February 7, 2017

Mr. Suril R. Shah  
Alternate Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219  

RE:  I-95 Southbound CD Lanes – Rappahannock River Crossing From: Exit 130 To: 0.66 Miles North of Exit 133  
State Project Nos.: 0095-111-259 | Federal Project Nos.: IM-5111(235)  
Contract ID Number: C00101595DB94  

Dear Mr. Shah:  

The Lane Construction Corporation (LANE) is pleased to present this Statement of Qualifications for the above referenced project to the Virginia Department of Transportation (VDOT). LANE is nationally ranked as the #1 Highway Contractor by Engineering News-Record (ENR), specializing in high quality roadway and bridge construction. LANE has a long and successful history of project delivery in Virginia, having completed nearly 150 projects worth over $2.4B in the Commonwealth alone.  

As a leader in the Design-Build (D-B) method (nationally ranked as the 55th Top Design-Build Firm by ENR) LANE has constructed more than 75 projects worth over $3B in D-B projects during the last decade. LANE’s teaming and leadership experience enables us to deliver the innovative and technically sound results that VDOT and Virginia residents expect and deserve.  

LANE is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We are teamed with KCI Technologies (KCI) as the Lead Designer and Rinker Design Associates (RDA) as a major subconsultant to KCI. LANE, KCI, and RDA have an extensive and successful history of teaming together. LANE and KCI are currently working together on the $220M SCDOT Port Access Interchange and Viaduct Bridge Design-Build Project in Charleston, SC along with numerous D-B pursuits in VA, SC, NC, and TX. KCI and RDA are teamed together on VDOT’s I-64 Segment II D-B project while LANE and RDA are delivering VDOT the I-66/Route 15 Interchange Reconstruction in Prince William County along with the Route 29 Solutions D-B in Albemarle County. Together, we provide VDOT with a reputable team that has completed projects of this size and scope on time and within budget as evidenced in our collective project experiences.  

LANE and KCI, in conjunction with additional hand-selected design and construction specialty firms, are highly experienced with VDOT processes and procedures and will provide design and construction for the I-95 Southbound CD Lanes – Rappahannock River Crossing project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections.  

3.2.2 Offeror’s Point of Contact Information: Mr. Donald E. Bryson, Jr. is the point of contact and authorized representative for the LANE Team for all matters associated with this qualifications submittal.  

Donald E. Bryson Jr., Pursuit Manager  
14500 Avion Parkway, Suite 200, Chantilly, VA 20151  
Tel: (703) 222-5670  Fax: (703) 222-5960  
Email: DEBryson@laneconstruct.com  

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An Equal Opportunity Employer M/F/D/V  

LaneConstruct.com
3.2.3 Offeror’s Principal Officer Information: Mr. Richard A. McDonough is the principal officer of The Lane Construction Corporation.

Richard A. McDonough, Senior District Manager
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: RAMcDonough@laneconstruct.com

3.2.4 Offeror’s Corporate Structure: LANE was founded in 1890 and was incorporated in the State of Connecticut on April 5, 1902. LANE will undertake the financial responsibility for the project and has no known liability limitations. LANE’s pre-qualification status/capabilities with VDOT are well in excess of the requirements of this project. The co-sureties will furnish a single 100% performance bond and a single 100% payment bond.

3.2.5 Lead Contractor and Lead Designer: The full legal name of the Offeror is: The Lane Construction Corporation. LANE will serve as the prime/general contractor responsible for overall construction of the project and will serve as the legal entity who will execute the contract with VDOT. The full legal name of the Lead Designer is: KCI Technologies, Inc. (KCI). KCI will serve as the lead design firm responsible for the overall design of this Project under contract to LANE.

3.2.6 Affiliated/Subsidiary Companies: A complete list of affiliates and subsidiary companies may be found in the Appendix.

3.2.7 Debarment Forms: Certifications for Debarment for both Primary and Lower Tier Covered Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities as identified as members of the LANE Team and may be found in the Appendix.

3.2.8 Offeror’s VDOT Prequalification Evidence: Evidence from VDOT’s online Prequalified List (LO002/Active) is included in the Appendix and verifies that LANE is prequalified for this SOQ submission.

3.2.9 Letter of Surety: A surety letter from the bonding companies is included in the Appendix, confirming their willingness to provide any and all bonds for this project.

3.2.10 Professional Services Evidence: The matrix in the Appendix delineates the respective state registrations and licensures of the LANE Team. The Offeror and all team members are eligible at the time of the SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the project. Respective copies of licenses may be found in the Appendix.

3.2.11 DBE Statement: LANE supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 10% goal for the design and construction of this project utilizing Virginia certified DBE companies.

Through our proven performance, our Team will deliver this project safely, on time and within budget. We appreciate the opportunity to present our qualifications and look forward to working with VDOT on this important project.

Respectfully submitted,

Donald E. Bryson, Jr.
Pursuit Manager
The Lane Construction Corporation
3.3 Offeror’s Team Structure
3.3 | OFFEROR’S TEAM STRUCTURE

**LANE**

The Lane Construction Corporation (LANE) will serve as the Lead Contractor of the D-B team for the I-95 Southbound CD Lanes – Rappahannock River Crossing (I-95/ Rappahannock River) project and will be responsible for managing the project, supervising construction, and self-performing the major work elements. LANE was named the 2015 Top Contractor by ENR Mid-Atlantic and is the #1 Highway Contractor by ENR. Our proven heavy civil experience in bridge and roadway construction and more than 75 D-B projects ranging in scope and value from $13M to $2.3B demonstrates LANE’s ability to tackle the region’s most challenging infrastructure projects.

**KCI Technologies, Inc. (KCI),** as the Lead Designer, will provide structure design, river hydraulics, and overall design project management. KCI (formerly Triplett-King & Associates, Inc.) is an employee-owned, full service engineering firm employing approximately 1,300 people in more than 36 offices, including Richmond, VA. KCI was established in 1955 and has consistently been placed among ENR’s top 100 engineering firms in the country. KCI has excelled in providing management and design services for fast track, D-B projects; this experience includes 35 major transportation D-B projects. KCI’s value engineering and innovative designs have saved DOT clients over $18M in the last 16 years. KCI also specializes in construction engineering and has a client list of over 60 highway/heavy contractors throughout the Southeast, which provides KCI’s staff a competitive edge for constructability and efficient designs.

**Rinker Design Associates, PC (RDA),** as the subconsultant to the Lead Designer, will provide roadway design and other support services for the project. RDA is a Virginia-based firm with over 120 employees with offices in Manassas, Fredericksburg, and Richmond. They are an award-winning Virginia-Certified Small Business (DSBSD Certification #652784) and, in the last decade, have served as the Lead Designer on 13 D-B projects while supporting an additional five.

**Additional Subconsultants**

The LANE Team also includes the following highly qualified subconsultants:
- CES (QAM)
- The Albrite Group (Public Relations)
- EEE (Environmental)
- InfraMap (SUE)
- F&R (Geotechnical & QC Lab)
- Dulles Geotechnical & Material Testing Services, Inc. (QA Lab)

LANE and KCI have an extensive and successful history working together. KCI (and our Design Manager, Merritt King, PE) first started working with LANE over 25 years ago on a multitude of SC and NC bridge projects. Since that time, KCI has continued to provide construction engineering, value engineering, and D-B services for LANE. LANE and KCI are currently working together on the Port Access D-B project for SC DOT. As further evidence of our Team’s collaborative working relationships, LANE and RDA also have a long history of teaming together on important D-B projects in the Commonwealth. Two recent projects in which LANE is the Lead Contractor and RDA is a Lead Designer include the I-66/Route 15 Interchange Reconstruction D-B project in Prince William County and Route 29 Solutions D-B project where RDA was the Lead Designer for the Route 29 Widening segment. Additionally, KCI and RDA are currently teamed together on the I-64 Capacity Improvements – Segment II D-B and the Route 46 Nottaway River Bridge projects for VDOT. The longstanding and integrated LANE Team will use the knowledge and experience gained through previous D-B projects to successfully deliver the I-95/ Rappahannock River project to VDOT.

3.3.1 Qualifications of Key Personnel

All of the proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on the I-95 Rappahannock River project. They are assigned and dedicated for the duration of the project. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.
The LANE Team organization has a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. The following Organizational Chart depicts VDOT, third party stakeholders, key personnel, and their respective relationships and functions.
Reporting Relationships of Key Personnel

D-B Project Manager (DBPM), Mr. Jan Sherman (LANE) will report to VDOT and serve as VDOT’s central point of contact. He facilitates communication among VDOT, team partners and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. It is his responsibility to work with the Team to ensure that the design complies with the owner’s specifications. Mr. Sherman’s management from design through construction includes weekly design and construction meetings to discuss how the Team will construct the project. Additionally, he is responsible for construction quality management, contract administration, and coordination of public outreach and public meetings.

☑ Added Value: Mr. Sherman is currently the DBPM on the I-66/Route 15 Interchange Reconstruction project (with RDA as Lead Designer). Additionally, Mr. Sherman was Project Manager on the $1.5B I-495 Express Lanes project (included in Work Histories) which included major interstate roadway widening and bridges/structures in one of the most congested regions in the country.

Responsible Charge Engineer (RCE), Mr. Scott Shropshire, PE (RDA) reports to the DBPM, communicates regularly with VDOT, the DM and CM, and supervises, directs, and controls both design and construction teams. He is integrated among the project team and will accept full professional responsibility for engineering decisions relating to the final product. Mr. Shropshire answers questions/inquiries relevant to engineering decisions relating to design and/or construction and has authority to shut down the project if warranted. Mr. Shropshire is a registered Professional Engineer in Virginia.

☑ Added Value: Mr. Shropshire has completed numerous projects in Stafford County and has extensive experience in the corridor coupled with strong, professional knowledge of the project area and longstanding professional relationships with the Fredericksburg District and Stafford County. In his tenure at VDOT, Mr. Shropshire was the Area Construction Engineer (ACE) for over 120 contracts in the Fredericksburg District.

Quality Assurance Manager (QAM), Mr. Syed Khan, PE (CES) reports directly to the DBPM on all quality issues. Any item of work failing to meet minimum standards is rejected and corrected immediately. Construction personnel have no authority over QA inspection staff. Mr. Khan keeps VDOT informed on the status of quality of construction and issues/resolutions/solutions through weekly reports and progress meetings. As QAM, Mr. Khan holds the authority to shut down the job if quality issues warrant. Quality Assurance Inspector, Mr. Justin Liming (CES), reports directly to the QAM, and is assigned to the project on a full-time basis for the duration of the project. The AMRL Certified QA laboratory reports to Mr. Khan.

☑ Added Value: Mr. Khan has been providing quality assurance and quality control services on a variety of D-B and D-B-B projects ranging from $1M to $5B. He has extensive experience working on complex bridge and roadway widening projects and has worked on VDOT projects for over 20 years.

Design Manager (DM), Mr. Merritt King, PE, DBIA (KCI) reports directly to the DBPM. Mr. King, a Virginia PE, maintains close communication with the RCE and CM; and ensures the overall project design is completed in accordance with the requirements of the Contract Documents. All design, ROW, and permitting disciplines report directly to Mr. King. He provides VDOT with design plans for review and approval. Mr. King is also responsible for establishing oversight of the QA/QC program for all design disciplines of the project which are performed by qualified, independent staff personnel.

☑ Added Value: Mr. King has designed or managed 23 major D-B highway projects for DOT clients, including the Route 288 PPTA, Route 288/I-64 Interchange D-B in Richmond, VA and the I-520 Palmetto Parkway D-B, Phase I and II in Aiken County, SC. Mr. King has worked with LANE on six major transportation projects and has managed numerous construction engineering projects for LANE since 1989. Similar project experience with LANE includes the I-77 Dual Bridge Widening over Catawba River, York, SC; US 176 Bridge Replacement over Broad River, Richland County, SC; and US 21 Bridge Replacement over Catawba River, York County, SC.
Construction Manager, Mr. Bob Cross (LANE) reports directly to the DBPM and is on-site full-time for the duration of the project. His daily duties include: safety, coordination of all project personnel including subcontractors, and execution of the construction QC program. He holds ultimate responsibility for managing the construction schedule with his staff engineers and coordinating regularly with adjacent projects underway. He coordinates daily meetings with the QA Lead Inspector, and QC Manager to discuss all ongoing construction activities. He also reviews all construction QC reports and lab results. Mr. Cross is currently working on the I-66/Route 15 Interchange Reconstruction project and will be available prior to the start of I-95/Rappahannock River construction. Mr. Cross currently holds a DEQ RLD Certification and will hold a VDOT ESCCC as required.

☑ Added Value: Mr. Cross served as a Construction Manager on numerous roadway widening and intersection projects in Virginia. He is currently the Construction Manager working with proposed DBPM, Mr. Sherman and RDA staff on the I-66/Route 15 Interchange Reconstruction project in this identical role. Mr. Cross was also a Construction Manager on the I-495 Express Lanes project (included in Work Histories).

Lead Structural Engineer, Mr. Eric Burgess, PE (KCI) reports directly to the DM. Mr. Burgess is responsible for structural design of the bridges and retaining walls. He reviews, verifies, and modifies designs, if necessary, based on field conditions and construction activities related to dismantling and removing portions of existing structures, installing foundation structures, handling and erecting bridge girders, and making superstructure and substructure repairs. Mr. Burgess is a registered, licensed, Professional Engineer in the Commonwealth of Virginia.

☑ Added Value: Mr. Burgess provides VDOT with over 14 years of D-B and highway bridge and structure design knowledge and experience. He has been involved with over 50 DOT bridge replacement projects for multiple DOTs, including VDOT on such projects as I-64 Segment II D-B, Route 288 PPTA, Region II D-B Bridge Replacements, and Route 46 Bridge Replacement over Nottoway River. Mr. Burgess is also currently working with LANE on the Port Access D-B project, where he is serving as the seismic engineer for the D-B team.

Other Functional Relationships

The LANE Team also includes the following recognized specialists whom we deem critical to this Project, albeit non-key personnel as defined by the RFQ; their relevant qualifications are summarized below.

<table>
<thead>
<tr>
<th>Name/Position</th>
<th>Yrs Exp</th>
<th>D-B</th>
<th>Interstate Widening</th>
<th>Bridge Exp.</th>
<th>Complex MOT</th>
<th>VDOT Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other pertinent design disciplines that will report directly to Mr. King, PE (DM) include:</strong></td>
<td></td>
<td></td>
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<td>Darell Fischer, PE, DBIA/Design QA</td>
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<td>John Barefoot, PE/Design QA</td>
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<td>✓</td>
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<tr>
<td>Leah Young, PE/Bridge Hydraulics</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>John Giometti, PE/Roadway</td>
<td>28</td>
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<tr>
<td>Doug Fraser, PG/Environmental</td>
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<tr>
<td>Robert Vester, PE/Geotechnical</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<th>Name/Position</th>
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<th>Bridge Exp.</th>
<th>Complex MOT</th>
<th>VDOT Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other pertinent construction disciplines that will report directly to Mr. Cross (CM) include:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mike Russo/Utility Manager</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Karla Mejia /MOT Superintendent</td>
<td>14</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Stu Casasola/Structures Superintendent</td>
<td>14</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>George Hansbrough/Roadway Superintendent</td>
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<td>✓</td>
</tr>
<tr>
<td>Chris Monahan/Environmental</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Design and Construction Team Interaction

The LANE Team ascribes to the DBIA paradigm that “integrated development of the design and construction program is the cornerstone of D-B delivery and this methodology optimizes opportunities for collective excellence.” Put into practice, our design team will interface with our construction team and vice versa throughout the life of the contract.

The DBPM will be involved in all project development and construction processes to ensure overall quality management, adherence to the contract, and to allocate appropriate resources to meet the project schedule. Furthermore, the DBPM will guide the team in important Public Outreach efforts that will be critical in mitigating citizen concerns on a project of this magnitude.

To ensure a successful project, the LANE Team’s extensive D-B experience has shown that weekly scheduled discipline coordination meetings throughout project execution are critical. These focused meetings, which are led by the RCE and coordinated through the DBPM, serve as a conduit for disseminating project-critical information and are the central point of decision-making and communication among all involved in the project. These regular, open forums of discussion among the LANE Team to address plan elements serve to clearly define project criteria. VDOT will be invited on a regular basis for over the shoulder reviews and coordination to ensure VDOT’s intentions are being met, address corridor-wide safety and constructability issues, and provide consistency in design before becoming schedule-critical.

