all design activities and led design coordination efforts to ensure that roadway, structure, stormwater management, traffic, and environmental permitting elements were coordinated for the development of three separate plan sets for (1) the replacement I-95/Route 630 Interchange and realignment of Route 630 for approximately 1 mile; (2) the widening of Route 630 for approximately 1.5 miles; and (3) new park & ride facilities (two separate lots) providing nearly 1,100 parking spaces adjacent to I-95. The new I-95/630 Interchange consisted of a diverging diamond interchange (DDI) with new parallel bridges over I-95 to replace the existing diamond interchange which passed below I-95 approximately 800’ further to the north. Steve oversaw development of all final design of this new interchange, including modifications to lane and intersection configurations at the relocated Wyche Road intersection based on additional coordination with VDOT traffic engineering staff. For the Widening element of the project, Steve oversaw development of final plans which were required to remain within right-of-way and easements which were acquired by VDOT prior to the design-build advertisement. Steve led roadway and drainage staff to implement slope adjustments and drainage modifications so that additional easements were not required due to changes in existing conditions since acquisitions had been completed. For the park & ride facilities, Steve oversaw design efforts and coordinated with VDOT staff to identify an alternate parking lot site so that right-of-way impacts could be minimized and development potential for adjacent property owners could be maintained near the proposed intersection of Wyche Road and Courthouse Road. Steve coordinated directly with subconsultants providing updated aerial mapping, utility designations and test pits, geotechnical investigations, and noise analysis, most of which was completed simultaneously for each of the three project elements. Steve attended multiple public outreach meetings and information meetings to review the DDI operations with local communities, residents, and new drivers at Colonial Forge High School, located within the limits of the Widening element of the project. During construction, Steve attended monthly progress meetings and oversaw construction support efforts to respond to questions and review shop drawings.

Similarities to I-81 Project: Design of auxiliary lane improvements on an interstate; interchange reconstruction on an interstate; design of noise barriers; development of multi-phased temporary traffic control plans.

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

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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Kevin Kegebein, Construction Manager
b. Project Assignment: Construction Manager (CM)
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Archer Western Construction, LLC
d. Employment History: With this Firm 14 Years With Other Firms 7 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): Archer Western Construction, 2017-Present, Construction Manager: As a Construction Manager, Mr. Kegebein is responsible for management of construction operations, including project start-up and staffing. He oversees application of quality control systems, schedule requirements, construction of the project, cost accountability, and the implementation of safety and environmental systems. Walsh Construction Company (Archer Western Affiliate), 2006-2017, Project Manager: As a Project Manager, Mr. Kegebein is responsible for project administration, including project start-up, staffing, and contract negotiation with subcontractors and suppliers. He oversees maintenance of quality control systems, schedule requirements, construction of the project, cost accountability, and the establishment of management systems. It is Mr. Kegebein's duty to ensure close coordination among all project team members, ensuring owners a successful project delivery. Volk, Inc, 2004-2006, Draftsmen/Project Coordinator: Mr. Kegebein prepared Wall Sections, Details, and Floor Plans for Design Submittals. Field Work Consisted of Field Measuring and Leveling Circuits, Onsite Supervision, Scheduling.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Purdue University, West Lafayette, Indiana / Bachelor of Science / 2004 / Construction Management
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A Kevin will hold a Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) prior to the commencement of construction.
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) South Capitol St. Corridor Phase 1 (DB) (\$450M), Washington, DC Role: Construction Manager Firm: Archer Western Construction Dates: 2018-Present <ul style="list-style-type: none">• Oversight, coordination and management of roadway operations including oversight of the Superintendents, Project Managers and engineering staff• Coordinating with Design partner, providing constructability analysis, MOT sequence of construction coordination to streamline the scheduling of the operations associated with the new construction of approximately three miles of Roadway/Highway removal and replacement• Applies safety, environmental, and quality plans• Extensive coordination with QA/QC Managers to ensure work meets contract requirements• Extensive, complex management and strategizing for MOT and commuting traffic during construction

This design-build project includes the construction of the six-lane new Frederick Douglass Memorial Bridge (FDMB) with parallel alignment across the Anacostia River. A new traffic oval will be built on the west landing of the bridge to connect to South Capitol and reconnect R Street and Q Street. On the east landing, a new traffic oval will connect South Capitol to Anacostia Drive and Howard Road. Construction also includes widening and reconstruction of I-295 for 2.1 miles as well as bikeway and pedestrian access to the FDMB. The project will conclude with final demolition of the existing bridge and final landscaping and streetscape.

Similarities to I-81 Project: *Design-Build delivery, interstate highway construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, sound walls, stakeholder coordination*

Ohio River Bridge-Downtown Crossing (DB), (\$894M), Louisville, KY **Role:** Construction Manager

Firm: Walsh Construction (Archer Western Affiliate)

Dates: 2012-2014

- Oversight, coordination and management of land-based operations including oversight of the Superintendents, Project Managers and engineering staff
- Coordinating with Design partner, providing constructability analysis, MOT sequence of construction coordination to streamline the scheduling of the operations associated with the construction of approximately 4 miles of interstate highway and a system to system interchange
- Applies safety, environmental, and quality plans
- Extensive coordination with QA/QC Managers to ensure work meets contract requirements
- Procurement of material suppliers, subcontractors with over \$40M in DBE/MBE commitments
- Extensive, complex management and strategizing for MOT and commuting traffic during construction
- Supported the DBPM while supervising the design, permitting, and construction activities

This design-build project included reconfiguring I-65 and I-71 and rebuilding 45 structures including the Kennedy Interchange in Downtown Louisville, building a new cable-stayed I-65 bridge, repairing the existing Kennedy Memorial Bridge crossing, and constructing a new segment of northbound I-65 on the Indiana side of the project.