Through this approach, we create strong relationships that set the foundation to interact and partner with VDOT and third-party stakeholders, streamline reviews, eliminate potential construction field issues, and deliver the project safely, as early as possible.

Construction Support During Design. Construction staff are engaged to ensure designs are constructible and tailored to support the most efficient execution strategy.

<table>
<thead>
<tr>
<th>Construction Support During Design</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical input in development of work packaging and D-B strategy</td>
<td>Incorporates contractor expertise to develop the most efficient construction sequence and schedule logic</td>
</tr>
<tr>
<td>Advising design team on specific construction elements required for the project</td>
<td>Enables tailoring of design / construction documentation to construction delivery method</td>
</tr>
<tr>
<td>Providing input on construction means and methods to design packages</td>
<td>Ensures practical designs that support planned construction approaches in a safe and economical manner</td>
</tr>
<tr>
<td>Constructability, operability and pricing reviews of design documents</td>
<td>Ensures design documents are implementable and will achieve intended purpose</td>
</tr>
</tbody>
</table>

Design Support During Construction. Engineering staff continue to support construction to ensure design intent is achieved.

<table>
<thead>
<tr>
<th>Design Support During Construction</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of subcontractor statements of work</td>
<td>Ensures that design requirements and intent are integrated into the subcontractor’s work package</td>
</tr>
<tr>
<td>Assignment of design engineer(s) on-site, as needed</td>
<td>Provides assistance in interpretation of design requirements and responding to field changes</td>
</tr>
<tr>
<td>Providing support to review and implement field changes requiring design revisions</td>
<td>Ensures consistency of design changes with intent of original design</td>
</tr>
<tr>
<td>Providing and verifying final as-built drawings</td>
<td>Provides correlation between original design, design changes, and as-built construction</td>
</tr>
</tbody>
</table>
3.4 EXPERIENCE OF OFFEROR’S TEAM

Both LANE and KCI are among the nation’s top-ranked firms in their respective specialties. We have designed and built some of our country’s most important infrastructure. Each firm has earned industry-wide recognition for their success in controlling, managing, and executing work. The blend of similar projects that we each have and are working on in the region, and with the agencies involved confirms our qualifications to successfully deliver all elements of this project. Supported by RDA, who has extensive D-B experience in Virginia, LANE has assembled a Team built for success.

Bridge/Structures Experience. LANE and KCI have both developed a niche for designing and constructing major bridges over rivers similar to the I-95 Rappahannock River project, such as:

- South Norfolk Jordan Bridge, Norfolk, VA $76.5M (LANE)
- I-77 Bridges over Catawba River, York County SC ($7.4M) (KCI)
- A. Max Brewer Bridge, Titusville, FL $45M (LANE)
- I-85 Bridge Replacements over South Tyger River, Spartanburg County, SC ($8.4M) (KCI)
- US 21 Bridge Replacement over Catawba River, York County, SC ($18.7M) (KCI)
- I-85 Yadkin River Bridge, Salisbury, NC ($144M) (LANE)
- US 1 Bridge Replacements over Great Pee Dee River, Chesterfield County, SC (Construction Pending) (KCI)
- SC 41 Bridge Replacement over the Wando River, Charleston, SC ($29.6M) (KCI)
- I-35 Improvements Brazos Bridge, McLennan County, TX $214M (LANE)
- US 176 Bridge Replacement over Broad River, Columbia, SC ($24.5M) (KCI)
- 29 Solutions, Charlottesville, VA $116M (LANE/RDA)
- US 17 Bridge Replacements over Combahee River, Hampton County, SC (Construction pending) (KCI)
- I-520 Bridge over Savannah River, Aiken County, SC/August, GA ($43.9M) (KCI)

Interstate D-B Experience. LANE excels in complex interstate construction and has successfully completed a wide variety of interstate D-B projects for VDOT including the highly acclaimed 95 and 495 Express Lanes projects. Other relevant D-B interstate projects include: $145M I-85 Widening, Cabarrus County, NC; $212M I-35 Improvements, McLennan County, TX; and $2.3B I-4 Ultimate P3, Orange County, FL.

KCI is a leader in Design-Build and many projects involved interstates, including new facilities, widenings and/or rehabilitations. KCI has extensive experience in the Mid-Atlantic and Southeast with major interstate projects as the lead engineer or serving as a subconsultant. Design tasks include roadway design, traffic and
MOT, bridge and structure design, bridge rehabilitation, cross slope corrections, alignment changes, drainage and signing/signals. Project experience includes I-95/I-495/MD210 Interchange Reconstruction, Prince Georges Co., MD; I-195 Interstate Access Road/BWI Airport, Linthicum Heights, MD; I-520 Palmetto Parkway Phases I & II, Aiken Co., SC; I-64 Widening and Rehabilitation - Segment 2, Newport News, VA; I-95 Widening and Rehabilitation, Florence Co., SC; I-77 Widening & Rehabilitation, Columbia, SC.

RDA’s extensive VDOT D-B interstate experience includes the I-64 Capacity Improvements – Segment II (teamed with KCI), I-581/Elm Avenue Interchange Improvements, I-95 at Temple Avenue Interchange Improvements, and I-66/Route 15 Interchange Reconstruction (teamed with LANE). Furthermore, RDA supported LANE’s design team on the I-95 Express Lanes project to the north of this project.

### 3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a) and (b)) as required for LANE (Lead Contractor) and KCI (Lead Designer) are included in the Appendix.
3.5 | PROJECT RISKS

The LANE Team has carefully considered the key elements of work for the I-95 Rappahannock River project to determine the three most relevant and critical Project Risks for our Team to mitigate for the success of this Project. In making our assessment, we considered numerous potential risks to the project including: geotechnical conditions, utility relocations, Time of Year Restrictions, Transportation Management Plan, agency/stakeholder coordination, public relations, permitting, Stormwater Management, Proximity of the Central Park Property Owners Association Impoundment, and ROW acquisitions. Each of these risk items will have a major impact on the project if not properly assessed and mitigated. We have concluded that Transportation Management Plan, Utility Relocations, and Proximity of the Central Park Property Owners Association Impoundment are the three most critical risks to the success of this Project.

RISK NO. 1 – TRANSPORTATION MANAGEMENT PLAN

Risk Identification: Transportation Management Plan (TMP) at the Safety Rest Area/Welcome Center located on the west side of the I-95 Southbound Lanes at the 131 Mile Marker.

Why the TMP Risk is Critical and the Impacts to the Project: The TMP for the project is critical due to its relevance during construction operations. Specifically, a unique, singular risk of the project is maintaining the capacity and functionality of the Fredericksburg Safety Rest Area/Welcome Center during construction. Based on review of the 2013 Visitation Data for the VDOT Statewide Safety Rest Area/Welcome Center Program, the impacted Safety Rest Area/Welcome Center ranks 4th out of 43, and received approximately 4,050 visitors per day (1,478,300 visitors per year) in 2013. Additionally, the Fredericksburg Safety Rest Area/Welcome Center experienced a 3.1% increase in visitation comparing 2012 and 2013.

The LANE Team has identified the following impacts of the TMP risk as related to the capacity and functionality of the Fredericksburg Safety Rest Area/Welcome Center assuming the facility is to remain open, fully accessible, and operate at full capacity:

- Maintaining an effective and efficient ingress/egress of vehicles utilizing the facility throughout each identified TMP/MOT Phase of construction
- Potential contractual impacts with respect to the Sponsorship, Advertising & Vending Enhancement (SAVE) program. Based on review of the SAVE program, the contract contains an Annual Rights Fee paid by the successful bidder of just over $2,000,000.00. Additionally, the successful bidder provides payment to VDOT, Virginia Department for the Blind and Visually Impaired (DBVI), and Virginia Tourism Corporation (VTC) on a sliding scale based upon its annual gross revenue through a 12-month period. Based on 2013 projections, VDOT’s annual share of revenue associated with this contract is approximately $800,000.00, DBVI’s annual share is approximately $770,000.00, and VTC’s share is approximately $395,000.00. The potential for loss of revenue will not only affect the statewide vendor but will also impact revenues of these three state agencies.
- Reduction in car parking capacity – 34 spaces potentially affected by construction (east side of the car parking area).

Risk Mitigation Strategy: The LANE Team will develop and implement an effective, efficient, and safe TMP, coupled with open communication between the public, third party stakeholders, and our construction staff to voice concerns and resolve any issues immediately.

- The LANE Team will initiate formal partnering with VDOT, Stafford County, and the City of Fredericksburg to review the TMP, construction schedules, and incident response plans, if required, before implementation. During construction, meetings will be held prior to major changes in traffic patterns. Partnering will minimize negative perceptions to impacted stakeholders by communicating construction impacts.
• Coordinate with the respective SAVE sponsor and vendor to obtain their input for the development of a TMP in order to mitigate negative impacts to their operations at the Fredericksburg Safety Rest Area/Welcome Center.

• After compiling input from respective stakeholders, the LANE Team will develop and consider various alternatives to maintain access, capacity, and functionality of the Fredericksburg Safety Rest Area/Welcome Center to accommodate driver convenience, expectation, and safety. Moreover, allowing for the promotion of Virginia tourism by maintaining access to the dedicated travel research area. The intent will be to develop and implement a TMP associated with the safety rest area/welcome center mitigating negative impacts to access, capacity, functionality, and operations.

• LANE’s MOT Coordinator will consult with the TMP design lead to build constructability into the design, ensure proposed TMP is implemented per plan, and make adjustments as necessary to account for congestion/demand. This integrated approach of providing a single person responsible throughout all TMP aspects of the project will provide continuity and accountability.

• With respect to the potential impact to car parking space capacity, the LANE Team will investigate alternatives to maintain capacity. However, in the event capacity cannot be maintained, alternate considerations will be analyzed and an acceptable resolution reached to address capacity for the various vehicle types.
  
  o Minor encroachment of the car parking spaces may be resolved with an insignificant, internal shift of the car parking spaces
  o Under a temporary condition during construction operations, reduce the number of Truck/Bus parking spaces to accommodate the number of impacted car parking spaces.
  o As a worst case scenario, allow parking for buses and cars only at the Fredericksburg Safety Rest Area/Welcome Center, and move the truck parking to the Ladysmith Safety Rest Area located at the 107 Mile Marker.

• To communicate with the project stakeholders, and traveling public, a comprehensive public outreach plan will be developed by the LANE Team. This public outreach plan will:
  
  o Hold a Citizen Information Meeting prior to implementing the TMP to share our construction schedule, design concept, and communication plan
• Provide a voice for the traveling public by providing signs with the number of our project hotline
• Inform all project stakeholders about construction progress and how they will be impacted
• Keep local commuters/residents informed about how the project will impact their travel via the Free-Lance Star newspaper and local radio stations (WFLS and WBQB).
• Regular coordination with adjacent projects
• Ensure maximum use of work zone related resources
  ▪ Portable Changeable Message Signs (PCMS)
  ▪ Overhead Message Signs (OMS)

• Advance signage for notification of the upcoming Safety Rest Area/Welcome Center may have to be placed beyond the prescribed project limits due to advancement upstream of the egress point for the CD Lanes. In order to mitigate the potential for exceeding the project limits, the LANE Team will consider various signing scenarios to adequately notify the traveling public of the approaching safety rest area/welcome center. The scenarios may include ground mounted, overhead, or a combination thereof to ensure adequate advance notice to safely navigate to the appropriate egress point for accessing the Fredericksburg Safety Rest Area/Welcome Center.

Role of VDOT and other Agencies: The integration of the LANE Team and our successful collaboration efforts will minimize construction and maintenance of traffic issues. In a collaborative effort, the LANE Team will work with VDOT, DBVI, and VTC to successfully resolve impacts to parking capacity and vending operations at the Fredericksburg Safety Rest Area/Welcome Center. Our proposed public outreach, communication plan, and partnering initiatives will assist stakeholders, and the traveling public identify the LANE Team as their point of contact should issues arise. These strategies will minimize the need for additional effort by VDOT, DBVI, VTC, Stafford County, and City of Fredericksburg, reducing their role to one of situational awareness with the potential for decision-making should the parking capacity require more detailed analysis and consideration for resolution.

RISK NO. 2 – UTILITY RELOCATIONS

Risk Identification: Utility Relocations for several large utilities adjacent to over a highly congested interstate.

Why the Utility Risk is Critical and the Impacts to the Project: Utilities are always a risk to projects as they involve depending on a third party to perform work that the project has no control over the schedule or production on. However, on this project there are several, specific utilities that pose a collective risk to schedule and cost.

Sanitary sewer lines shown on the RFQ Conceptual Plans are in conflict and will have to be relocated into easements where there is already a congested collection of various utilities. Specifically, the 12” Sanitary Force Main (SFM) on Sheets 12 thru 14 (see graphic below) will be difficult to relocate to an area not already encumbered by another utility or infrastructure features. Relocation of this SFM with minimal shutdown (if even allowed) will be costly and will require significant schedule resources.
Additionally, there are two smaller SFM along Route 17 which do not appear to be in direct conflict but may be susceptible to vibrations from pile driving associated with the new bridge over Route 17 and the replacement bridge for the mainline. If the age or condition of these lines are questionable, there may be cost and schedule impacts as they would be considered in conflict.

Aerial power, phone and CATV lines cross the project in multiple places and will either be impacted by the construction itself or have clearance issues with the proposed retaining walls and the braided interchange. Relocation of long-spanning facilities can take nine months or more to relocate after four to six months of design. To further impact schedule, it appears that these poles are shared poles where each impacted company will relocate in sequence not simultaneously. If one company struggles, the other companies are delayed. It is also likely that in order to make vertical adjustments needed to clear the project (i.e. the braided interchange portion), multiple poles will have to be added or relocated to make the adjustment gradual instead of abrupt. This will add time and cost to the project.

Like the smaller sewer lines discussed above, the existing waterline may also be impacted by vibrations associated with pile driving. Given that public utilities are at project cost, relocation of the line will have a financial impact for a utility that is not physically impacted. However, of greater concern will be the 24” water main that crosses I-95 approximately 500’ south of Fall Hill Avenue. The designation ends prior to leaving the right-of-way which complicates evaluation of potential conflicts. However, it appears that the proposed retaining wall may be in conflict and require a new bore to relocate under I-95.

Verizon is in conflict with several features of this project. This includes one fiber crossing of the project – aerially – that is in conflict along with other utilities discussed above. Other underground locations in conflict are in areas where retaining walls and bridge structures are proposed near the existing rest stop and along Riverside Parkway. Verizon is historically a very long schedule item and will be in danger of affecting project schedule. This problem has worsened with the recent downsizing of the Verizon engineering group.

Lastly, there is a fiber marker along the edge of the right of way at approximate Station 5452+00. This line does not appear on the designation but either crosses or runs parallel and is in conflict regardless of direction.

**Risk Mitigation Strategy:** An overall mitigation strategy is early and continued communication and coordination with the utility owners is paramount. Our utility coordination team member, RDA, has great relationships with all of the utility companies potentially impacted by this project. Furthermore, they have staff engineers that previously worked for some of these same utility owners which provides added insight. Key success measures include making the utilities an invested partner in the project and making them feel as if they are part of the project team. As a result, our experience shows that they are more willing to help in delivering the project successfully. Additionally, they have excellent relationships with several subsurface utility exploration (SUE) firms that they will partner with to designate and research ownership on the existing facilities immediately following NTP allowing our team the maximum amount of time to react to the findings and resolve any unknown conflicts.

To specifically mitigate the 12” SFM, our team will develop a test hole program along Riverside Parkway that exceeds that which is required for determining impacts. This program will canvas all utilities to see where the SFM can be relocated (both horizontally and vertically) within a corridor that is heavily cluttered with various

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**On the 95 Express Lanes project, RDA coordinated with over 20 different utility owners regarding over 200 utility crossings. Of the 200 potential conflicts, only 12 required relocation or adjustment by the utility owners.**
utilities. A possible solution may be establishment of utility ductbanks to facilitate a uniform and organized relocation of many of the utilities along Riverside which may be impacted by secondary construction activities.

The aerial crossing of I-95 near Fall Hill Avenue appears to have two sets of guys to support the pole in conflict. The pole is shown to be directly behind a proposed retaining wall. Through support of excavation and coordination with the utilities, we believe that the pole and conflict may be avoided. We will work with the utility owner to ensure that a new guy system can be established that will secure the pole and allow it to stay in close proximity to the propose retaining wall.

To address the vibration concerns, especially as it relates to the waterlines, the LANE Team will investigate the use of vibration monitoring to show to determine if there is an issue or not. Our team will also look at vibration dampening approaches that may include sheetpile or dampening blankets to mitigate vibrations if monitoring shows that there is a real concern. Furthermore, we will investigate sleeving the 24” waterline through the proposed retaining wall to avoid boring a new line under the interstate.