Similarities to I-81 Project: *Design-Build delivery, interstate highway construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, sound walls, stakeholder coordination*

US 65/60 Interchange Reconstruction (\$58M), Springfield MO

Role: Project Manager

Firm: Walsh Construction (Archer Western Affiliate)

Dates: 2009-2012

- Developed and managed the project control and document control systems
- Managed labor force and procured subcontractors and materials in time to meet a demanding schedule
- Coordinated contractor requests for information and conducted change-order reviews.
- Claims avoidance and dispute resolution
- Applying health and safety plans
- Review and approval of pay estimates

The complex, project included replacing two cloverleaf loop ramps with directional "flyover" ramps. Bridges were built on US 60 over the railroad tracks just west of US 65. This project also includes four bridges over BNSF railroad tracks (two bridges as part of "flyover" ramps and two bridges carrying U.S. 60 traffic), replacing the northbound U.S. 65 bridge over U.S. 60 and rebuilding southbound U.S. 60 bridge over U.S. 60, and replacing the westbound U.S. 60 bridge over Lake Springfield and widening eastbound U.S. 60 bridge over Lake Springfield.

Similarities to I-81 Project: *Interstate highway type construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

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

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

Current Assignments:

- South Capitol Street Corridor Phase 1, Washington DC, Construction Mgr, through December 2020 (Kevin will be leaving the project prior to the project completion date)

This design-build project includes the construction of the six-lane new Frederick Douglass Memorial Bridge (FDMB) with parallel alignment across the Anacostia River. A new traffic oval will be built on the west landing of the bridge to connect to South Capitol and reconnect R Street and Q Street. On the east landing, a new traffic oval will connect South Capitol to Anacostia Drive and Howard Road. Construction also includes widening and reconstruction of I-295 for 2.1 miles as well as bikeway and pedestrian access to the FDMB. The project will conclude with final demolition of the existing bridge and final landscaping and streetscape.

Similarities to I-81 Project: *Design-Build delivery, interstate highway construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, sound walls, stakeholder coordination*

METRO Crenshaw/LAX Light Rail Project (DB), (\$1.4B), Los Angeles, CA **Role:** Senior Safety Manager

Firm: Walsh Construction (AWC Affiliate)

Dates: 2016-2018

- Development and implementation of site-specific health and safety plan
- Responsible for Risk Management and Mitigation strategies as it pertains to safety concerns
- Supervised Health and safety team of nine individuals
- Development and implementation of site-specific health and safety plan
- Conducted regular safety meetings with all project personnel, performs safety inspections and enforced compliance to industry standards
- Extensive coordination with MOT Managers to understand safety aspects of the workzone
- Key point of contact for issues arising from safety or incident management

The project is an 8.5-mile light rail line that includes 5.5 miles of at-grade track, 3,600 feet of cast-in-place bridge structures, 4,600 feet of U-wall, 4,700 feet of cut and cover trench and approximately 6,000 feet of dual bored tunnels. In addition, the project includes 8 stations and a signature parabolic bridge over I-405, the busiest and most congested freeway in the U.S., where Walsh used innovative design and construction techniques to temporarily shore the new parabolic bridge structure off an existing rail bridge to drastically minimize impacts to traffic and mitigate project risks.

Similarities to I-81 Project: *Design-Build delivery, bridge construction, retaining walls, asphalt, drainage, Interstate and roadwork, utility relocations, multi-phase traffic management, workforce development, procurement coordination, schedule management, environmental considerations, stakeholder coordination, DBE coordination.*

Jones Branch Connector over I-495 (\$45M), Tysons, VA

Role: Regional Safety Manager

Firm: Archer Western Construction

Dates: 2018-2019

- Development and implementation of site-specific health and safety plan
- Conducted regular safety meetings with all project personnel, performs safety inspections and enforced compliance to industry standards
- Extensive coordination with MOT Managers to understand safety aspects of the workzone
- Key point of contact for issues arising from safety or incident management

The project involved construction of a new four-lane road and bridge from the I-495 Express Lanes/Jones Branch Drive interchange to Scotts Crossing Road. Improvements were also made along the access road from Jones Branch Drive to the I-495 Express Lanes, and Scotts Crossing Road.

Similarities to I-81 Project: *VDOT project, Interstate highway type construction, bridge construction, retaining walls, utility relocations, multi-phase TMP/MOT, environmental considerations, stakeholder coordination*

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

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

Current Assignments:

- South Capitol Street Corridor Phase 1, Washington DC, Construction Mgr, through December 2020 (Ritchie will be leaving the project prior to the project completion date)

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
South Capitol Street Corridor Phase 1 (DB) Washington, DC	AECOM Technical Services, Inc.	Name of Client: DDOT Project Manager: Rick Kenney Phone: (202) 671-2249 Email: richard.kenney@dc.gov	12/2021 (Estimated)	12/2021 (Estimated)	\$ 440,786	\$450,869* * Difference due to Owner added scope	\$ 234,575

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



SIMILARITIES TO
I-81 WIDENING MM 136.6 TO MM 141.8

- Design-Build Delivery
- Interstate Highway Widening
- Bifurcated lanes
- Asphalt paving
- Multi-stage bridge construction/replacement
- Utility relocations & Avoidance
- Adjacent Project Coordination
- Environmental Permitting and Strict Compliance Monitoring
- Storm Drainage and SWM Pond Facilities
- MOT Operations minimizing impacts
- Noise barrier analysis, design, and construction
- Independent QA program
- AWC responsible for QC program
- Public involvement and Outreach
- Third Party Stakeholder communication & coordination

ARCHER WESTERN'S ROLE:

Archer Western's role in the project was the Managing Member of the South Capitol Bridgebuilders JV and lead contractor. In this capacity Archer Western had overall responsibility and management of the complete scope of work including all design and engineering, utility relocations, permitting, quality control, construction, public outreach, and overall project administration and management. Archer Western was the primary point of contact with the owner and created and monitored the project schedule.

PROJECT NARRATIVE AND SCOPE:

In June 2017, South Capitol Bridgebuilders (AWC managing member of JV), was awarded the contract for the design and construction of a new Anacostia River crossing (Frederick Douglass Memorial Bridge) and widening and reconstruction along I-295 in Washington, DC. Specific elements of the project included:

- Widening of I-295 from six to 8-lanes for approximately 2.1 miles;
- Replacement of I-295 bridges over Firth Sterling Ave, Suitland Pkwy, Howard Rd, and Good Hope Rd;
- Interchange/Ramp improvements at the Howard Rd and Suitland Pkwy Interchanges;
- Stormwater management improvements;
- Drainage improvements and adequate outfall channel enhancements;
- New 3-span arch bridge over the Anacostia Rive
- New traffic ovals at each end of the river crossing
- Noise barrier analysis, design, and construction; and
- Public outreach

All interstate work was performed on a heavily traveled roadway and all lane restrictions were coordinated by Archer Western with DDOT to allow for public notifications of construction activity.