**Role of VDOT and other Agencies:** The role of VDOT will include minimal oversight, review, and participation in the Utility Field Inspection. Overall, the project is responsible for coordination with the utility companies involved. VDOT will only be asked to assist if/when a utility company refuses to cooperate or excessively delays their work thereby jeopardizing the project schedule.

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**Risk No. 3 – Proximity of the Central Park Property Owners Association Impoundment**

**Risk Identification:** Proximity of the Central Park Property Owners Association (POA) Impoundment

**Why the Proximity of the Central Park POA Impoundment Risk is Critical and the Impacts to the Project:**

The RFP Plans depict the lowering of the new Southbound CD lanes to obtain proper clearances under the existing Cowan Blvd. Bridge. The result of lowering the CD lanes and widening to the west is the need to purchase additional ROW owned by Property Owner #007 (The Central Park POA, Inc.) between stations 5457+41.35 and 5466+38 and the advancement of construction activities adjacent to and potentially into the functional area of the impoundment which both present risks to the Department. The impoundment (runoff detention basin) adjacent to I-95 at this location was once associated with a golf course located where Central Park Mall is now and was later expanded by excavation to function as an impoundment for the development. The water is retained in the impoundment by a dam embankment along its east side and overflows via a pipe and weir in the NE corner of the impoundment near the junction of the Cowan Boulevard and existing I-95 rights-of-way. When needed, the overflow drains north passing under the Cowan overpass and under I-95. Right of Way (ROW) is currently needed in this area to accommodate roadway widening and a 2:1 cut slope which extends into the existing earthen dam embankment.

**Elevations in the area:** Based on existing plans, the baseline of the Southbound CD lanes at Station 5464+00 is at elevation 232.5’ which results in the ditch being at an elevation of approximately 229.6’. The water in the impoundment appears to be at an elevation of approximately 224’ based on our research. The top of the dam embankment appears to be approximately 22 feet inside of existing ROW while the construction limits appear to be about 13 feet beyond the existing ROW line at an elevation of roughly 235’.

Constructing the new lanes will reduce the berm that exists between the highway and the pond. Additionally, the Proposed ROW acquires to the top of bank (Elevation 230). Although these elevations seem to be sufficient to allow the pond to function, a detailed analysis will be required to evaluate overtopping elevations. The bigger concern is that it appears that VDOT would be taking ownership and liability of a large portion of the existing dam embankment structure. This ownership could lead to VDOT being responsible for providing maintenance to the earthen structure or being held liable for the performance of this facility which is used by a multitude of...
current businesses. This liability is further increased by the project’s current plans to cut into the existing dam embankment presenting several unknown associated risks:

How was the dam constructed? It is unknown as to whether the dam has a clay core. Construction into which may weaken or undermine the core if one exists.

- What type of soils are in the dam and the adjacent areas? Geological maps currently show that Potomac clays may exist in this area, leading to shallower cut slopes (6:1, instead of 2:1) which may require additional ROW (further exposing VDOT’s liability).

**Risk Mitigation Strategy:** The LANE Team will attempt to mitigate this risk through the following investigative means:

- **Survey:** gather additional survey information (if not already available) and stake the proposed ROW lines, cut limits, and ditch locations to better define the extents of the impacts to the dam embankment in the field,
- **Design Study:** develop cross sections through the area with existing and shallow slopes to determine the full extents of the impacts (vertical and horizontal) and investigate raising the profile of the Southbound CD lanes as much as possible while maintaining required vertical clearance under Cowan Boulevard to reduce cuts into the dam embankment,
- **Geotechnical Study:** the LANE Team will develop an exploration program as a subset of our overall geotechnical study to evaluate the composition of the existing earthen berm and location of groundwater influence to ensure that structural measures are not impacted and that groundwater won’t weaken the remaining berm section due to proposed cuts.
- **Dam Breach Analysis:** based on research of the impoundment and the results of geotechnical studies, our team is prepared to develop a Dam Breach Analysis to ensure that the impacts resulting from the roadway construction are fully documented and that the roadway can resist against the potential of a dam failure.

If it is determined through investigation that the risk still exists and is not manageable, the LANE Team would recommend that an additional wall be constructed between Station 5460+40 and Station 5465+40. This will require only the purchase of ROW in this area where the section is in fill or the cuts are significantly higher than the overflow elevation; therefore, ROW would be needed up to Station 5460+50 and from Station 5465+30 to Station 5466+38. Although adding this 500’ wall would add cost to the project, it would eliminate the long term risks potentially associated with this property and the problems that might arise from cutting into the existing dam embankment.

**Role of VDOT and other Agencies:** Once all existing information is obtained to fully understand the nature of the embankment, our Team would meet with the Department to discuss options and obtain their input. We would then set up a meeting with Central Park to which we would request VDOT’s attendance and participation.
ATTACHMENT 3.1.2
SOQ CHECKLIST
ATTACHMENT 3.1.2

Project: 0095-111-259

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
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<th>SOQ Page Reference</th>
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ATTACHMENT 2.10
FORM C-78-RFQ
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00101595DB94
PROJECT NO.: 0095-111-259

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 – November 1, 2016 (Date)

2. Cover letter of RFQ Addendum No.1 – December 19, 2016 (Date)

3. Cover letter of RFQ Addendum No.2 – January 23, 2017 (Date)

February 7, 2017

SIGNATURE

DATE

Donald E. Bryson
PRINTED NAME

Pursuit Manager
TITLE
ATTACHMENT 3.2.6
AFFLIATED AND SUBSIDIARY COMPANIES
OF THE OFFEROR
ATTACHMENT 3.2.6  
State Project No. 0095-111-259  
Affiliated and Subsidiary Companies of the Offeror

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

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

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<th>Address</th>
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<td>Salini Impregilo, S.p.A.</td>
<td>Via dei Missaglia, 97 – 20142 Milan, Italy</td>
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<tr>
<td>GRANDPARENT</td>
<td>Salini-Impregilo US Holdings, Inc.</td>
<td>2711 Centerville, Suite 400 Wilmington, DE 19808</td>
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<tr>
<td>PARENT COMPANY</td>
<td>Lane Industries Incorporated</td>
<td>90 Fieldstone Court Cheshire CT 06410</td>
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<tr>
<td>AFFILIATE</td>
<td>Lane Worldwide Infrastructure, Inc.</td>
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<td>AFFILIATE</td>
<td>Lane International, B.V.</td>
<td>Prins Bernhardplein 200 1097 JB Amsterdam, the Netherlands</td>
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<tr>
<td>AFFILIATE</td>
<td>Lane Mideast Contracting, LLC</td>
<td>P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets</td>
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<tr>
<td>AFFILIATE</td>
<td>Lane Mideast, Qatar, LLC</td>
<td>Grand Hamad Street Bin Al Sheikh Bldg. 3rd Floor</td>
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<tr>
<td>SUBSIDIARY</td>
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<td>S.A. Healy Company</td>
<td>901 N. Green Valley Parkway, Suite 260 Henderson, NV 89074</td>
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<td>Skanska-Granite-Lane</td>
<td>295 Bendix Road, Suite 400 Virginia Beach, VA 23452</td>
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<td>JOINT VENTURE (30% PARTNER)</td>
<td>I4 Leasing, LLC</td>
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<td>929 West Adams Street Chicago, IL 60607</td>
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<td>Gemma-Lane Liberty Partners</td>
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<td>JOINT VENTURE (60% MANAGING PARTNER)</td>
<td>Lane-Corman, A Joint Venture</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>JOINT VENTURE (30% PARTNER)</td>
<td>Purple Line Transit Constructors, LLC (PLTC)</td>
<td>6811 Kenilworth Avenue East Riverdale, MD 20737</td>
</tr>
<tr>
<td>JOINT VENTURE (45% PARTNER)</td>
<td>Fluor-Lane South Carolina</td>
<td>100 Fluor Daniel Drive Greenville, SC 29607</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Civil Wall Solutions, A Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Cold River Materials, A Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Company Details</td>
<td>Address</td>
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<tr>
<td>------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
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<tr>
<td>TRADE NAME</td>
<td>Lane Concrete Frames, A Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Prestress of the Carolinas, A Division of the Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Senate Asphalt, A Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Virginia Paving Company, A Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
<tr>
<td>TRADE NAME</td>
<td>Virginia Sign and Lighting Company, Division of The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
</tr>
</tbody>
</table>
ATTACHMENT 3.2.7(a)
DEBARMENT FORM- PRIMARY COVERED TRANSACTIONS
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0095-111-259

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 form.

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

Signature ________________________ February 7, 2017 ________________________ Pursuit Manager

Date ___________________________________________________________________

Pursuit Manager

Title ________________________

The Lane Construction Corporation

Name of Firm ________________________
ATTACHMENT 3.2.7(b)
DEBARMENT FORM- LOWER TIER COVERED TRANSACTIONS
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature] 01/25/17  [Vice President]

Date  Title

KCI Technologies, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

Signature: [Signature] 12/20/2016 Date: 12/20/2016 Exec. Dir. of DB Services/Gen. Mgr./Principal Title: [Title]

Rinker Design Associates, P.C. Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature] 1/24/17 [Title]

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

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

Signature  Date  Title

Dulles Geotechnical & Material Testing Services, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature] January 26, 2017 [Vice President]

[Signature] [Date] [Title]

EEE Consulting, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature] 1/23/2017 [Date]
[President]

Froehling & Robertson, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature] 1/26/2017  Vice President Business Development

[Date]  Title

InfraMap Corp.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-111-259

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

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

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

[Signature]
[Date]
[Title]

[Name of Firm]
ATTACHMENT 3.2.8
OFFEROR’S VDOT PREQUALIFICATION CERTIFICATE
CERTIFICATE OF QUALIFICATION

THE LANE CONSTRUCTION CORPORATION

Vendor Number: L002

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; PORTLAND CEMENT CONCRETE PAVING; MINOR STRUCTURES; UNDERGROUND UTILITIES; ASPHALT CONCRETE PAVING

Issue Date: June 30, 2016

This Rating and Classification will Expire: June 30, 2017

Suzanne FR Lucas, State Prequalification Officer

Don E. Silles, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.
ATTACHMENT 3.2.9
SURETY LETTER
December 29, 2016

Alternate Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: The Lane Construction Corporation
Request for Qualifications
DESIGN-BUILD PROJECT FOR I-95 Southbound CD Lanes – Rappahannock River Crossing
From: Exit 130 to: 0.66 Miles North of Exit 133
Stafford County/City of Fredericksburg, Virginia; Contract ID Number: C00101595DB94
Estimated Contract Price: $100,000,000.00

To Whom It May Concern:

This letter will serve to confirm that The Lane Construction Corporation is a highly regarded and valued client of the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV) and Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the Commonwealth of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2016.

As the sureties for The Lane Construction Corporation, we advise that The Lane Construction Corporation is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.

Naturally, as is customary within the surety industry, the issuance of any bonds is contingent upon a favorable underwriting review of project specifics including, but not limited to, the contract terms, conditions, documents, bond forms and confirmation of complete project financing by both The Lane Construction Corporation and its co-sureties at the time a request for bonds is made. We assume no liability to third parties or to you by issuance of this letter, should bid or final bonds not be issued.

Should you need additional assurance regarding the technical ability or bonding capacity of The Lane Construction Corporation, please do not hesitate to contact this office.

Sincerely,

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

[Signature]

Theresa E. Rowedder
Attorney-in-Fact
KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by GERALD F. HALEY, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT, Jeffrey HENDRICKS and Jane GILSON, all of Boston, Massachusetts, EACH its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

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

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 26th day of April, A.D. 2016.

ATTEST:

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

By: Eric D. Barnes
Secretary
State of Maryland
County of Baltimore

On this 26th day of April, 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, GERALD F. HALEY, Vice President, and ERIC D. BARNES, Secretary, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

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

POA-F 063-3474
EXTRACT FROM BY-LAWS OF THE COMPANIES

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

CERTIFICATE

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,
this 20th day of December, 2016.

Michael Bond, Vice President
POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority hereof set forth, does hereby name, constitute and appoint, Brian Driscoll; Bryan Huff; Gregory J. Steele; Jane Gilson; Joan Correia; Jeffrey Hendricks; Kevin A. White; Maria Chaves; Mark P. Herendeen; and Theresa E. Rowedder

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 19th day of July, 2016.

STATE OF PENNSYLVANIA
COUNTY OF MONTGOMERY

On this 19th day of July 2016, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire & Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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

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

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officers or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 29th day of December, 2016.

by:

[Signature]

Gregory W. Davenport, Assistant Secretary

LMS_12873_122013

29 of 300
ATTACHMENT 3.2.10
SCC AND DPOR INFORMATION TABLES
ATTACHMENT 3.2.10
State Project No. 0095-111-259
SCC and DPOR Information

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

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Information (3.2.10.1)</th>
<th>DPOR Information (3.2.10.2)</th>
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<tr>
<td>The Lane Construction Corporation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F0254476 Foreign Corporation Active</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
<td>Contractor Class A 2701011871 2018-01-31</td>
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<td>The Lane Construction Corporation</td>
<td>90 Fieldstone Court Cheshire, CT 06410</td>
<td>Business Entity Registration 0407002174 2017-12-31</td>
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<td>The Lane Construction Corporation</td>
<td>14500 Avion Parkway, Suite 200 Chantilly, VA 20151</td>
<td>Business Entity Branch Office Registration 0411000988 2018-02-28</td>
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<td>KCI Technologies Inc.</td>
<td>936 Ridgebrook Road Sparks, MD 21152</td>
<td>Business Entity Registration 0407003113 2017-12-31</td>
</tr>
<tr>
<td>KCI Technologies Inc.</td>
<td>6802 Paragon Place, Suite 410 Richmond, VA 23230</td>
<td>Business Entity Branch Office Registration 0411000938 2018-02-28</td>
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<tr>
<td>KCI Technologies Inc.</td>
<td>3014 Southcross Blvd. Rock Hill, SC 29730</td>
<td>Business Entity Branch Office Registration 0411000956 2018-02-28</td>
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<tr>
<td>Rinker Design Associates, P.C.</td>
<td>9385 Discovery Boulevard, Suite 200 Manassas, VA 20109</td>
<td>Professional Corporation Registration 0405000502 2017-12-31</td>
</tr>
<tr>
<td>Rinker Design Associates, P.C.</td>
<td>4301 Dominion Boulevard, Suite 100 Glen Allen, VA 23060</td>
<td>Professional Corporation Branch Office Registration 0410000220 2018-02-28</td>
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</table>
## ATTACHMENT 3.2.10

### State Project No. 0095-111-259

### SCC and DPOR Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Jurisdiction</th>
<th>Status</th>
<th>Address</th>
<th>Additional Information</th>
<th>Registration Date</th>
</tr>
</thead>
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<tr>
<td>Rinker Design Associates, P.C.</td>
<td>Corporation</td>
<td>Active</td>
<td>927 Maple Grove Drive, Suite 105, Fredericksburg, VA 22407</td>
<td>Professional Corporation Branch Office Registration</td>
<td>0410000156</td>
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<tr>
<td>CES Consulting, LLC</td>
<td>Limited Liability Company</td>
<td>Active</td>
<td>23475 Rock Haven Way, Suite 255, Dulles, VA 20166</td>
<td>Business Entity Registration</td>
<td>0407005783</td>
</tr>
<tr>
<td>Dulles Geotechnical and Material Testing Services, Inc.</td>
<td>Corporation</td>
<td>Active</td>
<td>14119 Sullyfield Circle, Suite H, Chantilly, VA 20151</td>
<td>Business Entity Registration</td>
<td>0407006236</td>
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<tr>
<td>EEE Consulting, Inc.</td>
<td>Corporation</td>
<td>Active</td>
<td>8525 Bell Creek Road, Mechanicsville, VA 23111</td>
<td>Business Entity Registration</td>
<td>0407003798</td>
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<td>EEE Consulting, Inc.</td>
<td>Corporation</td>
<td>Active</td>
<td>201 Church St, Blacksburg, VA 24060</td>
<td>Business Entity Branch Office Registration</td>
<td>0411000435</td>
</tr>
<tr>
<td>Froehling &amp; Robertson, Incorporated</td>
<td>Corporation</td>
<td>Active</td>
<td>3015 Dumbarton Road, Richmond, VA 23228</td>
<td>Business Entity Registration</td>
<td>0407000098</td>
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<tr>
<td>InfraMap Corp.</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>10365 Cedar Lane, Glen Allen, VA 23059</td>
<td>Business Entity Registration</td>
<td>0407003343</td>
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<tr>
<td>The Albright Group, LLC</td>
<td>Limited Liability Company</td>
<td>Active</td>
<td>1011 East Main St, Suite 310, Richmond, VA 23219</td>
<td>N/A</td>
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</tbody>
</table>
## ATTACHMENT 3.2.10

**State Project No. 0095-111-259**

### SCC and DPOR Information

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Individual's Name</th>
<th>Office Location Where Professional Services will be Provided (City/State)</th>
<th>Individual's DPOR Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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<tr>
<td>Rinker Design Associates, P.C.</td>
<td>Steven Scott Shropshire, P.E.</td>
<td>Fredericksburg, VA</td>
<td>5203 Yellow Birch Dr. Fredericksburg, VA 22407</td>
<td>Professional Engineer</td>
<td>0402035812</td>
<td>2017-06-30</td>
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<tr>
<td>CES Consulting, LLC</td>
<td>Syed R. Khan, P.E.</td>
<td>Dulles, VA</td>
<td>43744 Paramount Pl. Chantilly, VA 20152</td>
<td>Professional Engineer</td>
<td>0402031057</td>
<td>2017-07-31</td>
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</table>
THE LANE CONSTRUCTION CORPORATION

**General**

- SCC ID: F0254476
- Entity Type: Foreign Corporation
- Jurisdiction of Formation: CT
- Date of Formation/Registration: 7/24/1972
- Status: Active
- Shares Authorized: 11700

**Principal Office**

90 FIELDSTONE COURT
CHESHIRE CT06410

KCI Technologies, Inc.

**General**

- SCC ID: F0598690
- Entity Type: Foreign Corporation
- Jurisdiction of Formation: DE
- Date of Formation/Registration: 12/19/1988
- Status: Active
- Shares Authorized: 1000
Rinker Design Associates, P.C.

General

SCC ID: 02270627
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 2/24/1982
Status: Active
Shares Authorized: 20000

Principal Office

9385 DISCOVERY BOULEVARD
SUITE 200
MANASSAS VA20109

CES Consulting, LLC

General

SCC ID: S3416007
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 10/14/2010
Status: Active

Principal Office

23475 ROCK HAVEN WAY
SUITE 255
DULLES VA20166
Dulles Geotechnical and Material Testing Services, Inc.

General

SCC ID: 07582323
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 11/26/2012
Status: Active
Shares Authorized: 1000

Principal Office

14119 SULLYFIELD CIRCLE
SUITE H
CHANTILLY VA20151

EEE Consulting, Inc.

General

SCC ID: 05049416
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 6/23/1998
Status: Active
Shares Authorized: 333000
FROEHLING & ROBERTSON, INCORPORATED

General

SCC ID: 00272112
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 10/11/1924
Status: Active
Shares Authorized: 1100000

InfraMap Corp.

General

SCC ID: F1055252
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 10/22/1990
Status: Active
Shares Authorized: 1500

The Albright Group, LLC

General

SCC ID: S4682250
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 8/31/2013
Status: Active

Principal Office
ATTACHMENT 3.2.10.2
DPOR SUPPORTING DOCUMENTATION
FOR EACH OFFICE
### DPOR License Lookup  License Number 2701011871

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<td>2012-06-27</td>
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**License Number**: 0405000502  
**License Description**: Professional Corporation Registration  
**Firm Type**: PC - Professional Corporation  
**Rank**: Professional Corporation  
**Address**: 9385 DISCOVERY BOULEVARD, STE 200, MANASSAS, VA 20109  
**Initial Certification Date**: 1986-07-16  
**Expiration Date**: 2017-12-31 |
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**License Number**: 0410000220  
**License Description**: Professional Corporation Branch Office Registration  
**Firm Type**: PC - Professional Corporation  
**Rank**: Professional Corporation Branch Office  
**Address**: 4301 DOMINION BOULEVARD, SUITE 100, GLEN ALLEN, VA 23060  
**Initial Certification Date**: 2011-03-17  
**Expiration Date**: 2018-02-28 |
| 0410000156     | **Name**: RINKER DESIGN ASSOCIATES PC  
**License Number**: 0410000156  
**License Description**: Professional Corporation Branch Office Registration  
**Rank**: Professional Corporation Branch Office  
**Address**: 927 MAPLE GROVE DR STE 105, FREDERICKSBURG, VA 22407  
**Initial Certification Date**: 2005-12-27  
**Expiration Date**: 2018-02-28 |
CES Consulting, LLC

Dulles Geotechnical and Material Testing Services, Inc.

EEE Consulting, Inc.
KEY PERSONNEL DPOR

Robert E. Burgess, P.E.

William M. King, P.E.

Steven S. Shropshire, P.E.

Syed R. Khan, P.E.
ATTACHMENT 3.3.1
KEY PERSONNEL RESUMES
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: JAN SHERMAN, DISTRICT MANAGER

b. Project Assignment: DESIGN-BUILD PROJECT MANAGER

c. Name of all Firms with which you are employed at the time of submitting SOQs. In addition, please denote the type of employment (Full time/Part time): THE LANE CONSTRUCTION CORPORATION (FULL TIME)

d. Employment History: With this Firm 18 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):

The Lane Construction Corporation, 2002-Present: Mr. Jan Sherman has been working for LANE for over 18 years. His construction experience consists of a wide assortment of projects ranging in value from several thousand to over $200M. The scopes of his projects have included bridge replacement, roadway widening and rehabilitation, dirt and rock excavation, blasting, excavation support, micro-piles, caissons, underground utilities, storm drainage, reinforced structural concrete, architectural concrete, concrete pavement, asphalt pavement, milling, traffic control, site electrical, interior electrical, mechanical, plumbing, terrazzo, precast concrete, elevators, escalators, moving walkways and various finishes. Throughout his career with LANE, Mr. Sherman has performed as an Estimator, Foreman, QC Technician, QC Manager, Project Engineer, Project Manager, and currently District Manager. He is also the Division Manager for Virginia Sign & Lighting (VS&L) and Civil Walls Solutions (CWS), both divisions of LANE. His responsibilities have included the management of office & field personnel, adherence to corporate safety policies, contract administration, submittals, requests for information, payment requisitions, project scheduling, procurement, change order negotiations, management of resources and costs, and subcontractor coordination.

- VDOT I-66/Route 15 Interchange Reconstruction, Prince William County, VA – 2014-Present – Design-Build Project Manager
- VDOT Richmond GRTC BRT, Richmond, VA – 2016-Present – VS&L Division Manager
- VDOT Military Highway, Norfolk, VA – 2016-Present – VS&L Division Manager
- VDOT I-66 Spot 2 Improvements, Arlington, VA – 2013-2016 – Assistant District Manager
- VDOT I-95 Express Lanes, Fairfax, Prince William and Stafford Counties, VA – 2013-2014 – CWS Division Manager
- VDOT I-495 Express Lanes, Fairfax County, VA – 2010-2012 – Construction Manager
- VDOT Route 29 Solutions, Albemarle County, VA – 2015-Present – VS&L Division Manager
- MWAA APM Package 6 – Dulles International Airport, Dulles, VA – 2007-2009 – Assistant Project Manager
- Stafford Regional Airport Phase IV, Stafford VA – 2002 – Project Engineer/Quality Control Manager
- Airport Access Road Phase I, Stafford VA – 2002 – Project Engineer/Quality Control Manager

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

Clarkson University, Potsdam, NY/ B.S./1998/ Civil Engineering

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

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

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

VDOT, I-495 Express Lanes, Fairfax County, VA  (DESIGN-BUILD)

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>The Lane Construction Corporation</th>
<th>Project Role:</th>
<th>Area Project Manager</th>
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<tbody>
<tr>
<td>Beginning Date:</td>
<td>2010</td>
<td>End Date:</td>
<td>2012</td>
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Specific Responsibilities: As the Area Project Manager on this D-B project, Mr. Sherman was responsible and accountable for oversight of construction activities, assisting in estimating quantities, reviewing construction plans and general conduct of the project in Area 2. In addition, he assisted with the maintenance and updating of the project CPM schedule using Primavera Scheduling software as well as scheduling and assuring continued inspection of all materials and construction for conformance to the contract plans and specifications. Mr. Sherman worked with proposed CM, Bob Cross on this project.
**Project Relevance:** This $1.5B D-B project involved two new lanes which were constructed in each direction on a 14-mile stretch of I-495 from the Springfield Interchange to just north of the Dulles Toll Road. Area 2 of the Express Lanes encompasses the I-495 interchange at I-66, new ramp access at Route 29, W&OD Trail and overpasses south of Route 7 interchange. Construction of the new interchanges in Area 2 required close coordination with homeowners, WMATA, NVRPA and both vehicular & pedestrian foot traffic through the work areas. Unique to Area 2, an active HOV ramp from I-66 to the beltway was maintained throughout the majority of the project, requiring innovative traffic management and alternate means of construction to build the entire interchange. As one of the more congested interchanges along the beltway, construction was performed in a manner to minimize impacts to the traveling public. The project encompassed the replacement of more than $260 million of aging infrastructure, including more than 50 bridges and overpasses. Similar to the proposed I-95/Rappahannock River Crossing project included MOT, bridge/structure replacement, roadway widening, survey, QA/QC, hydraulics, and public involvement/relations and all associated project management functions.

**VDOT, I-581 Valley View Interchange Phase II, Roanoke, VA**

**Name of Firm:** The Lane Construction Corporation  
**Project Role:** Design-Build Project Manager

**Beginning Date:** 2013  
**End Date:** 2/2017 (est)

**Specific Responsibilities:** As DBPM on this project, Mr. Sherman is responsible for overall construction, quality and safety programs, ensured all requirements and specifications were delivered, contract administration, directed and managed project development and constructability reviews with the designers, defining project scope, goals and deliverables, collaborated with senior management and stakeholders, public outreach and public meetings, estimating resources, supervised the procurement and furnishing of all materials, equipment, services and labor necessary for project completion, scheduled project timelines and milestones, supervised team members, and developed best practices and tools for project execution and management.

**Project Relevance:** Similar to the I-95 Rappahannock River Crossing project, this $39 million D-B project includes the partial demolition of the existing structure; widening and repair of the existing bridge substructure and superstructure; maintenance of traffic; construction of retaining and mechanically stabilized earth (MSE) walls required for the bridge structure, ramps, auxiliary lanes, and Valley View Boulevard widening; acquisition of right-of-way and limited access lane revisions; extensive utility relocations; geotechnical; environmental; QA/QC; survey; hydraulics; milling and repaving of the existing pavement; installation of two new traffic signals and reconstruction of the existing traffic signals; roadway lighting replacement; complete interchange lighting including the underbridge; installation of new and revised signs and pavement markings along I-581, Valley View Boulevard, and the ramps; installation and extension of the drainage system and ditches; ESS control; stormwater management; installation of a new pedestrian bridge along I-581. The project also includes the construction of a new DDI at I-581 and Valley View Boulevard. This will be accomplished by the addition of the southbound exit and northbound entry ramps serving I-581/U.S. Route 220 north of the interchange and accompanying auxiliary lanes along I-581/U.S. Route 220 to the Hershberger Road interchange. The existing southbound exit and northbound exit ramps will be adjusted and lengthened to facilitate the other improvements. Valley View Boulevard and the bridge over I-581/U.S. Route 220 will be widened to provide two through lanes in each direction, dual left turn lanes for both the northbound and southbound movements to I-581 through the interchange and a right turn lane onto the northbound I-581/U.S. Route 220 entry ramp.

**VDOT, I-66/Route 15 Interchange Reconstruction, Prince William County, VA**

**Name of Firm:** The Lane Construction Corporation  
**Project Role:** Design-Build Project Manager

**Beginning Date:** 2014  
**End Date:** 7/2017 (est)

**Specific Responsibilities:** As DBPM for this $36M project, Mr. Sherman is responsible for the overall project design and construction. He supervises and manages the design, construction, quality management, contract administration and other services required by the contract, including the procurement and timely delivery of all materials, equipment, services and labor. Mr. Sherman ensures all contract obligations are met and successfully avoids and/or resolves disputes in accordance with contract documents. He is responsible for overseeing the construction and field personnel as well as permitting, erosion control, lighting, signing and pavement marking, traffic control, right-of-way and utility relocation. Mr. Sherman also coordinates public outreach and public meetings.

**Project Relevance:** Similar to the proposed I-95 Rappahannock River Crossing project this project includes: roadway widening, utility relocation, right-of-way acquisition, environmental, sign structures, public involvement, QA/QC, overall project management, transportation management plan, construction of a new service road, and replacement of northbound and southbound bridges carrying Route 15 over I-66. The I-66/Route 15 Interchange Reconstruction project also involves reconstructing the interchange of Route 15 over I-66. **Mr. Sherman worked with proposed CM, Bob Cross on this project.**

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A. Mr. Sherman is not required on-site full-time.
Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: S. SCOTT SHROPSHIRE, P.E. / DIRECTOR OF CONSTRUCTION – SOUTHERN REGION

b. Project Assignment: RESPONSIBLE CHARGE ENGINEER

c. Name of all Firms with which you are employed at the time of submitting SOQ’s. In addition, please denote the type of employment (Full time/Part time): RINKER DESIGN ASSOCIATES, P.C. (FULL TIME)

d. Employment History: With this Firm >1 Years with Other Firms 18 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):

Rinker Design Associates, P.C., Director of Construction – Southern Region (2015-Present): Mr. Shropshire is responsible for overseeing and managing all elements of construction engineering and providing overall direction of RDA’s Construction Services Division in the Fredericksburg and Richmond offices. His duties include active contract management, monitoring field inspections/testing, strong emphasis on and enforcing quality assurance/quality control specifications, providing accurate project documentation/records, and determining construction solutions to design and unforeseen field conditions. Serves as Responsible Charge Engineer and QA/QC Manager in the field for traditional Design-Bid-Build and Design-Build contract work.


Morton Thomas & Associates, Inc. – Associate – Quality Control Manager (2014-2015): As Quality Control Manager (QCM) worked exclusively on Design-Build projects as lead QC. Responsible for the QC documentation related to inspection, reporting and testing of all materials used and work performed, in addition to establishing and maintaining the Materials Register on the projects.


Virginia Department of Transportation, Fredericksburg District Area Construction Engineer (2004-2014): Mr. Shropshire functioned as the Responsible Charge Engineer for construction contract work, and was responsible for providing leadership and technical guidance for inspectors, construction managers, contract administration, and consultant staff in the delivery of the six-year highway construction program via traditional Design-Bid-Build and Design-Build procurements.

- VA Rt. 639/Fall Hill Ave Widening – 2013-2014 – ACE
- VA Rt. 3/Piankatank River Bridge Rehab – 2012-2014 – ACE
- US Rt. 301 Bridge Rehab over Rappahannock River – 2012-2013 – ACE
- I-95/VA Rt. 207 Interchange – 2009-2010 – ACE
- VA Rt. 639/Bragg Rd Widening – 2008-2010 – ACE
- VA Rt. 610/Garrisonville Rd Widening – 2006-2009 – ACE
- VA Rt. 630/Courthouse Rd Improvements – 2006-2008 – ACE

Johnson Mirmiran & Thompson, Inc., Traffic Engineer (2002-2004): Served as Project Engineer/Manager providing roadway/traffic engineering services on a variety of transportation engineering projects to multiple clients.

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

Virginia Military Institute, Lexington, VA / B.S. / 1996 / Civil Engineering

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

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

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

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

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<tr>
<th>Name of Firm: A. Morton Thomas &amp; Associates, Inc.</th>
<th>Project Role: Quality Control Manager (QCM)</th>
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<td>End Date: 04/2015</td>
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Specific Responsibilities: This FHWA – EFLHD project involves 3.66 miles of roadway widening from 4-lanes to 6-lanes along US Route 1/Jefferson-Davis Highway under urban conditions. The scope of work included roadway excavation, embankment, subgrade and drainage improvements, twin bridges over Accotink Creek, paving, and sound walls. As QCM, Mr. Shropshire was responsible for QC inspection and testing, establishing and maintaining the Materials Register, as well as, coordinating and
addressing RFIs and Shop Drawing Reviews with design staff for the widening of US Route 1. His role also included establishing and maintaining the SWPPP, coordination of all applicable permits, reviewing and maintaining project diaries and daily work reports, generating and compiling weekly work reports for the QAM. Additional project responsibilities included construction oversight of TMP, bridge demolition/replacement, pile driving, and drilled in caissons. He was responsible for coordinating with the contractor (during design and construction), FHWA-EFLHD, VDOT, Ft. Belvoir, Fairfax County, and utility companies to ensure that the design/construction requirements of the contract were met and to expedite the concurrence for associated services. Mr. Shropshire provided field engineering decisions to address geotechnical issues, storm sewer issues, and TMP conflicts, as well as, provided guidance on how to correct non-conforming construction work.