Archer Western in partnership with DDOT developed a local area hiring program that targeted existing workforce development programs, and established an "On-The-Job" (OJT) program. The program is organized by job types and is structured as an apprenticeship program with the goal of graduation to journeyman status. (*Critical Risk #3 Mitigation Strategy*)

LIMITING IMPACTS TO THE TRAVELING PUBLIC/AFFECTED BUSINESSES AND COMMUNITIES:

Minimizing impacts to the traveling public was a critical aspect of this congested corridor. Archer Western applied the use of a MOT "Task Team" from pursuit phase through TMP implementations. The Task Team was comprised of Designers, Construction personnel, DDOT representatives, and emergency responders (local fire and police). The MOT Task Team developed the TMP around the goals of safety, efficiency, stability, access, and communication. Key components included:

- Assigning a dedicated MOT/Incident Manager responsible for implementing the plan and acting as the single point of contact for all MOT issues (*Critical Risk #1 Mitigation Strategy*)
- Having the MOT Manager attend meetings at the DDOT Traffic Management Center regarding changes in the traffic patterns, lane closures, and upcoming activities
- Dividing the project into three segments each with only two phases until traffic was placed in its final configuration (*Critical Risk #1 Mitigation Strategy*)
- Implementing an Incident Management Plan with communication protocols with law enforcement and emergency responders to clear accidents (*Critical Risk #1 Mitigation Strategy*)
- Strategically located laydown and storage areas to reduce construction traffic and minimize trucks from entering existing traffic lanes (*Critical Risk #1 Mitigation Strategy*)
- Developing a revised roadway profile to minimize the height of bifurcation between MOT phases and provide a safer work zone (*Critical Risk #2 Mitigation Strategy*)
- Use of additional temporary drainage inlets between phases to improve drainage and eliminate ponding, thereby keeping all travel lanes open during rain events (*Critical Risk #2 Mitigation Strategy*)

INNOVATIVE DESIGN SOLUTIONS/CONSTRUCTION TECHNIQUES:

Archer Western utilized our experience and "lessons learned" from several major river crossings and interstate highway widening projects to implement several innovative design solutions. First, the interstate widening/reconstruction scope was extensive enough to allow an optimized roadway alignment and geometry which minimized the amount of temporary pavement, reduced earthwork quantities and eliminated two MOT phases. The revised phasing also minimized nighttime construction work, representing a safety improvement to our team's field staff and inspection staff, as well as reduced impacts to the travelling public.

Additional innovative design solutions included optimizing the river crossing span lengths (eliminating one foundation) and foundation design to limit the amount of "in water" work that needed to be performed. The revised span lengths also reduced the amount of navigation lane closures needed to construct the superstructure. The team also developed designs for preassembled bridge deck elements. Use of preassembly reduced schedule, minimized traffic impacts, improved quality, and eliminated potential safety issues.

SUCCESS IN TAKING AND MANAGING CALCULATED RISKS/REALIZING INCENTIVES:

Archer Western developed a river bridge design that increased span lengths in order to eliminate a water pier. This approach reduced the amount of "in water" work but increased the size of the foundations. The piers were founded on open ended pipe piles to minimize the risk of disturbing the contaminated riverbed. In order to drive pile through the work in water moratorium Archer Western used "bubble curtains" around each pile to create a work zone that fish avoided and dissipated the vibrations from pile driving. The design and construction techniques reduced the bridge foundation schedule by six weeks.

IMPLEMENTING AND MAINTAINING QA/QC PLANS DURING DESIGN AND CONSTRUCTION:

Archer Western's philosophy is that Quality is the responsibility of every worker and is accomplished by using proven checks and balances throughout the course of the project. These systems are implemented on all projects and are formalized in a written job specific Quality Control Plan (QCP). The QCP includes:

- QCP acceptance from all subcontractors as a condition of working on the project.
- Development of Specific Activity Work Plans
- Pre-Activity/Pre-Construction meetings to review the specifications, approved submittals and quality expectations
- Regular quality control testing, as well as quality assurance testing when specified
- Tracking and resolution of quality issues (NCRs)

The quality program on this project includes a dedicated QC Manager and staff who are independent of construction operations. They are involved in the development of all work plans and are treated as a partner more than a policeman in the process.

ON-TIME COMPLETION:

Design plans were completed on-time and construction is currently on-track for on-time completion.

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Ohio River Bridge Downtown Project (DB) Louisville, KY	Jacobs	Name of Client: KTYC Project Manager: Andy Barber Phone: (502) 564-4890 Email: andy.barber@ky.gov	12/2016	11/2016	\$ 860,000	\$894,042* * Difference due to Owner added scope	\$576,657

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



SIMILARITIES TO I-81 WIDENING MM 136.6 TO MM 141.8

- Design-Build Delivery
- Interstate Highway Widening
- Bifurcated lanes
- Asphalt paving
- Multi-stage bridge construction/replacement
- Utility relocations & Avoidance
- Environmental Permitting and Strict Compliance Monitoring
- Storm Drainage and SWM Pond Facilities
- MOT Operations minimizing impacts
- Noise barrier analysis, design, and construction
- Independent QA program
- AWC responsible for QC program
- Public involvement and Outreach
- Third Party Stakeholder communication & coordination

PROJECT NARRATIVE AND SCOPE:

In February 2013, Walsh Construction II (Archer Western affiliate), was awarded the contract for the design and construction of a new Ohio River crossing (Abraham Lincoln Bridge) and widening and reconstruction along I-64, I-65, and I-71 in Louisville, KY. Specific elements of the project included:

- Widening of I-65 from four to 8-lanes for approximately 6.1 miles;
- Widening of I-64 from four to 6-lanes for approximately 1.3 miles;
- Ramp and shoulder improvements at I-65/I-64/I-71 Interchange;
- Replacement of 45 bridge structures over sideroads, railroads, stormwater facilities, and interstate ramps;
- Stormwater management improvements;
- New cable stayed bridge over the Ohio River
- Rehabilitation of the bridge deck of the existing Kennedy river bridge
- Noise barrier analysis, design, and construction; and
- Public outreach

All work was performed on a heavily traveled interstate highway and all lane restrictions were coordinated by Archer Western with KYTC to allow for public notifications of construction activity.