**Project Relevance:** Similar to the I-95/Rappahannock River project, this $75M D-B project consisted of the design and construction of roadway improvements along a congested corridor with extensive earthwork, embankments, and bridge work over a sizeable stream. As anticipated on the RRC project, TMP complexity on this project required significant integration of the roadway designers during implementation. Another similar component is the geotechnical issues/concerns (i.e. unsuitable material, Potomac Clay, and acidic soils). The extensive coordination with multiple stakeholders (e.g. FHWA-EFLHD, Army Corps of Engineers, Fort Belvoir, VDOT, Fairfax County, and adjacent property owners) for this project provides a direct correlation and understanding of the communication emphasis we anticipate on the RRC project to implement our effective and efficient TMP design through coordination with VDOT, Stafford County, City of Fredericksburg, commercial property owners, and commuter traffic.

### VA Route 3 / Piankatank River Bridge, Matthews/Middlesex Counties, VA

**Name of Firm:** Virginia Department of Transportation  
**Project Role:** Area Construction Engineer  
**Beginning Date:** 10/2012  
**End Date:** 04/2014

**Specific Responsibilities:** As the Area Construction Engineer, Mr. Shropshire monitored, supervised, and provided technical expertise in the replacement of the existing superstructure, coupled with major rehabilitation of the substructure for the two lane, 30 span, 2,100 linear foot river crossing. In his role for this project, he was fully integrated with the project team, and possessed supervisory direction and control authority for making and approving engineering decisions during construction. His role also included coordination of bridge design revisions, construction implementation, survey, right of way evaluation, and utility coordination. Additional project responsibilities included construction oversight of TMP, utility relocations, formwork, reinforced steel, hydraulic cement operations, sign structures, and traffic engineering elements. During construction, he was responsible for coordination with the contractor, VDOT, local government, utility companies, and adjacent property owners to ensure that requirements of the contract were met. Additionally, Mr. Shropshire monitored the construction QC program by reviewing inspection and test reports from his QA inspection staff. In addition to actively monitoring the inspection staff, he performed periodic evaluations of the project records at regular intervals. This review included, but was not limited to, the Materials Notebook, Project Daily Work Reports, Force Accounts/Work Orders, and testing reports. Pay requests were processed by Mr. Shropshire. Mr. Shropshire provided field engineering decisions address differing conditions, as well as, how to correct non-conforming construction elements. Through his efforts, three (3) pending Notices of Intent to File Claim were resolved.

**Project Relevance:** Similar to the I-95/Rappahannock River project, this project consisted of the design and construction of a significant bridge involving a major river crossing. TMP complexity and existing structural conditions on this project required significant integration of the roadway and bridge design staff during construction which was managed and coordinated by Mr. Shropshire. The extensive coordination with the multiple stakeholders (e.g. VDOT – District and Residency, US Coast Guard, Matthews County, Middlesex County, and adjacent property owners) provides further insight on challenges and strategies that can be explored to engage and guide the stakeholders on the RRC project.

### I-95 / VA Route 207 Interchange Improvements, Caroline County, VA

**Name of Firm:** Virginia Department of Transportation  
**Project Role:** Area Construction Engineer  
**Beginning Date:** 06/2009  
**End Date:** 11/2010

**Specific Responsibilities:** As the Area Construction Engineer for this Federal Oversight project, Mr. Shropshire was responsible for the contract administration, construction, and quality assurance inspections/testing, as well as addressing RFIs and Shop Drawing Reviews for the I-95/VA Route 207 Interchange Improvements. His role also included coordination of roadway design revisions, construction implementation, surveys, right of way acquisition, and utility coordination. Additional project responsibilities included construction oversight of TMP, utility relocations, earthwork, subgrade and drainage improvements, paving, sign structures, and traffic engineering elements. During construction, he was responsible for coordinating with the contractor, FHWA, VDOT, Caroline County, utility companies, and adjacent business owners to ensure that the construction requirements of the contract were met and to provide updates to the FHWA Area Engineer. Additionally, Mr. Shropshire monitored the contractor’s and subcontractor’s QC program while overseeing the quality assurance inspection staff. Additionally, he periodically performed independent evaluations of the project records (i.e. Materials Notebook, Project Daily Work Reports, Force Accounts/Work Orders, density reports) at random intervals. Mr. Shropshire provided field engineering decisions to assist the contractor in addressing differing conditions, as well as, guidance on how to correct non-conforming construction elements.

**Project Relevance:** Similar to the I-95/Rappahannock River project, this project consisted of new alignment construction, coupled with roadway widening along a congested corridor involving on- and off- ramps to an interstate. The TMP complexity on this project required significant integration of the roadway designers, under Scott’s direction, to evaluate interchange operation / LOS, adjacent roadways, and business entrances (similar to those along Riverside Parkway near the Route 17 interchange on the RRC project) which resulted in TMP implementation revisions.

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h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A
### ATTACHMENT 3.3.1

**KEY PERSONNEL RESUME FORM**

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>SYED KHAN PE, CCM, DBIA, QUALITY ASSURANCE MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>QUALITY ASSURANCE MANAGER</td>
</tr>
<tr>
<td>c. Name of all Firms with which you are currently employed at the time of SOQ submittal. In addition, please denote the type of employment (Full Time/ Part Time):</td>
<td>CES CONSULTING LLC (FULL TIME)</td>
</tr>
<tr>
<td>d. Employment History: With this Firm</td>
<td>4 Years with Other Firms 31 Years</td>
</tr>
<tr>
<td>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):</td>
<td></td>
</tr>
<tr>
<td><strong>CES Consulting LLC, Quality Assurance Manager, 2013–Present: Mr. Khan is a Licensed Professional Engineer and a Certified Design Build Professional (DBIA) who has more than 35 years of professional experience in managing Design Build and Traditional transportation projects. He has used his extensive Quality Assurance (QA) and Quality Control (QC) Management experience for successful completion of I-66 Spot 2 Widening in Fairfax/Arlington County, I-95 HOV widening in Fairfax/Prince William County, I-395 reconstruction in Washington DC, Local Roads and a Ten Lane Five Mile Freeway (ten lanes) for an overseas project. Mr. Khan has managed Highways and Bridge construction projects in various capacities from developing Project QA and QC plans, developing standardized documents to maintain auditable testing records, developing audit criteria and frequencies, creating ties between project schedule activities and quality documents, establishing logs to track and monitor testing requirements and directing the staff in pursuing QA and/or QC duties.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Area Manager/QC Manager for Parsons Brinkerhoff, Qatar Local Roads and Drainage Program, 2011 – 2013: Mr. Khan was responsible for overseeing Quality Assurance Management as well as coordinating the design management, construction contract procurement, construction management, handing over and overseeing the defect liability period and final handing over of roads and drainage projects. He led all coordination efforts with other functional groups in the program management organization such as design specialists, project controls, contract management, claims specialists, construction supervision staff and the client for delivering the projects. The program required coordination with various other major programs and government agencies such as Ministry of Municipal Affairs, Ministry of Environment, President’s Executive Office and Central Planning Office of Qatar. The construction value of the projects supervised by him was approximately $500 Million.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Deputy Director for Yas Island (Quality Control) 2007 – 2011: Responsible for the development of Infrastructure projects at Yas Island, Mr. Khan was directly responsible for the design, procurement, and Quality Control Management of the following transportation and utilities projects on Yas Island: A 15 mile, 10–lane freeway with several interchanges, roads and waterway crossings connecting Yas Island to Mina Zayed via Saadiyat Island, Design &amp; Construction of an underwater tunnel (0.8 miles long) connecting Yas Island to Raha Beach; and construction of all internal roads, surface parking lots, and multilevel parking structures. The total value of the projects supervised by Mr. Khan was approximately $1 Billion.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Senior Construction Manager, Parsons Transportation Group, Transportation Improvement Program, 2002 – 2007: The projects under the program included construction of highways, interchanges, new bridges, widening of existing bridges, roadway widening, and installation of drainage pipes, extensive ITS/TMS work and overhead signs. In addition, from 2005 to 2007, he worked on the construction of Terminal Building at Abu Dhabi Airport which was a Design-Build project. Mr. Khan managed CEI Staff, for the oversight of all testing, documentation and payment of work on site, working with FHWA/Design Engineer/Contractor to resolve field construction issues. He enforced specifications/standards and ensured that all Non-Conforming Work was properly documented through NCR and remediated and closed out. As RE, Mr. Khan also ensured that all work orders, pay estimates &amp; project closeouts are done as per Quality Control and Quality Assurance procedures. The total value of projects managed under the program is approximately $400 Million.</strong></td>
<td></td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
<td>State University of New York at Buffalo/ MS/ 1989/ Construction Management</td>
</tr>
<tr>
<td>NED University of Engineering &amp; Technology, Pakistan/ BS/ 1981/ Civil Engineering</td>
<td></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:  Professional Engineer/1995/VA #31057 Certified Construction Manager, CCM; PMP; DBIA; VDOT Certifications: Pavement Marking (2018); Asphalt Field Levels I &amp; II (2018); Others: DCR/DEQ Erosion &amp; Sediment Control (2017); Intermediate Work Zone Traffic Control (2017); Nuclear Gauge Safety (2016); ACI Concrete Field (2018); OSHA 10-hour</td>
<td></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
<td></td>
</tr>
<tr>
<td>1. <strong>Note your role, responsibility, and specific job duties for each project, not those of the firm.</strong></td>
<td></td>
</tr>
<tr>
<td>2. <strong>Note whether experience is with current firm or with other firm.</strong></td>
<td></td>
</tr>
<tr>
<td>3. <strong>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</strong></td>
<td></td>
</tr>
</tbody>
</table>
(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.)

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

**VDOT, I-66 Spot 2 Improvements, Fairfax County, VA**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>CES Consulting LLC</th>
<th>Project Role:</th>
<th>Senior Construction Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Date:</strong></td>
<td>2013</td>
<td><strong>End Date:</strong></td>
<td>2016</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** As Senior Construction Manager for this $33 Million project, Mr. Khan was responsible for overseeing all of the office engineering and inspection efforts to assure Quality Assurance compliance with contract requirements. Mr. Khan was managing the Project Quality Management Team, VDOT and Consultant Staff. He was responsible for the oversight of all testing, documentation and payment of work on site, working with FHWA/Design Engineer/Contractor to resolve field construction issues. Additionally, he enforced VDOT specifications/standards and ensured that all non-conforming work was properly documented, remediated and closed-out.

**Project Relevance:** The Project entailed Roadway and Bridge widening, Storm drainage, Sound walls, In-plan utility relocations, Overhead sign installation, and paving construction. Extensive MOT work through multiple phased construction, Interstate corridor lighting, ITS communication equipment/duct bank installation and relocation, variable message boards and closely coordinated work with WMATA representatives for compliance with their Manual.

**Transurban, 395 Express Lanes, Fairfax & Arlington Counties, and City of Alexandria, VA (DESIGN-BUILD)**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>CES Consulting LLC</th>
<th>Project Role:</th>
<th>Program Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Date:</strong></td>
<td>9/2016</td>
<td><strong>End Date:</strong></td>
<td>Present</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Mr. Khan was hired for this GEC Contract to assist in all Program Management activities. He is involved in Program Management activities that include: developing procurement schedule, developing design build procurement documents such as RFQ and RFP, developing P3 procurement documents such as RFQ and RFP (part of alternate procurement plan), assisting in budget development, writing technical references for both Design Build and P3 procurement, participating in Risk Management exercises and development of Risk Register, and liaison with various VDOT Specialty Groups.

**Project Relevance:** The scope of this $300M project includes: interstate widening, improvements to interchange ramps, bridge rehabilitation, parking improvements, utilities, ROW, installation of TMS, and ITS components. The 395 Project also includes the design and construction of required sound barriers along the I-395 corridor (and connecting roadways, where applicable), as well as roadway, traffic signal, TTMS, and parking lot improvements on the Pentagon reservation.

**Qatar Local Roads and Drainage Program, Qatar, UAE (DESIGN-BUILD)**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Parsons Transportation Group</th>
<th>Project Role:</th>
<th>Area Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Date:</strong></td>
<td>2011</td>
<td><strong>End Date:</strong></td>
<td>2013</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** As Area Manager/Quality Control Manager, Mr. Khan was responsible for managing and overseeing Quality Assurance Management. He led all coordination efforts with other functional groups in the program such as design specialists, project controls, contract management, claims specialists, construction supervision staff and the client for delivering the projects. Mr. Khan supervised the development of Quality Assurance Program that included a detailed narrative, record keeping documents for Quality Assurance Tests, Recording and Closing out of all Non-Conformance Items and generating NCR Reports. He worked with multiple contractors to ensure that the quality of work was uniform across all contracts, specifications/standards were followed across all contracts, and payments were made as per contract terms and conditions.

**Project Relevance:** This $500 Million project included construction of roads and drainage works using multiple contractors. The project scope varied from construction of new roads, new storm water drainage system, widening and upgrading of the existing roadway and drainage system, construction of new highways, bridges and interchanges. The project also included public outreach, traffic maintenance and management, extensive stake holder coordination, pedestrian and bike access, environmental compliance, extensive landscaping of public areas along the roads and highways.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. *N/A. Mr. Khan is not required on-site full-time.*
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: MERRITT KING, PE, DBIA, SOUTHEAST REGIONAL STRUCTURES PRACTICE LEADER</td>
</tr>
<tr>
<td>b. Project Assignment: DESIGN MANAGER</td>
</tr>
<tr>
<td>c. Name of all Firms with which you are employed at the time of submitting SOQ’s. In addition, please denote the type of employment (Full time/Part time): KCI TECHNOLOGIES, INC. (FULL TIME)</td>
</tr>
<tr>
<td>d. Employment History: With this Firm 4 Years With Other Firms 24 Years</td>
</tr>
</tbody>
</table>

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

**KCI Technologies, Inc., Vice President, Southeast Regional Practice Leader, (2012-Present).** As Southeast Regional Practice Leader, Mr. King manages the Transportation Structures Design groups for Virginia, North Carolina, South Carolina, Georgia and Florida. He designs and pre-construction activities for design-build projects. His duties include proposal pursuits, teaming, contracts and agreements, project management, design management and coordination for design-build projects. Mr. King has been the design manager for 23 design-build projects ranging from $12 million to $487 million.

**Tripplett-King & Associates, Inc., President, (2002-2012).** Prior to merging his firm with KCI Technologies in 2012, Mr. King was founder and managing partner of Tripplett-King & Associates, Inc. (TKA), where he grew the firm from one employee to a staff of 40 with specialized services in bridge design, CEI, design-build, value engineering, structural design and construction engineering. For over 16 years, Mr. King managed the firm’s major projects, operations, design staff, CEI staff, human resources, financial and business operations, marketing, proposal and client development and quality control in design and inspection.

| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of North Carolina at Charlotte/B.S./1989/Civil Engineering Technology |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2001/Professional Engineer/0402035924 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. |
| 1. Note your role, responsibility, and specific job duties for each project, not those of the firm. |
| 2. Note whether experience is with current firm or with other firm. |
| 3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation. |

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

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

**I-520 Palmetto Parkway Design-Build, Phase I, Aiken County, SC/Augusta, GA (DESIGN-BUILD)**

<table>
<thead>
<tr>
<th>Name of Firm: KCI Technologies, Inc.</th>
<th>Project Role: Design Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date: 06/2002</td>
<td>End Date: 06/2004</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Mr. King oversaw project management, design management and coordination for the design team and all subconsultants. He prepared all subconsultant agreements and contracts, managed the pre bid fee estimates, served as project manager for all design activities and managed the design staff for preparing estimated quantities for pre-bid award. He also served as quality control engineer for the design and plans to satisfy GDOT requirements for the bridge crossing the Savannah River. In this capacity, he performed quality control of the bridge design and drawings and also reviewed the design for the interior bents consisting of drilled shaft foundations and concrete columns and bent caps. He reviewed the bridge bearings, typical section and span details for spans G-M, standard notes and detail sheets and designed the expansion strip joint seals for the expansion bents.