Being new to Louisville, Archer Western partnered with local area high schools, tech/vocational schools, community colleges, and universities to help grow our workforce. An apprenticeship program was established and over the life of the project had 35 graduate to journeyman status. (*Critical Risk #3 Mitigation Strategy*)

ARCHER WESTERN'S ROLE:

This project was constructed by Archer Western Affiliate *Walsh Construction II, LLC*. All Walsh companies operate as a single entity with resources (people, material, equipment) and experience shared as project needs arise. For example, many of our key personnel have experience working on both Walsh Construction and Archer Western Construction projects. It is anticipated that Walsh Construction II will not have a role on this project. However, personnel and construction equipment from Walsh Construction II projects could be assigned to the I-81 Project.

LIMITING IMPACTS TO THE TRAVELING PUBLIC/AFFECTED BUSINESSES AND COMMUNITIES:

Minimizing impacts to the traveling public was a critical aspect of this congested corridor. AWC applied the use of a MOT "Task Team" from pursuit phase through TMP implementations. The Task Team was comprised of Designers, Construction personnel, KYTC and INDOT representatives, and emergency responders (local fire and police). The MOT Task Team developed the TMP around the goals of safety, efficiency, stability, access, and communication. Key components included:

- Establishing weekly MOT/Incident management meetings focused on upcoming construction activities, traffic patterns, and "what if" incident scenarios.
- Assigning a dedicated MOT Manager responsible for implementing the plan and acting as the single point of contact for all MOT issues (*Critical Risk #1 Mitigation Strategy*).
- Having the MOT Manager attend meetings at the KYTC Traffic Management Center regarding changes in the traffic patterns, lane closures, and upcoming activities (*Critical Risk #1 Mitigation Strategy*).
- Implementing an Incident Management Plan with communication protocols with law enforcement and emergency responders to clear accidents (*Critical Risk #1 Mitigation Strategy*).
- Strategically located laydown and storage areas to reduce construction traffic and minimize trucks from entering existing traffic lanes (*Critical Risk #1 Mitigation Strategy*).

INNOVATIVE DESIGN SOLUTIONS/CONSTRUCTION TECHNIQUES:

Archer Western utilized our experience and "lessons learned" from several major river crossings and interstate highway widening projects to implement several innovative design solutions. First, the interstate widening scope was extensive enough to allow an alternate roadway alignment and geometry which minimized the amount of temporary pavement, reduced earthwork quantities and eliminated three MOT phases. The revised phasing also minimized nighttime construction work, representing a safety improvement to our team's field staff and inspection staff, as well as reduced impacts to the travelling public.

Additional innovative design solutions included developing an engineered ground improvements solution in lieu of surcharging to reduce schedule and optimize the design of the retaining walls and foundations. The team also developed designs for multiple prebuilt elements for bridge construction and the existing river crossing deck replacement. Use of preassembly reduced schedule, minimized traffic impacts, improved quality, and eliminated potential safety issues.

SUCCESS IN TAKING AND MANAGING CALCULATED RISKS/REALIZING INCENTIVES:

Part of the winning strategy of this project was the development of an aggressive but achievable schedule. Archer Western's bid schedule was 19 months faster than required, and the project was completed 1-month earlier than this commitment. Additionally, the new cable-stayed bridge opened to traffic 4 months early after construction operations recovered over 60 days from flooding.

Taking the risk to develop an engineered ground improvement method, which was more expensive, paid dividends to the team in the form of a reduced schedule (90 days), optimized MSE wall strap lengths, and reduced long term settlement risk to Archer Western and the owner.

IMPLEMENTING AND MAINTAINING QA/QC PLANS DURING DESIGN AND CONSTRUCTION:

Archer Western's philosophy is that Quality is the responsibility of every worker and is accomplished by using proven checks and balances throughout the course of the project. These systems are implemented on all projects and are formalized in a written job specific Quality Control Plan (QCP). The QCP includes:

- QCP acceptance from all subcontractors as a condition of working on the project.
- Use of IAuditor software and field tablets by field techs to sign off on inspections
- Dedicated sync folders set-up to monitor and track field reports
- Oversight and review of the work as it is put into place
- Tracking and resolution of quality issues (NCRs)

The quality program on this project included a dedicated QC Manager and staff who were independent of construction operations. They are involved in the development of all work plans and are treated as a partner more than a policeman in the process.

ON-TIME COMPLETION:

Design plans were completed on-time and construction achieved substantial completion 1 month ahead of schedule.

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
VDOT I-95 Richmond Bridges Richmond, Virginia	AECOM	Name of Client/ Owner: VDOT Project Manager: Scott Fisher Phone: (804) 674-2452 Email: scott.fisher@VDOT.Virginia.gov	10/24/2014	10/16/2014	\$67,958	\$73,537* *Difference due to Owner added scope & bonus payment	\$51,476

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



SIMILARITIES TO I-81 WIDENING MM 136.6 TO MM 141.8

- Interstate Highway Widening
- Asphalt paving
- Multi-stage bridge construction/replacement
- Use of innovative design solutions and construction techniques
- Taking calculated risks and realizing incentives
- Utility relocations & Avoidance
- Environmental Compliance Monitoring
- MOT Operations minimizing impacts
- AWC provided internal QC program
- Public involvement and Outreach
- Third Party Stakeholder communication & coordination



PROJECT NARRATIVE AND SCOPE:

In September 2010, Archer Western Construction was awarded the contract for the rehabilitation of 20 interstate bridges, two miles of shoulder widening, and the extension of acceleration lanes along I-95 in Richmond, Virginia. Specific elements of the project included:

- Widening shoulders of I-95 from for approximately 2.1 miles;
- Replacement of superstructure (beams, deck, barrier) of 20 Interstate 95 mainline bridges;
- Construction engineering, fabrication, and delivery of pre-constructed bridge units (PCUs)
- Substructure rehabilitation including concrete patching and pier repair;
- Stormwater management improvements along I-95;
- New foundations, substructure, and retaining walls at four bridge widenings;
- Replacement of five pier caps while bridges remained active;
- Utility coordination
- Supported Public outreach

All interstate work was performed on a heavily traveled roadway and all lane restrictions were coordinated by Archer Western with VDOT to allow for public notifications of construction activity.

ARCHER WESTERN'S ROLE:

Archer Western's role in the project was the prime contractor. In this capacity Archer Western had overall responsibility and management of the complete scope of work including all construction engineering, utility relocations, internal quality control, construction, supporting VDOT public outreach, and overall project administration and management. Archer Western was the primary point of contact with the owner and created and monitored the project schedule.

LIMITING IMPACTS TO THE TRAVELING PUBLIC/AFFECTED BUSINESSES AND COMMUNITIES:

Minimizing impacts to the traveling public was a critical aspect of this congested corridor. Archer Western applied the use of a dedicated MOT Superintendent and support team. The Team was comprised of MOT engineers, construction personnel, and MOT device subcontractors and suppliers. Weekly MOT meetings that included our MOT Team, VDOT representatives, and emergency responders (local fire and police) were held to review upcoming activities and the detour routes. Our approach to the implementation of the TMP centered around the goals of safety, efficiency, stability, access, and communication. Key components included:

- Assigning a dedicated MOT Superintendent responsible for implementing the plan and acting as the single point of contact for all MOT issues (*Critical Risk #1 Mitigation Strategy*).
- Developing each bridge replacement plan with site specific details, necessary material, labor and equipment needs, first responder input, and delivery route for PCUs
- Implementing an Incident Management Plan with communication protocols with law enforcement and emergency responders to clear accidents (*Critical Risk #1 Mitigation Strategy*).
- Strategically located laydown and PCU fabrication area to reduce construction traffic and minimize travel distance(*Critical Risk #1 Mitigation Strategy*).
- Developed schedule that restricted bridge demolition and PCU installation to specific weekends each year with hold out for special events and holidays

INNOVATIVE DESIGN SOLUTIONS/CONSTRUCTION TECHNIQUES:

Archer Western utilized our experience and "lessons learned" from a previous VDOT project (James River Bridge Deck Replacement) to develop our approach to engineering, fabricating, and installing the 234 PCUs. First, in order to improve quality, match-casting the pre-constructed composite bridge units was instituted to ensure the fit would work at the installation site. Enhancing the accuracy of the as-built survey (prior to fabrication of the PCUs) to ensure a proper field fit was accomplished using laser scanner technology. The laser scan coupled with detailed field measurements eliminated all potential fit issues.

Lastly, Archer Western utilized "Live Load" shoring in the locations where the five pier caps were replaced. This approach allowed the existing bridges to remain in operation significantly reducing impacts to traffic, improving quality, and eliminating potential safety issues.

SUCCESS IN TAKING AND MANAGING CALCULATED RISKS/REALIZING INCENTIVES:

Archer Western realized that there were multiple opportunities to improve the project schedule through construction engineering, fabrication, and construction techniques.

- Construction Engineering of PCUs – Use of multiple casting beds and fabricating and storing multiple pieces until the installation operation was ready, made each weekend closure more productive and allowed replacement of multiple PCUs during single weekend closures.
- Live Load Shoring – Use of live load shoring for the five pier cap replacements allowed traffic to remain in place and removed this activity from the critical path.
- Specialized equipment – Use of low overhead drill equipment for the drilled shaft operation eliminated the need to temporary relocate overhead utilities and removed this activity from the critical path.

AWC earned a \$3,000,000 "NO EXCUSES" early completion bonus.

IMPLEMENTING AND MAINTAINING QA/QC PLANS DURING DESIGN AND CONSTRUCTION:

Archer Western's quality systems are implemented on all projects and are formalized in a written job specific Quality Control Plan (QCP). While not a requirement on this project AWC's QCP included:

- QCP acceptance from all subcontractors as a condition of working on the project.
- Development of Task Specific Work Plans
- Detailed coordination and review of shop drawings
- Pre-Activity/Pre-Construction meetings to review the specifications, approved submittals and quality expectations
- Oversight and review of the work as it is put into place
- Tracking and resolution of quality issues (NCRs)

ON-TIME COMPLETION:

This challenging bridge replacement and reconstruction project achieved substantial completion **3 months ahead of schedule** and earned a \$3,000,000 "NO EXCUSES" early completion bonus.

ATTACHMENT 3.4.1(b)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-64 Capacity Improvements – Segment I Design-Build Location: Newport News, VA	Name: Shirley Contracting Company, LLC	Name of Client: VDOT Project Manager: Janet M. Hedrick Phone: 757-956-3071 Email: Janet.Hedrick@VDOT.Virginia.gov	3/2015	12/2017	\$84,879	\$101,396* *Difference due to Owner Added Scope	\$6,024

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



SIMILARITIES TO I-81 WIDENING MM 136.6 TO MM 141.8 PROJECT

- Design-Build Delivery
- Interstate Median Widening
- Interstate Bridge Widening & Replacements
- Reduced Property Impacts through Stormwater Management Innovation
- Closed System Median Storm Drainage
- Phased ESC Plans
- Noise Barriers
- High Traffic Volumes & Travel Speeds
- MOT Operations minimizing Congestion
- Updated Comprehensive Field Surveys
- Geotechnical Challenges addressed through Comprehensive Investigations and Design Solutions
- Environmental Permitting and Compliance Monitoring
- Coordination with Adjacent Projects
- QA/QC
- Construction Engineering Inspection

PROJECT NARRATIVE AND SCOPE:
 In 2015, Dewberry (as the lead engineer on our design-build team) was awarded the contract for the widening and pavement rehabilitation of I-64 in York County, Virginia which included:

- Widening of I-64 from four to 6-lanes for approximately 5.2 miles;
- Widening of I-64 bridges over Lee Hall Reservoir and Fort Eustis Boulevard;
- Demolition and replacement of the I-64 bridges over Industrial Park Drive and CSX Railroad;
- Lengthening of the auxiliary lanes at the Fort Eustis Boulevard Interchange;
- Stormwater management improvements;
- Drainage improvements including closed system median storm sewers beneath median barriers supporting raised medians and landscaping/planting areas; and
- Approximately 12,500 linear feet of noise barriers; and

The demolition and replacement of the I-64 bridges over Industrial Park Drive were not required by the RFP, but our team recognized that replacing the bridges would provide a longer-lasting product which required less maintenance. Dewberry developed plans for the new bridges, consisting of 2-span structures instead of matching the existing 3-span structures. During design, VDOT issued a contract modification to strengthen the outside shoulders between the Fort Eustis Boulevard Interchange and the eastern project limit to accommodate a future fourth travel lane in each direction. This additional work was completed as a plan revision to the already approved plans without impacting the schedule.