**Project Relevance:** This $43M, major design-build project consisted of connecting US 1 to I-520 Bobby Jones Expressway and included the design and construction plan details for the bridge over the Savannah River. This four-lane divided interstate facility on new alignment is controlled access and includes two major interchanges, 2.5 miles of interstate and five bridges. The bridge over the Savannah River is a 14-span, 1,900’ bridge consisting of 74’ prestressed concrete bulb-tie beams with spans up to 139’. The bridge superstructure is supported by 20” diameter pipe piles at the end bents and 72” diameter drilled shaft piers with crash wall struts in the navigable channel as required by the vessel impact loading study. The bridge geometry includes two tapers on the bridge deck for acceleration and deceleration lanes in combination with horizontal and vertical curve alignments, all of which added complexity to the seismic design and detailing requirements of the SCDOT’s Seismic Design Specifications for Highway Bridges, 2001. The project also included roadway improvements various secondary and local roads.
**US 21 Bridge over Catawba River, York County, SC**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>KCI Technologies, Inc.</th>
<th>Project Role:</th>
<th>Design Project Manager</th>
<th>End Date: 06/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>01/2008</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Mr. King performed the project management and contract administration for the replacement of the existing structural steel girder bridge over the Catawba River. He led the team for investigating several alternates and alignments for the replacement of the existing bridge. He also assisted in the preparation of the Alternate Alignment Study Report delivered to the client (SCDOT). Mr. King developed the scope of services for the firm and all sub-consultants including surveying, geotechnical, environmental, roadway, hydrology, subsurface utility exploration and utility coordination. He prepared engineering fee estimates for bridge design and project management and provided quality control of subconsultant fees for their various items of service. He coordinated monthly design meetings, approved invoices and pay estimates, managed staff for bridge design services for preliminary and final design phases and provided coordination with the client, regulatory agencies, property owners and other project stakeholders.

**Project Relevance:** The project consisted of two miles of widening from a two-lane roadway to a five-lane curb and gutter section sidewalks and a 1,000’ eight-span, pre-stressed concrete beam bridge supported on drilled shaft foundations. The new bridge utilizes 74’ pre-stressed concrete, bulb-tee beams supported on concrete drilled shaft and rock socket foundations to replace the existing structural steel bridge and includes bicycle lanes, sidewalks and aesthetic features with barrier walls and lighting. The project also included a corridor analysis and bridge alignment alternate for cost comparison and potential conflicts with ROW, environmental issues and utilities. KCI performed the study for architectural features for the new bridge including concrete arches over the river, architectural railings with rock and brick facades, decorative light pedestals and lighting schemes. KCI managed all subconsultants for bridge hydrology/hydraulic design, roadway design, environmental documents and permitting, surveying, geotechnical exploration, and utility coordination. As part of the scope of services for the conceptual and preliminary design phase, KCI performed an alternate alignment and bridge type study to provide SCDOT a matrix and cost comparisons of each alternate while defining: ROW impacts/relocations, traffic staging, utility conflicts, environmental issues, geometric alignments and constructability. Based on the alternate study, KCI recommended building the bridge on new alignment upstream and maintaining traffic on existing bridge instead of scouring the project as originally planned by DOT for staged construction method. The new alignment alternate showed a savings of $1.5M to the DOT. Special design considerations and issues included: extensive environmental studies in sensitive environmental and cultural areas; coordination with regulatory agencies and the Catawba Indian Nation; heavy public information and public hearing involvement; coordination with SCDOT, FHWA, York County, City of Rock Hill, and Town of Fort Mill; complex utility design and coordination, including several major utility relocations; completed services within schedule and budget.

**Route 288 PPTA, Route 288/I-64 Interchange Design-Build, Richmond, VA (DESIGN-BUILD)**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>KCI Technologies, Inc.</th>
<th>Project Role:</th>
<th>Design Manager</th>
<th>End Date: 01/2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>01/2001</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Mr. King performed design and plan reviews for the two flyover ramp bridges. He signed and sealed the construction drawings for the interchange bridges that were reviewed and approved by the lead consultant, CH2MILL and Virginia Department of Transportation.

**Project Relevance:** The KCI team was responsible for the design of Ramps G and H and design management for Ramp E, all of which are multi-span, horizontally curved, and continuous for live load bridges at the interchange of Route 288 and I-64. The Route 288/I-64 Interchange is part of the $236 million design-build project in Richmond, VA funded through the Public-Private Transportation Act of 1995 (PPTA). The superstructures for the ramps consist of curved structural steel plate girders with spans that range from 211 feet to 246 feet. The superstructures for Ramps G and H are supported by hammer-head piers and MSE high wall abutments. The begin bridge ends for Ramps G and H are supported by a single, shared MSE wall system with the highest portions of the MSE wall system being 70-feet-tall, currently the tallest MSE walls in the Commonwealth of Virginia. Since the project was constructed in the design-build format, two submittals for each structure were required to facilitate construction of the substructures. The separate submittals enabled construction of the substructure components to take place while the final design, plan details, and fabrication for the superstructure components were completed. With an accelerated schedule, the ramps were designed in 10 months and were constructed in 20 months.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **BOB CROSS, CONSTRUCTION MANAGER**

b. Project Assignment: **CONSTRUCTION MANAGER**

c. Name of all Firms with which you are employed at the time of submitting SOQ's. In addition, please denote the type of employment (Full time/Part time): **THE LANE CONSTRUCTION CORPORATION (FULL TIME)**

d. Employment History: With this Firm < 9 Years With Other Firms 30 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):

   **The Lane Construction Corporation, 2006-Present:** Mr. Cross is a Construction Manager with nearly 40 years of experience in the heavy construction industry including both roadway and site development construction. He performs constructability reviews of design drawings; develops and maintains project schedule, and coordinates contractor/subcontractor activities. Oversees all Quality Control activities on the project site to include both materials used and work performed and ensures that these meet contract requirements and the “approved for construction” plans and specifications.

   **Moore Brothers, 2005-2006:** Mr. Cross was General Superintendent on the I-66 HOV project between Route 234 and the Prince William Parkway interchanges. Supervised all aspects of construction including highway widening, geotechnical work, hydraulics, hydrology and erosion control, permitting, and utility coordination. Additionally, he performed quality control activities to ensure contract requirements were met and that approved for construction plans and specifications were met.

   **Archer Western Contractors, 2003-2005:** Mr. Cross was General Superintendent on the Springfield Interchange Project, Phases VI & VII. He performed constructability reviews of design drawings; developed and maintained project schedule; coordinated contractor and subcontractors’ activities. He supervised all aspects of construction including quality control assessments and measures.

   **Shirley Contracting Company, LLC, 2002-2003:** Mr. Cross was General Superintendent on the Springfield Interchange Project Phase II and III. He implemented and enforced corporate safety policies; performed constructability reviews of design drawings; developed and maintained project schedule; coordinated with contractor and subcontractor activities.

   **Langley High School, McLean, VA / 1972**

   **Northern Virginia Community College, Annandale, VA / Coursework**

   **Active Registration: Year First Registered/ Discipline/VA Registration #: N/A**

   **Virginia DEQ RLQ Certification, Expiration: 1/11/2019**

   **Create Construction Manager with highly similar responsibilities to those held on the following projects:***

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

   **VDOT, 95 Express Lanes, Fairfax, Prince William & Stafford Counties, VA (DESIGN-BUILD)**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>The Lane Construction Corporation</th>
<th>Project Role:</th>
<th>Construction Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>2012</td>
<td>End Date:</td>
<td>2014</td>
</tr>
</tbody>
</table>

   **Specific Responsibilities:** Mr. Cross’ role as Construction Manager for the proposed I-95 Rappahannock River Crossing project is similar to the role he held on the I-95 Express Lanes DB project. Mr. Cross was responsible for the management of the construction process which included the QC program, project schedules, cost control, subcontractor coordination, work plans, and specific means/methods for carrying out the work. He was responsible for ensuring the materials used and work performed met contract requirements and the “approved for construction” plans and specifications. Mr. Cross had extensive involvement with the complex MOT plans and implementation, relocation, adjustments, and coordination of utilities, and helped address environmental concerns.

   **Project Relevance:** Similar to the I-95 Rappahannock River Crossing project, this project consisted of an extensive structures and bridge work, utility relocation, MOT, environmental, public involvement, coordination with multiple stakeholders and VDOT,
QA/QC, roadway and interstate widening, and a 8.3 mile roadway extension that consisted of major clearing, earthwork, and bridge flyovers. This project also involved comprehensive public relations with over 365 outreach meetings. This $722 million D-B project created approximately 29 miles of Express Lanes on I-95 from Alexandria to Stafford, VA. This project also added capacity to the existing HOV Lanes from the Prince William Parkway to the vicinity of Edsall Road; improved the existing two HOV lanes for six miles from Route 234 to the Prince William Parkway. A 9-mile reversible two-lane extension of the existing HOV lanes from Dumfries to Garrisonville Road in Stafford County helped to alleviate the worst traffic bottleneck in the region.

**VDOT, I-495 Express Lanes, Fairfax County, VA** (DESIGN-BUILD)

<table>
<thead>
<tr>
<th>Name of Firm: The Lane Construction Corporation</th>
<th>Project Role: Construction Manager/Superintendent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date: 2009</td>
<td>End Date: 2012</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** As the Construction Manager/Superintendent on this project, Mr. Cross was responsible and accountable for coordinating with design team members, supervising engineering, survey, QC staff, developing and maintaining the project schedule, tracking and evaluating the project schedule and cost, scheduling subcontractors’ activities and on-site engineering calculations and drawings. He devised and implemented hazard analysis and safety procedures for crews and equipment, provided training for job engineers assigned as subordinates, and worked with the designer and owner to ensure materials used and work performed met contract requirements, design plans, and specifications. **Mr. Cross worked with proposed DBPM, Jan Sherman, on this project.**

**Project Relevance:** Similar to the proposed I-95 Rappahannock River Crossing project the I-495 Express Lanes project included MOT, bridge/structure replacement, environmental, geotechnical, utilities, roadway and interstate widening, hydraulics, transportation management plan, survey, QA/QC, ITS, safety and public involvement/relations. Additionally, the project included the installation of a large storm-water management wet pond with an earthen dam above the Chain Bridge Road interchange also similar to the proposed project. Mr. Cross was responsible for the roadway construction and elements of the 495 Interstate widening and improvements as part of this $1.5 billion PPTA project. Two new lanes were constructed in each direction on a 14-mile stretch outside the existing lanes of I-495, from the Springfield Interchange to just north of the Dulles Toll Road. The project encompassed the replacement of more than $260 million of aging infrastructure, including more than 50 bridges and overpasses.

**VDOT, I-66 Route 15 Interchange Reconstruction, Prince William County, VA** (DESIGN-BUILD)

<table>
<thead>
<tr>
<th>Name of Firm: The Lane Construction Corporation</th>
<th>Project Role: Construction Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date: 2014</td>
<td>End Date: 7/2017 (est)</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** As Construction Manager on this $39M project, Mr. Cross is responsible for managing the entire construction process. He coordinates subcontractors’ schedules, creates progress schedules to maintain cost-effectiveness, and communicates effectively with quality control for inspections and daily routines. He is responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He coordinates with and monitors contract progress with VDOT and subcontractors (including adherence to contractual requirements and specifications), and oversees the overall safety and quality control programs. **Mr. Cross is currently working with proposed DBPM, Jan Sherman, on this project.**

**Project Relevance:** The I-66/Route 15 Interchange Reconstruction project (the first DDI in Northern Virginia) involves reconstructing the interchange of U.S. Route 15 (James Madison Highway) over Interstate 66 (I-66). Similar to the proposed I-95 Rappahannock River Crossing project this project includes: roadway widening, utility relocation, right-of-way acquisition, sign structures, public involvement, QA/QC, overall project management, construction of a new service road, and replacement of northbound and southbound bridges.

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

**Current Assignment:** I-66/Route 15 Interchange Reconstruction Role: Construction Manager. **Duration of Assignment:** Mr. Cross will be available on-site full-time at the start of construction for the I-95 Rappahannock River project. Mr. Cross will be committed 100% to the construction phases of the Project.
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

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

| a. Name & Title: | **ERIC BURGESS, PE, TRANSPORTATION STRUCTURES PRACTICE LEADER** |
| b. Project Assignment: | **LEAD STRUCTURAL ENGINEER** |
| c. Name of all Firms with which you are employed at the time of submitting SOQ’s. In addition, please denote the type of employment (Full time/Part time): | **KCI TECHNOLOGIES, INC. (FULL TIME)** |
| d. Employment History: With this Firm | **17 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): | |
| **KCI Technologies, Inc., Transportation Structures Practice Leader, (2002-Present).** Responsible for design and design management of transportation structures projects for state departments of transportation, municipalities and private developers. Mr. Burgess has served as project engineer, project manager, vice president of design services and now, transportation structures practice leader for KCI Technologies. As a practice leader, his duties include contract executions, business development, marketing and managing a team of structural engineers and technicians within the design team. He has served as a lead design engineer and lead structures engineer for fast-paced value engineering and design-build projects for bridge contractors in multiple states. He has served in various capacities for over 50 DOT bridge replacements for multiple DOT’s including VDOT on such projects as I-64 Segment II D-B, Route 288 PPTA, Region II D-B Bridge Replacements, and Route 46 Bridge Replacement over Nottoway River. |
| e. Education: | **Clemson University/B.S./1997/Civil Engineering** |
| **Clemson University/M.E.1999/Civil Engineering** |
| f. Active Registration: | **2011/Professional Engineer/0402048509** |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. |
| 1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.* |
| 2. *Note whether experience is with current firm or with other firm.* |
| 3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.* |
| **(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)** |
| * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project. |

**I-520 Palmetto Parkway Design-Build, Phase I, Aiken County, SC/Augusta, GA (DESIGN-BUILD)**

| Name of Firm: | KCI Technologies, Inc. |
| Project Role: | Structure Design Manager |
| Beginning Date: | 06/2002 |
| End Date: | 06/2004 |

**Specific Responsibilities:** Mr. Burgess managed all aspects of design and was responsible for the coordination between all of the subconsultants for geotechnical, hydrology and bridge design and with the SCDOT Project Manager for submittals and approvals. Under Mr. Burgess’s management, KCI was able to provide final design and plan details for the bridge over the Savannah River in only five months and provided responsive contractor support during construction to ensure that the project was completed ahead of schedule.

**Project Relevance:** This $43M, major design-build project consisted of connecting US 1 to I-520 Bobby Jones Expressway and included the design and construction plan details for the bridge over the Savannah River. This four-lane divided interstate facility on new alignment is controlled access and includes two major interchanges, 2.5 miles of interstate and five bridges. The bridge over the Savannah River is a 14-span, 1,900’ bridge consisting of 74” prestressed concrete bulb-tee beams with spans up to 139’.

The bridge superstructure is supported by 20” diameter pipe piles at the end bents and 72” diameter drilled shaft piers with crash wall struts in the navigable channel as required by the vessel impact loading study. The bridge geometry includes two tapers on the bridge geometry includes two tapers on the bridge deck for acceleration and deceleration lanes in combination with horizontal and vertical curve alignments, all of which added complexity to the seismic design and detailing requirements of the SCDOT’s Seismic Design Specifications for Highway Bridges, 2001.

**US 21 Bridge over Catawba River, York County, SC**

| Name of Firm: | KCI Technologies, Inc. |
| Project Role: | Structure Design Manager |
| Beginning Date: | 01/2008 |
| End Date: | 06/2013 |

**Specific Responsibilities:** Mr. Burgess worked closely with the SCDOT and subconsultants to complete the design of the project. He and his squad of engineers developed an alternate study to design the most efficient and cost effective alternate while defining ROW impacts, traffic staging, utility conflicts, environmental issues, geometric alignments and constructability.
**Project Relevance:** The project consisted of two miles of widening from a two-lane roadway to a five-lane curb and gutter section sidewalks and a 1,000’ eight-span, pre-stressed concrete beam bridge supported on drilled shaft foundations. The new bridge utilizes 74” pre-stressed concrete, bulb-tee beams supported on concrete drilled shaft and rock socket foundations to replace the existing structural steel bridge and includes bicycle lanes, sidewalks and aesthetic features with barrier walls and lighting. The project also included a corridor analysis and bridge alignment alternate for cost comparison and potential conflicts with ROW, environmental issues and utilities. KCI performed the study for architectural features for the new bridge including concrete arches over the river, architectural railings with rock and brick facades, decorative light pedestals and lighting schemes. KCI managed all subconsultants for bridge hydrology/hydraulic design, roadway design, environmental documents and permitting, surveying, geotechnical exploration, and utility coordination. As part of the scope of services for the conceptual and preliminary design phase, KCI performed an alternate alignment and bridge type study to provide SCDOT a matrix and cost comparisons of each alternate while defining: ROW impacts/relocations, traffic staging, utility conflicts, environmental issues, geometric alignments and constructability. Based on the alternate study, KCI recommended building the bridge on new alignment upstream and maintaining traffic on existing bridge instead of scoping the project as originally planned by DOT for staged construction method. The new alignment alternate showed a savings of $1.5M to the DOT. Special design considerations and issues included: extensive environmental studies in sensitive environmental and cultural areas; coordination with regulatory agencies and the Catawba Indian Nation; heavy public information and public hearing involvement; coordination with SCDOT, FHWA, York County, City of Rock Hill, and Town of Fort Mill; complex utility design and coordination, including several major utility relocations; completed services within schedule and budget.