Dewberry's scope included:

- Updated field surveys;
- Wetland and stream delineations, environmental permitting, and permit monitoring;
- Roadway engineering design;
- Bridge structural designs;
- Hydrologic and hydraulic analysis for the bridges over Lee Hall Reservoir;
- Drainage and stormwater management design;
- Traffic engineering design including signing & marking, ITS, and temporary traffic control design;
- Landscaping design; and
- Public outreach

To advance the start of construction, temporary traffic control plans for outside shoulder strengthening were developed as an advance, separate plan set to allow for construction activities to start while final right-of-way acquisition and construction plans were still being developed.

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

EXPERIENCE LIMITING IMPACTS TO THE PUBLIC, BUSINESSES & COMMUNITIES:
 To reduce impacts to the travelling public, an advance temporary traffic control plan was developed so that shoulder strengthening could be completed during night-time operations, ultimately allowing for all major activities to occur behind concrete barrier. As part of the final improvements, approximately 12,500 linear feet of noise barriers were installed within existing right-of-way, with minimal private property impacts, to provide noise reductions to nearly 1,000 homes and apartments.

USE OF INNOVATIVE DESIGN SOLUTIONS:
 Although the RFP allowed for the widening and rehabilitation of the existing 4-span bridges over Industrial Park Drive and CSXT Railroad, our Team developed plans which provided two new 2-span bridges to completely replace the existing structures. The resulting shorter structures will require less maintenance for VDOT and also provided additional horizontal clearance between the CSXT railroad and the substructure of the bridge. As construction began, the conditions of both bridges and identification of large voids beneath the approach slabs and adjacent to the abutments made it clear that the choice to completely replace both bridges provided a safer and superior overpass of the CSXT railway than what would have been possible through repair and widening of the existing bridges.

SUCCESS IN TAKING & MANAGING CALCULATED RISKS & REALIZING INCENTIVES:
 During the design process, VDOT expressed an interest in adding shoulder strengthening to the contract, with the stipulation that the additional work needed to be completed without a contract time extension. Dewberry worked quickly to complete additional surveys and utility designations so that a plan revision was completed to depict the additional work, allowing construction to continue unimpacted. The additional work, nearly one mile of additional shoulder demolition and repaving, was completed on-time when the project was accepted.

Several risks were also addressed during design. At Industrial Park Drive, our Team made the decision to replace the existing bridges instead of rehabilitating and widening them. Rehabilitation and widening raised concerns due to the condition of the existing bridges, which were validated during construction when large voids were found behind the abutments and under the approach slab. Replacing the bridges addressed these issues but introduced challenges associated with settlement and pile down-drag associated with the increased embankment heights behind the new abutments. Geotechnical plans were developed to address those geotechnical risks, and the new bridge now provides a longer service length that would have been provided by widening and rehabilitation of the existing bridges. Separately, risk associated with property acquisition were addressed by redesigning stormwater management facilities to avoid impacts to private property. Finally, bifurcation between the eastbound and westbound lanes was addressed by the design and construction of raised median planting areas and closed system drainage in-lieu of shallow open ditches.

IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:
 Dewberry implemented a comprehensive QA and QC plan which was adhered to throughout design, effectively reviewing plans which were developed in two offices in different geographic areas (Fairfax, VA and Richmond, VA). Advance temporary traffic control plans were developed to allow construction to start before final plan approvals, and QA/QC efforts ensured no re-work or design conflicts arose through any phase of design, allowing construction to continue without adverse design impacts. As part of the project scope was to correct existing deficiencies with the existing concrete pavement, extensive spreadsheets were developed, checked, and re-checked to ensure a smooth riding surface would be provided upon completion of the project. Calculations were completed to ensure cross-slopes and longitudinal grades didn't exceed maximum breakovers, minimum and maximum cross-slopes were provided, minimum asphalt overlays were provided, and pavement drainage was addressed throughout the project. These comprehensive spreadsheets were provided to the contractor and paving subcontractor for implementation in the field, ultimately resulting in the desired product and improved pavement conditions.

ATTACHMENT 3.4.1(b)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

b. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-64 Capacity Improvements – Segment III Design-Build Location: York County, VA	Name: Shirley Contracting Company, LLC	Name of Client: VDOT Project Manager: Janet M. Hedrick Phone: 757-956-3071 Email: Janet.Hedrick@VDOT.Virginia.gov	12/2017	12/2021	\$178,282	\$182,767* *Difference due to Owner Added Scope	\$10,177

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



SIMILARITIES TO I-81 WIDENING MM 136.6 TO MM 141.8 PROJECT

- Design-Build Delivery
- Interstate Median Widening
- Interstate Bridge Widening & Replacements
- Reduced Property Impacts through Stormwater Management Innovation
- Closed System Median Storm Drainage
- Phased ESC Plans
- Noise Barriers
- High Traffic Volumes & Travel Speeds
- Few Alternate Parallel Travel Routes
- MOT Operations minimizing Congestion
- Updated Comprehensive Field Surveys
- Geotechnical Challenges addressed through Comprehensive Investigations and Design Solutions
- Environmental Permitting and Compliance Monitoring
- Coordination with Adjacent Projects
- QA/QC
- Construction Engineering Inspection

PROJECT NARRATIVE AND SCOPE:

In December 2017, Dewberry (as the lead engineer on our design-build team) was awarded the contract for the widening and reconstruction of I-64 in York County, Virginia which included:

- Widening of I-64 from four to 6-lanes for approximately 8.3 miles;
- Widening of I-64 bridges over Lakeshead Drive and The Colonial Parkway;
- Demolition and replacement of the 900' bridges over Queens Creek;
- Interchange auxiliary lane improvements at the Route 199 and Route 143 Interchanges;
- Stormwater management improvements;
- Drainage improvements and adequate outfall channel enhancements;
- Noise barrier analysis, design, and construction; and
- Public outreach

Design of these improvements were coordinated with the on-going I-64 Segment II project, which was under construction but not yet completed at the time of plan development and at the start of construction. Since the existing pavement was required to be completely demolished and replaced, the horizontal alignment of the eastbound and westbound lanes were adjusted where possible to minimize impacts to existing ITS facilities, adjacent properties, and environmentally sensitive areas including Queens Lake, Queens Creek, and the associated contributing channels and streams.