### US 1/SC 9 over Great Pee Dee River, Chesterfield/Marlboro Counties, SC

| Name of Firm: | KCI Technologies, Inc. | Project Role: | Lead Structural Engineer |
|---------------|------------------------|------------------|
| Beginning Date: | 06/2009 | End Date: | 05/2010 |

**Specific Responsibilities:** Mr. Burgess served as the lead structural engineer overseeing the structural design and project coordination with the project owner, local municipalities and the subconsultant team. He was heavily involved with the bridge type and span layouts to determine the most economical bridge replacement while spanning wetlands, utilities, parallel streams and existing bridge piers within the river. This set the stage for final design and plan development that Mr. Burgess oversaw as the engineer of record for the main river bridge. He was also involved with quality control oversight of the other bridge sites performed by sub consultants. He was instrumental in the conceptual design of those sites as well.

**Project Relevance:** KCI performed the bridge design for the replacement of the US 1/SC 9 bridge over the Great Pee Dee River and managed all subconsultants for bridge hydrology/hydraulic design, environmental documents and permitting, geotechnical exploration, utility coordination and for the design of the overflow bridges. The new river bridge will consist of a 1,950-foot-long, 13-span, 74-inch bulb-tee prestressed concrete beam superstructure supported on drilled shaft foundations. Each span is 150-foot-long. A detailed seismic analysis and design was completed for this bridge. This bridge will be constructed in stages in order to maintain traffic flow.

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

**PROJECT SCOPE**

LANE, as a Construction Joint Venture (CJV) member, shared responsibility for the design and construction of the $326 million 1-95 Express Lanes project. The project creates approximately 29 miles of Express Lanes on I-95 from Alexandria, VA at the northern terminus to Route 610, Stafford, VA at the southern terminus. The scope of work included a 9-mile roadway extension beginning at the southern end of the existing HOV lanes, consisting of major clearing and earthwork, an extensive ITS and signing system, sound walls, asphalt mill and overlay, shoulder reconstruction, and, additionally, structural bridge work (20 bridges and rehabilitated flyovers including 9 new structures). Although only a 35% Fluor-Lane 95, LLC CJV member, LANE provided nearly all of the project supervision and workforce for the CJV performed bridgework and 20 miles of existing HOV lane renovation and widening; plus, all of the asphalt paving, soundwall construction and some roadway signage. Only LANE of Fluor-Lane LLC will be credited for the work on the I-95 Alhambra to Route 610 project.

**RELEVANT PROJECT ELEMENTS**

LANE/RDA Partnership: LANE and RDA partnered together to provide complete design services for the 1-95 Express Lanes project. Our Team’s collaborative effort in developing a comprehensive TMP for the corridor, design adjustments to avoid utilities, and expedited utility relocations were works that were not feasible that the project stayed on schedule.

Roadway: A new 9-mile reversible, two-lane extension of the existing HOV lanes from Dumfries to Garrisonville Road in Stafford County was constructed to alleviate the worst traffic bottleneck in the region. This new construction in the median of the roadway provided new access points to serve Virginia-based destinations, including Tysons Corner, City of Alexandria, Arlington County, and major military sites. The project included construction of 2 new lanes and extensive utility coordination and relocation.

Bridge and Structures: Nine new bridges have been constructed along the project corridor to date. The new bridges include two each with steel curved girders, two each two span flyovers near Garrisonville Road and Joplin Road, three single span bridges with steel girders over Aquia and Choppawannock Creeks and Russell Road, one two-span concrete girder bridge over Joplin Road and replacement of the existing Telegraph Road Bridge bridge across I-95 with a new two-span steel girder bridge.

Maintenance of Traffic: The I-95 Express Lanes project presented numerous work zone ingress/egress challenges and very tight work areas due to the heavy traffic and median work zone conditions. The I-95 project corridor carries an AADT of nearly 250,000 vehicles per day. The LANE Team mitigated this challenge by working with construction and engineering personnel to devise the best MOT schemes and develop efficiencies; over 1,000 MOT plan sheets were developed and approved. The need for an innovative work zone traffic control and access plan was particularly critical on this project due to the severe deterioration of some of the mainline and surrounding road pavements. Unimpaired access to the existing median was necessary to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, and accelerate the project schedule.

Public Outreach/Involvement: A dynamic public information program was implemented which provided advance information notifications to VDOT and the public. This has been facilitated through meetings, website access, email blasts, flyers, and door to door calls promoting awareness of construction operations and lane closures in order to provide better travel planning through the corridor. The team held over 415 public meetings and the project site had visits from former Governor McDonnell and VDOT Secretary of Transportation Aubrey Layne as well as accolades from current Governor Terry McAuliffe.

Safety/Limiting Impacts to the Traveling Public: The project has recorded over 4 million safe work hours with zero (0) Lost Work Day Cases. This is one of the safest projects (of this size and magnitude) ever constructed in the Commonwealth. The OSHA Recordable Incident Rate is 0.44, well below the industry average of 3.6.

**DBE:** Over $193M was committed to more than 131 DBE/SWAM firms, which exceeded the team’s DBE/SWAM project goals of $189M. Additionally, the team surpassed the On the Job Training Program goal of 24 trainees by VDOT (31 trainees graduated the program). “The project has also benefited jobs and business opportunities, particularly for women- and minority-owned businesses as well as small businesses.” - Governor Terry McAuliffe.

**Project Benefits:**
- Additional capacity [Support of 11,880 jobs] [Faster travel options] [Congestion relief for Northern VA] [Safety - Less stop and go traffic] [Positive environmental impact]

**Expedited Project Delivery:**
- The team had 1,089 days to design and construct this fast track D-B project. The team received NTP on March 27, 2012 and it was imperative that construction start in the first season in order to finish by December 31, 2014. Our Team was able to deliver 123 design packages by implementing over-the-shoulder reviews to help get early approval and were able to begin construction within 4 months of NTP. We were able to complete the project early. In all, the Team completed 29 miles in 29 months!

### Evidence of Performance

The programs on the 95 Express Lanes project is a visible reminder of the congestion relief and new travel choices that Virginians will have available to them in less than a year.” - Governor Terry McAuliffe.

The 95 Express Lanes combined with the nearly completed 495 Express Lanes will bring a transportation network that manages congestion efficiently, saving time and better connecting commuters with some of Virginia’s most important employment centers and military sites. - Sean T. Comnanno, (former) Virginia Secretary of Transportation.

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<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.</th>
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<td></td>
<td>Phone: 571.483.2651</td>
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<td></td>
<td>Project Manager: Charlie Warraich, PE</td>
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<td>Phone: 571.273.8229</td>
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<td>Email: <a href="mailto:H.S.Warraich@vdot.virginia.gov">H.S.Warraich@vdot.virginia.gov</a></td>
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<td>- Construction Engineering and Inspection</td>
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<td>- Overall Project Management</td>
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### Proposed Personnel on Project:

- Jan Sherman (LANE)
- Bob Cross (LANE)
- Chris Monahan (LANE)
- John Myers (RDA)
- Brian Keimar, PE (RDA)
- Chris Colliers (RDA)
- Sidney Thomas (RDA)

---

**c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.**

**d. Contract Completion Date (Original)**

**e. Contract Completion Date (Actual or Estimated)**

**f. Contract Value (in thousands)**

**g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)**

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**E. 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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.**

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**a. Project Name & Location**

**b. Name of the prime design consulting firm responsible for the overall project design.**

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**c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.**

**d. Contract Completion Date (Original)**

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**Similar Scope of Work:**

- Design Build
- Roadways
- Bridges and Structures
- Effective MOT
- Environmental
- Geotechnical
- Right-of-Way
- Hydraulics
- Stormdrain and SWM
- Asphalt Milling and Resurfacing
- ITS
- Traffic Control Devices
- Sign Structures
- Transportation Management Plan
- Utilities
- Stakeholder Coordination
- Public Involvement/Communications
- QA/QC
- Survey
- Construction Engineering and Inspection
- Overall Project Management
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location

I-495 EXPRESS LANES
Fairfax County, VA

b. Name of the prime design consulting firm responsible for the overall project design.

 DESIGN BUILD

HNTB/HDR
Name of Client / Owner: VDOT
Phone: 540.829.7500
Project Manager: John Lynch, P.E.
Phone: 540.829.7512
Email: John.Lynch@vdot.virginia.gov

12/2012
11/2012
$1,346,560
$1,481,670
$642,000

PROJECT SCOPE

Construction of four new managed/HOV traffic lanes (two in each direction) in the median of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, heavy maintenance of traffic effort, shoulder reconstructions, interchanges, frontage roads. Both overpasses and underpasses as well as bridge widening. The Project encompassed the replacement of more than $260M of aging infrastructure, including 58 bridges, 9 miles of roadway and 12 interchanges. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Although only a 35% CJV member, LANE provided nearly all of the project supervision and workforce, all of the MOT plus all asphalt paving.

Material/Project Elements

Roadway: The I-495 Express Lanes project is one of the largest roadway projects constructed in the Commonwealth. The I-495 Express Lanes project widened the existing roadway to the median and involved widening and widening the leftmost lane of the median for 11 miles between the Woodbridge and Springfield interchanges. The team constructed three new access points and 12 key interchanges that increased capacity and mobility, improved driver safety and reduced operating deficiencies, and created some of the most innovative approaches to the traveling public, residences, and businesses.

Bridges and Structures: Our Team was tasked with the design and construction of 58 bridges over the Beltway. The original concept called for three-stage chemical petrochemical and traffic. The contract called for the project to maintain the existing traffic during construction; affecting every phase of the planning, design, and construction. By conducting extensive traffic studies and developing a close coordination with VDOT and the local jurisdictions, our Team produced a number of innovative designs, work zone access methods, carefully planned lane closures, and construction phasing sequences that helped to minimize disruption during construction. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted so new replacement bridges were built on the same footprint as the old structures. One of the significant challenges for this project was not starting day time lane closures until after 9:30 am and having all four lanes of traffic open again at 3:30 pm. Overnight closures were similarly restricted and exceptions were rare – primarily for steel erection, where short-duration lane closures were permitted. LANE fulfilled this requirement by not reducing traffic capacity during work.

Utilities: There were significant utility coordination efforts, both in relocation of existing utilities and installation of new services for lighting and toll facilities. Two high voltage transmission lines ran parallel to the main alignment of the project, crossing several arterial roads that were associated with the project. At one arterial, there was insufficient clearance between the transmission line sag and the road surface. The line had to be raised by having an instal in one supporting tower. In total, over 175 utility conflicts were resolved requiring coordination with 13 different utility owners.

Public Outreach / Involvement: More than 2,000 public outreach meetings were conducted and, in coordination with VDOT, the team kept the public informed through various media channels: project website, routine newsletters, and brochure mailings to residents and businesses.

EVIDENCE OF PERFORMANCE

“A solid experienced company that has built to standards and worked well under difficult traffic and space constraints to minimize impact on travel.” - Garrett Moore, P.E., VDOT Chief Engineer

“Project was built over four years under traffic as high as 200,000 vpd and achieved 5 million safe work hours as of September 2012 without a lost time incident, ranking it among the safest heavy civil projects ever built in the U.S.” - Public Works Financing Newsletter, 12/2012

“As the primary self-performing entity in the Flout-Lane Joint Venture, Lane has demonstrated outstanding ability to complete construction on time under these heavy traffic conditions,” wrote Tim Steinshilber (General Manager, Capital Beltway Express, LLC)

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</table>

**PROJECT SCOPE**

The I-85/Yadkin River Bridge is one of the most well-known highway structures in the state of North Carolina. By replacing a severely deteriorated, 60-year-old bridge, 8 months ahead of schedule and $44M below the owner’s budget, our design and construction team was able to satisfy the NCDOT’s lofty project goals, achieving completion of a mega I-85 project with many complexities. The existing I-85/Yadkin River Bridge was built in the 1950’s and had become one of the most notorious bridge crossings in all of North Carolina. Besides being narrow and unsafe, the condition of the existing bridge had become severely deteriorated. Originally designed to carry 10,000 vehicles per day, the bridge was subjected to 80,000 vpd — including heavy tractor-trailer traffic. A cost-effective solution was in dire need. NCDOT chose to accelerate the project via a design-build procurement using a “best-value” selection process.

**RELEVANT PROJECT ELEMENTS**

Roadway: The I-85 Yadkin River project reconstructed approximately 7 miles of I-85. In addition to widening the roadway, realignment of the interstate occurred to eliminate sharp curves and improve the interchange to NC 150. The work included earthwork, concrete paving, and drainage.

Bridge and Structures: Our team relocated the southbound lane of I-85 and replaced two deficient 2-lane bridges over the Yadkin River with dual 4-lane structures that are approximately 2,700 LF long. The completed structures met the 70 mph speed for a rolling urban freeway and interstate standards. Additionally, the bridge on the US29/70 over the Yadkin River was replaced. In total, there were six new bridges constructed and 5 were demolished. Of the 6 new bridges, 3 crossed the Yadkin River. We used a “single work” bridge concept to address the complexity of rapid construction in the environmentally sensitive Yadkin River basin, while providing the contractors with safe, proximate access to the work site (away from normal vehicular traffic).

Environmental: The project’s environmental plan protected 13 environmentally sensitive wetland/streams and performed 1.5 acres of wetland mitigation. The protection of the wetlands occurred by using a temporary access work bridge across the river, which avoided disturbing the wetlands. Constructing a 3,000-foot bridge through environmentally sensitive areas without disturbing the wetlands was a major challenge. One of the ways we mitigated environmental impacts was through the use of a single trestle work bridge instead of two trestles. The planning document and RFP for the project envisioned a 46-foot median and separate temporary work bridges for the dual (NB and SB) Yadkin River bridges. Our team saw that by constructing a single work bridge in the center median (instead of two separate bridges), reducing the cost, timeframe, and environmental impacts all at once.

Maintenance of Traffic: Our MOT plan enabled us to achieve substantial completion eight (8) months early. We accomplished this by accelerating an intermediate milestone to open the northbound mainline bridge and shift all NB and SB traffic onto the new NB Bridge to temporarily carry all Interstate 85 traffic. We were able to safely sequence several phases of work, and when major traffic shifts occurred, we were able to achieve those dangerous shifts without incident.

Utilities: The project involved a number of public and private utilities, the most complex of which was the work adjacent to Duke Energy’s main transmission line across the Yadkin River. By conducting “partnering” sessions with the utility owners, we succeeded in managing the utility coordination for this and other lines which were in conflict with the new construction. Two high voltage transmission lines ran in a corridor parallel to the main alignment of the project, crossing several arterial roads that were associated with the project. At one arterial, there was insufficient clearance between the transmission line sag and the road surface. The line had to be raised by installing an insert in one supporting tower. In total, over 175 utility conflicts were resolved requiring coordination with 13 different utility owners.

Partnering: By virtue of the design-build delivery method, we were able to engage the client/owner in every phase of the project. NCDOT participated in our bi-weekly construction meetings and participated in “partnering” to achieve the desired end product. We worked with both the local (Division 9) and Central offices of NCDOT as well as the FHWA. And we successfully managed over 100 design-plan submittals (on an aggressive schedule) which included DOT reviews on a fast-paced routine. In conclusion, the I-85/Yadkin River Bridge was built successfully — ahead of schedule, well under budget, of supreme quality, and safely. We met the goals of the NCDOT for this very high-profile project.

Rail/Roadway Coordination: Extensive coordination occurred with the Norfolk Southern railroad during the replacement of the structurally deficient Yadkin Bridge along with making rail improvements. The DOT and Norfolk Southern were disputing for almost two years, and we facilitated talks to resolve the dispute so the project could commence. Originally another bridge was taken out of the project scope, but the railroad bridge was put back in, and the project contract date was extended by a year and the contract amount was increased.*

*The project achieved substantial completion 8 months ahead of schedule and the interstate was open to traffic at that time. The contract date was extended a year to accommodate added scope which included the construction of the new railroad bridge.

**EVIDENCE OF PERFORMANCE**

2014 Design-Build Institute of America (DBIA) National Award of Merit for Transportation and 2012 – 3rd Top Project, Roads and Bridges Magazine
ATTACHMENT 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS
**LEAD DESIGNER - WORK HISTORY FORM**

**LIMIT 1 PAGE PER PROJECT**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Start Date</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement. (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-520 Palmetto Parkway &amp; Bridge over Savannah River, Phase I Aiken County, SC/Augusta, GA</td>
<td>United Contractors, LLC</td>
<td>Name of Client/Owner: SCDOT</td>
<td>08/06/2002</td>
<td>06/04/2004</td>
<td>$42,000</td>
<td>$2,400</td>
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</table>

**Similar Scope of Work:**

- Design-build
- New alignment & structures
- Environmentally sensitive area
- Complicated project with aggressive schedule
- Acceleration & deceleration lane ramps
- New major route & traffic congestion
- Roadway & traffic improvements
- New major river bridge
- Environmental & permitting
- Geotechnical
- Bridge hydraulics
- Storm drainage & SWM
- Demolition of structures
- Traffic control devices
- Signs, sign structures, and foundations
- Transportation management plan
- Extensive utilities & coordination
- Major stakeholder coordination
- Public involvement/communications
- Design QA/QC
- Surveys
- Construction engineering and inspection

**PROJECT SCOPE**

The Palmetto Parkway Phase I project was the first ever, hybrid design-build project in South Carolina, providing the much awaited link between South Carolina and Georgia. The project consisted of the design and construction of 2.5 miles of new mainline interstate facility on I-520 from Sandbar Ferry Road in Augusta, Georgia to US 1 (Jefferson Davis Highway) near North Augusta, South Carolina, and five major bridge structures. This project provided the citizens and communities a link outside of Augusta and reduced travel time and relieved congestion in the area. The corridor also opened up valuable land for industrial and economic development in the region. This modified design-build project was bid as a “A+B” project (pricing & time to construct) with all roadway plans completed by the Department with unit rate prices and all bridges designed by project manager with lump sum pricing. This fast track project featured over two million cubic yards of earthwork with two interchanges and phased design and construction to accommodate access to a major industrial plant along Dittman Court Road. Bridge structures were required for the Savannah River site, dual bridges over Savannah River swamp and overflow, bridge over Norfolk Southern Railroad, Dittman Court Road bridge over I-520 and dual US 1 bridges over I-520. KCI served as the prime designer for the contractor and work was performed in the Rock Hill, SC office. KCI provided overall design project management and structure design for the Savannah River. As the design project management entity for the team, KCI was responsible for the management and coordination between all of the subconsultants for geotechnical, bridge hydrology and bridge design and with the SCDOT Project Manager for submittals and approvals. The project was designed and constructed within the budget and schedule bid. The actual construction costs varied from the initial bid costs due to the SCDOT adding scope to two of the bridges with additional acceleration/deceleration lanes and extending one bridge for future use.

**RELEVANT PROJECT ELEMENTS**

- **Intercostal Roadways:** The project consisted of 2.5 miles of new, four-lane divided, limited access interstate facility connecting the Bobby Jones Expressway in Georgia to US 1 in Aiken County, SC. Also, improvements to side roads, signalization, turning lanes and intersection improvements were improved for the existing local connecting roads.
- **Bridges and Structures:** The project consisted of 5.2 miles of I-520 consisting of 74’ pre-stressed concrete bulwark-beam bridges with spans up to 139’. The bridge superstructure is supported by 20” diameter pipe piles at the abutments and 42” diameter drilled shaft piers with crash wall struts in the navigable channel as required by the vessel impact loading study. The bridge geometry includes two tapers on the bridge deck for acceleration and deceleration lanes in combination with horizontal and vertical curve alignments, all of which added complexity to the seismic design and detailing requirements of the SCDOT’s Seismic Design Specifications for Highway Bridges, 2001. The design of the structures was on the critical path of the design-build project and therefore required an accelerated schedule of completion in order to meet the construction deadlines. In order to facilitate construction of the bridge over the Savannah River, the substructure plans were developed and approved by the SCDOT to permit drilled shaft installation prior to completion of the final plans. Under the accelerated schedule demands, KCI was able to provide final design and plan details for this site in only five months and provided responsive contractor support during construction to ensure that the project was completed ahead of schedule. Other bridges on the project included 600’ bridge over Savannah River swamp overflow, using AASHTO Type III beams and pre-stressed concrete piling for foundations; 150’ single span bridge over Norfolk Southern Railroad with structural steel girders and MSE wall abutments supported on steel pipe piles; 205’ two-span bridge on Dittman Court Road over I-520 consisting of BT-63’ bulb tee-pre-stressed concrete beams supported on spread footings in the interior bent and steel pipe pile abutments; 161’ single span bridge over US 1 with structural steel beams supported on MSE wall abutments and steel pipe piles.

- **Environmental:** The project was successfully constructed across the environmentally sensitive Savannah River and its floodplain, which includes a pristine wetlands caused by a breach in the aquifer with no impact to water quality. Innovative design and construction techniques were used to minimize the chance for pollution or alteration to enter these bodies of water. Less intrusive drilled shafts were designed instead of cofferdams for the river site and driven concrete piles for the overflow bridge. Stone fill and turbinite backfill were used to cross the aquifer to minimize sation. Gabion rip rap was used in the area of the Savannah River bank and levy for protection.

**Safety/Limiting Impacts to Traveling Public:** Phased construction of roadway and underpass was required to provide continuous access to a major industrial plant along Dittman Court Road bridge over I-520 and dual US 1 bridges over I-520. KCI served as the prime designer for the contractor and work was performed in the Rock Hill, SC office. KCI provided overall design project management and structure design for the Savannah River. As the design project management entity for the team, KCI was responsible for the management and coordination between all of the subconsultants for geotechnical, bridge hydrology and bridge design and with the SCDOT Project Manager for submittals and approvals. The project was designed and constructed within the budget and schedule bid. The actual construction costs varied from the initial bid costs due to the SCDOT adding scope to two of the bridges with additional acceleration/deceleration lanes and extending one bridge for future use.

**PROJECT HISTORY**

2006 ACEC SC Engineering Excellence Award: No environmental impacts or citations. Over 650,000 man hours worked with no lost time injuries. Completed design and construction schedule in accordance with a completion date and changes to structures and also seven months ahead of the next low bidder. “KCI has made customer service and partnering hallmark of this project. They have met the challenging commitments of bringing value to the SCDOT through efficient designs and construction methods while meeting the requirements of quality and schedule.”

– Danny Shealy (SCDOT Director of Construction, retired)
**LEAD DESIGNER - WORK HISTORY FORM**

**LIMIT 1 PAGE PER PROJECT**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>United Contractors, LLC</th>
<th>b. Name of the prime/general contractor responsible for overall construction of the project.</th>
<th>Aiken County, SC</th>
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<tr>
<td>I-520 Palmetto Parkway Phase II</td>
<td>United Contractors, LLC</td>
<td>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</td>
<td>DESIGN-BUILD</td>
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<tr>
<td>2010 ACEC</td>
<td>Phone: 803-737-2100</td>
<td>d. Construction Contract Start Date</td>
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<td>2010 ACEC</td>
<td>Phone: 803-737-4202</td>
<td>e. Construction Contract Completion Date (Original)</td>
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<td>SC Small Firm Award</td>
<td>Email: <a href="mailto:ipockc@scdot.org">ipockc@scdot.org</a></td>
<td>f. Construction Contract Value (Original)</td>
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<td>2010 ACEC</td>
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<td>g. Design Fee for the Work</td>
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**Similar Scope of Work:**
- Complex interchanges and MOT
- Environmentally sensitive area
- Aggressive schedule to complete project
- Interstate facility w/ local road improvements
- Major route & traffic congestion
- Transportation management plan
- Geotechnical
- Bridge hydraulics
- Storm/drainage and SWM
- Demolition of structures
- Traffic control devices
- Signs, signs structures, and foundations
- Project Manager:
  - Claude Ipock, PE
  - ipockc@scdot.org
  - Phone: 803-737-2100
  - 803-737-4202
  - 803-1224-737-2311
- Construction Engineer: United Contractors, LLC
  - Name of Client/Owner: SC DOT
  - Phone: 803-737-2100
  - Project Manager: Claude Ipock, PE
  - Phone: 803-737-4202
  - Email: ipockc@scdot.org

**RELEVANT PROJECT ELEMENTS**

- **Interstate Roadways:** The project consisted of 6.5 miles of new, four-lane divided, limited access interstate facility connecting the I-520 Palmetto Parkway the interchange of US 1/520 to connect to I-20. The project has 11 interchanges with major interchanges at I-520 and US 25 Connector and the interchange with US 25 in North Augusta, SC to I-520. The project also included roadway improvements to US Route 25, SC 126 (Clearwater Road), S-33 (Ascanga Lake Road) and various secondary and local roads. KCI served as the prime designer and was performing in our Rock Hill, SC office. KCI served as the lead engineering firm and provided the pre-construction management, bridge design, and construction quality control. As the design management entity for the team, KCI was responsible for the coordination of all of the sub-consultants for geotechnical, hydrology, roadway, utility coordination, bridge design support, public relations and involvement, and with the SCDOT Project Manager, Resident Engineer and design staff for submittals and approvals. After the contract was awarded, and throughout the design phase, several items were added to the project by the SC DOT, including the addition of US-25 widening improvements and bridge replacement. Also added was the widening of Clearwater Road from three to five lanes. Substantial design and construction had been completed when the SCDOT requested that the roadway section be increased to a five-lane section. Lastly, the addition of the multi-use path along the corridor was added. It was decided in the plan development stage to include the multi-use path in the roadway design which was omitted from the original contract. Although these additional items presented challenges to the design team, close coordination with the Contractor and the SCDOT permitted these design changes to be accomplished with minimal impact on the original schedule. The project was designed and constructed within the budget and the aggressive schedule set by the contractor to complete all bridge plans in record time in order to bid such an aggressive schedule to help secure the bid for our team.

**EVIDENCE OF PERFORMANCE**

2010 ACEC SC Engineering Excellence Award & 2010 ACEC-SC Small Firm Award. Original and additional scope items completed in original aggressive schedule.

“KCI’s involvement in the Palmetto Parkway Phase II project has brought a new dimension to the design-build effort and the engineer’s role. KCI coordinated with the DOT and managed the design staff in order to complete all of the structures at the twelve bridge sites in record time to supply the contractor with plans and to meet the aggressive construction schedule.” - Claude Ipock, PE, Resident Construction Engineer
ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location

US 21 Bridge Replacement over the Catawba River and Roadway Improvements
York County, SC

b. Name of the prime/general contractor responsible for overall construction of the project.

KCI

The Lane Construction Corporation

Name of Client/Owner: SCDOT
Phone: 803-737-2314
Project Manager: Brian Klauck, PE
Phone: 803-737-5051
Email: klauckbd@scdot.org

The project also included a corridor analysis and bridge alignment alternates from an existing two-lane roadway, to a five-lane section with curb and gutter, sidewalks and bicycle lanes. Several side roads required realignment along with turn lanes for local businesses. Bridges and Structures: Eight-span, 1000’ long prestressed concrete beam bridge supported on drilled shaft foundations. The new bridge utilizes 74” pre-stressed concrete, bulb-tee beams supported on concrete drilled shaft and rock socket foundations to replace the existing structural steel bridge and includes bicycle lanes, sidewalks and aesthetic features with barrier walls and lighting. Retaining walls were also utilized near transmission lines to eliminate the need to relocate expensive utilities where needed.

Performance

KCI performed the alternate analysis, conceptual plans, preliminary and final design, final construction plans and construction phase services this $18.7M bridge replacement and roadway improvement project. The project consisted of two miles of widening from a two-lane roadway to a five-lane curb and gutter section, sidewalks, bicycle lanes and a new, 1,000’ long bridge replacement carrying US 21 over the Catawba River in York County, SC. The improvements of the widening project were from Celriver Road and a major interchange at I-77/I-26 to Sutton Road, serving many businesses and the new, 1,000-acre master planned, mixed-use Riverwalk development. This stretch of heavily traveled US 21 carries 41,000 VPD and serves as a linkage connecting Rock Hill to Fort Mill, SC and Charlotte, NC. This segment of US 21 also serves as an alternate and emergency route to I-77 and is seldom used for traffic due to congestion and accidents on I-77. KCI was selected as the prime design firm and performed all design tasks from the Rock Hill, SC office location. As the lead firm, KCI performed alternate analysis, bridge design, public hearings, public relations, construction services, construction inspection and provided overall project management for all subconsultants for bridge hydrology/hydraulic design, roadway design, environmental documents and permitting, surveying, geotechnical exploration, and utility coordination. Project was completed on the original design schedule per the design contract and bids for the project were $6.5M below the engineers estimate.

Relevant Project Elements

Roadways: Two-mile widening of the bridge approaches from an existing two-lane roadway, to a five-lane section with curb and gutter, sidewalks and bicycle lanes. Several side roads required realignment along with turn lanes for local businesses. Bridges and Structures: Eight-span, 1000’ long prestressed concrete beam bridge supported on drilled shaft foundations. The new bridge utilizes 74” pre-stressed concrete, bulb-tee beams supported on concrete drilled shaft and rock socket foundations to replace the existing structural steel bridge and includes bicycle lanes, sidewalks and aesthetic features with barrier walls and lighting. Retaining walls were also utilized near transmission lines to eliminate the need to relocate expensive utilities where needed.

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Similar Scope of Work:

- Major route & traffic congestion
- Roadway & traffic improvements
- Major river bridge and retaining walls
- Extensive MOT
- Environmental & permitting
- Geotechnical
- Bridge hydraulics
- Storm drainage and SWM
- Deomolition of structures
- Traffic control devices
- Sign structures
- Transportation management
- Extensive utilities & coordination
- Major stakeholder coordination
- Public involvement/communications
- Design QA/QC
- Surveys
- Construction engineering and inspection
- Aggressive schedule to complete project

Proposed Personnel on Project:

Merritt King, PE (KCI)
Eric Burgess, PE (KCI)

Safety/Limiting Impacts to Traveling Public: Sidewalks and a separate dedicated bike lane on both sides of the bridge and roadway increase accessibility and promote pedestrian and biker safety. Aesthetic details including bridge lighting, upgraded finish coating on the superstructure and the substructure concrete components, and barrier wall detailing were requested for this economically developing corridor due to the prominence of this bridge.

Stakeholder Communication: Coordination with regulatory agencies and the Catawba Indian Nation; heavy public information and public hearing involvement; coordination with SCDOT, FHWA, York County, City of Rock Hill, Town of Fort Mill, and utility companies. The project also required heavy coordination with the local businesses, property owners and the new 1,000-acre Riverwalk development under design at the time of our improvements to US 21.

Innovative Design Solutions/Construction Techniques: The project also included a corridor analysis and bridge alignment alternate for cost comparison and potential conflicts with ROW, environmental issues and utilities. As part of the scope of services for the conceptual and preliminary design phase, KCI performed an alternate alignment and bridge type study to provide SCDOT a matrix and cost comparisons of each alternate while defining: ROW impacts/relocations, traffic staging, utility conflicts, environmental issues, geometric alignments and constructability. Based on the alternate study, KCI recommended building the bridge on an alignment upstream and maintaining traffic on existing bridge instead of scoping the project as originally planned by DOT for staged construction method. The new alignment alternate showed a savings of $1.5M to the DOT. KCI also performed the study for architectural features for the new bridge including concrete arches over the river, architectural railings with rock and brick facades, decorative light pedestals and lighting schemes.

DBE Program Commitments: KCI had high DBE participation for the design of this project, including all project surveying and extensive utility coordination. The DBE utilization amounted to 16% of the total design contract value billed to the client. This completed value exceeded the initial proposed participation percentage of 10%.

Evidence of Performance:

This design project received the 2013 ACEC-SC Engineering Excellence Award and was completed within schedule and well under the SCDOT’s budget. Our innovative design and alternate study recommendation saved the SCDOT over $1.5M in cost savings. “KCI has met the challenging commitments of bringing value to SCDOT through efficient designs and innovative construction methods while meeting the requirements of quality and schedule. Additionally, KCI has been very responsive to the dynamic conditions that evolved during the project development and construction” – Brian Klauck, PE (SCDOT Program Manager).