Dewberry's scope included:

- Updated field surveys;
- Wetland and stream delineations, environmental permitting, and permit monitoring;
- Roadway engineering design;
- Bridge structural designs;
- Hydrologic and hydraulic analysis for Queens Creek;
- Drainage and stormwater management design;
- Traffic engineering design including an interchange traffic signal, signing & marking, ITS, and temporary traffic control design; and
- Public outreach

Advance temporary traffic control plans were developed and approved, allowing construction to start while final right-of-way and construction plans were completed and approved concurrent with initial construction activities. Extensive public outreach occurred for proposed noise barriers, coordination with the National Park Service for work over and on The Colonial Parkway, and with Camp Peary, a secure government property located immediately adjacent to westbound I-64.

DEWBERRY'S ROLE:

As the Lead Designer, Dewberry's Fairfax, Virginia and Richmond, Virginia offices were responsible for completion of all engineering identified above. Dewberry also completed all design field surveys, environmental permitting and documentation, and oversight of subconsultant services to complete updated aerial mapping, utility designations and test pits, geotechnical investigations and recommendations, noise analysis, and pipe video inspections.

EXPERIENCE LIMITING IMPACTS TO THE PUBLIC, BUSINESSES & COMMUNITIES:

Our unique design concept minimized the amount of temporary shoulder strengthening required during the initial phase of construction which reduced night-time construction operations and temporary impacts to traffic, and improved safety for the travelling public, construction, and inspection staff. During the design phase, it was realized that the preliminary noise analysis didn't properly account for existing topography further away from the interstate. As a result of updated noise modeling, three additional noise barriers totaling approximately 6,500 linear feet were added to the project, reducing noise impacts to numerous residents who were not expecting to receive noise barriers. For the replacement of the bridges over Queens Creek, we developed an alternate sequence of construction which eliminated one entire stage of construction and a temporary cross-over within the median of I-64. This has already resulted in improved constructability and reduced impacts to the traveling public.

USE OF INNOVATIVE DESIGN SOLUTIONS:

Dewberry utilized our experience and "lessons learned" from the I-64 Capacity Improvements – Segment I project to implement several innovative design solutions. First, since the existing pavement would be reconstructed, we developed an alternate roadway alignment which minimized the amount of temporary shoulder strengthening. This reduced night time construction work, representing a safety improvement to our team's field staff and inspection staff, as well as reduced impacts to the travelling public. The adjustments to the horizontal alignments also enabled us to eliminate a 1,300' retaining wall in the median of I-64, reducing the amount of closed-system drainage and temporary excavation required adjacent to travel lanes in both directions. Additional innovative design solutions included developing profiles which minimized temporary wedge overlay required on the existing pavement to maintain pavement drainage, resulting in reduced construction costs. Finally, roadside ditch grading on the outsides of I-64 were designed to minimize excavation over the existing ITS conduit, allowing a majority of it to be salvaged and reused, thereby reducing construction costs.

SUCCESS IN TAKING & MANAGING CALCULATED RISKS & REALIZING INCENTIVES:

Dewberry developed an Advance Temporary Traffic Control plan set to allow construction to start prior to approval of the final construction plans. Starting construction earlier, concurrent with design, will help enable us to achieve the Early Completion deadline and earn the full "No Excuse" Incentive which was adjusted based on the addition of the 6,500' of noise barriers and associated additional scope.

Our Team took several calculated risks including changing the horizontal alignment of I-64 and changing the sequence of construction for the bridges over Queens Creek. Changing the horizontal alignment of I-64 introduced some complexities in the development of sequence of construction plans and ensuring profiles were developed which avoided trapping water on the roadway during all stages of construction. However, it enabled us to eliminate a large retaining which would have been challenging to construct in the median and required long-term maintenance efforts by VDOT. It also enabled us to maintain full shoulders on I-64 during construction, improving safety and operations for the travelling public. Changing the sequencing of the Queens Creek Bridges allowed us to eliminate a median crossover between eastbound and westbound I-64, improving temporary traffic control operations and allowing the eastbound bridge to be completed in a single stage.

IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:

Dewberry implemented a comprehensive QA and QC plan which was adhered to throughout design, effectively reviewing plans which were developed in two offices in different geographic areas (Fairfax, VA and Richmond, VA). Extensive coordination was required for the bridge widenings over Lakeshead Drive and the Colonial Parkway due to their close proximity to each other, minimal width between parapets, on I-64, and the need to reduce the Parkway to a single lane to accommodate brick arch construction. Dewberry's design team met on a weekly basis to review project progress and schedule and ensure all design and permitting aspects were coordinated as designs were updated and finalized.

ATTACHMENT 3.4.1(b)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

c. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-66 Widening Design-Build Location: Prince William County, VA	Name: Shirley Contracting Company, LLC	Name of Client: VDOT Project Manager: Christiana Briganti-Dunn Phone: 703-259-2960 Email: Christiana.Briganti@VDOT.Virginia.gov	8/2013	8/2016	\$54,871	\$56,135* *Difference due to Owner Added Scope	\$2,931

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



SIMILARITIES TO
I-81 WIDENING MM 136.6 TO MM 141.8
PROJECT

- Design-Build Delivery
- Interstate Median Widening
- Bridge Replacements
- Reduced Property Impacts
- Phased ESC Plans
- Noise Barriers
- High Traffic Volumes & Travel Speeds
- MOT Operations minimizing Congestion
- Updated Comprehensive Field Surveys
- Environmental Permitting and Compliance Monitoring
- Coordination with Adjacent Projects
- QA/QC
- Construction Engineering Inspection

PROJECT NARRATIVE AND SCOPE:

In 2013, Dewberry (as the lead engineer on our design-build team) was awarded the contract for the widening of I-66 in Prince William County, Virginia which included:

- Widening of I-66 from 4 to 8-lanes for approximately 2.5 miles between Gainesville and Haymarket;
- Demolition and replacement of the Old Carolina Road and Catharpin Road bridges over I-66;
- Ramp widening and auxiliary lane improvements at the westbound exit to Route 15;
- Traffic signal modifications on Route 15 at the westbound exit ramp;
- Drainage improvements and adequate outfall channel enhancements;
- Approximately 5 miles of noise barriers; and
- Public outreach

The widening of I-66 was completed primarily in the median, avoiding fee-simple right-of-way acquisition along the entire length of I-66 and only requiring "sliver" acquisitions of temporary and permanent easements. Stormwater management facilities were developed to remain within existing right-of-way (with the exception of easements associated with slope construction) and all noise barriers were aligned to take advantage of existing topography, minimizing noise barrier panel area and grading impacts beyond existing right-of-way. To avoid impacts to traffic, several existing culverts were lined and repaired to avoid replacement, and jack & bore installation methods were used to avoid open cut installation in phases across the travel lanes. Additional traffic management facilities were also installed as part of the project, including a distance/time overhead dynamic message sign above eastbound I-66 and several new traffic cameras.

Although the RFP allowed for the partial closure of the Catharpin Road bridge over I-66 (and only maintaining traffic in one direction via a single lane), we developed an alternate roadway alignment which avoided additional right-of-way acquisitions while enabling both lanes of traffic to remain open throughout the duration of construction. By shifting the road slightly to the east, the new Catharpin Road bridge was constructed in a single phase (eliminating a longitudinal construction joint) and improved traffic operations since the Old Carolina Road bridge was also being demolished and replaced simultaneously further to the west.

Dewberry's scope included:

- Updated field surveys;
- Wetland and stream delineations, environmental permitting, and permit monitoring;
- Roadway engineering design;
- Bridge structural designs;
- Drainage and stormwater management design;
- Traffic engineering design including an interchange traffic signal, signing & marking, ITS, and temporary traffic control design; and
- Public outreach

In recognition that traffic queues routinely extended into the westbound shoulder approaching the Route 15 interchange in the evening peak hours, an advance construction package was developed to complete the interchange exit ramp improvements prior to the I-66 mainline widening improvements. By completing the ramp improvements in advance, additional storage was provided which reduced queuing on the shoulder of I-66 during construction.

DEWBERRY'S ROLE:

As the Lead Designer, Dewberry's Fairfax, Virginia office was responsible for completion of all engineering identified above. Dewberry also completed all design field surveys, environmental permitting and documentation, and oversaw subconsultant services to complete updated aerial mapping, utility designations and test pits, geotechnical investigations and recommendations, noise analysis, and pipe video inspections.

EXPERIENCE LIMITING IMPACTS TO THE PUBLIC, BUSINESSES & COMMUNITIES:

Our approach to development of temporary traffic control plans and construction sequencing was done to reduce impacts to the travelling public and provide improved operations even before the ultimate improvements were completed. At the westbound I-66 exit ramp to Route 15 (Exit 40), we developed an advance plan set for the construction of dual left turn lanes, including receiving lane width modifications on Route 15, so that queuing on I-66 would be reduced. During later stages of construction, plans were developed to maintain a full right shoulder to enable stopped traffic and excessive queues to move out of the travel lanes and reduce impacts to thru traffic. Based on final noise analysis, approximately 5 miles of noise barriers were installed to provide noise reductions to adjacent private properties, residences, schools, and outdoor activity centers.

USE OF INNOVATIVE DESIGN SOLUTIONS:

Both the Old Carolina Road and Catharpin Road overpasses were required to be demolished to accommodate the wider 8-lane typical section on I-66. To improve traffic operations for the local community, Dewberry developed an alternate horizontal alignment for Catharpin Road so that the existing bridge could be maintained with 2-lane operations throughout construction. The alternate alignment took advantage of excessive existing right-of-way widths on the east side of the existing bridge and roadway to avoid right-of-way acquisitions while also accommodating single-stage bridge construction. We also adjusted the horizontal alignment of the Old Carolina Bridge and roadway to avoid impacts to existing overhead utilities, eliminating relocations and associated easements, including on recently developed residential properties immediately adjacent to the southern end of the bridge. Finally, the alignment of the westbound I-66 ramp was adjusted to enable all widening to occur to the left of the existing ramp, within existing right-of-way, and without acquisition of additional easements or the need for utility relocations. This modification allowed construction to start sooner, providing improved operations for the public even before ultimate improvements were completed.

SUCCESS IN TAKING & MANAGING CALCULATED RISKS & REALIZING INCENTIVES:

Developing the advance plans for the westbound I-66 exit ramp helped to accelerate construction, minimizing the amount of work which needed to be completed in later stages of construction. Ultimately, advancing this work helped to achieve completion of the Old Carolina Bridge replacement under a compressed timeline, enabling our team to achieve the early completion bonus for reducing the closure duration of that roadway.

One significant risk our Team met head-on was the complete replacement of both the Catharpin Road and Old Carolina Road overpasses. The contract documents allowed the Catharpin Road overpass to be narrowed to a single northbound lane but narrowing of that bridge couldn't be done simultaneously with the closure and demolition of the Old Carolina Road overpass. To improve the construction schedule and reduce impacts to the travelling public, we developed an alternate alignment for Catharpin Road which allowed the existing bridge to be maintained for 2-way traffic for the duration of construction. This allowed work on both bridge replacements to occur simultaneously, improving local traffic operations and improving the overall project schedule.

IMPLEMENTING AND MAINTAINING AN EFFECTIVE QA/QC PLAN:

Dewberry implemented our comprehensive QA and QC plan for these improvements, effectively coordinating all design disciplines and environmental permitting so that no modifications or major revisions were needed during construction. Following plan approval, the modifications to the I-66/Route 15 Interchange were initiated under separate contract (by others), and we developed exhibits, plans, and field modifications to avoid rework of ramp and auxiliary lane improvements. Paving, drainage, and guardrail installations were effectively coordinated between project teams so that no re-work or scope was added to either project, resulting in a savings to VDOT.



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