

STATEMENT OF QUALIFICATIONS

INTERSTATE 64 CAPACITY IMPROVEMENTS – SEGMENT III

FROM: 1.15 MILES WEST OF ROUTE 199
(LIGHTFOOT)
TO: 1.05 WEST OF ROUTE 199
(HUMELSINE PARKWAY)
YORK COUNTY, VIRGINIA

STATE PROJECT NO.: 0064-965-229, P-101, R-201, C-501,
B-638, B-639, B-640, B-641, B-642, B-643, D-609, D-610,
D611

CONTRACT ID NUMBER: C00106689DB97



PREPARED FOR:



SUBMITTED BY:





May 2, 2017

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

RE: I-64 Capacity Improvements - Segment III
State Project No.: 0064-965-229, P-101, R-201, C-501, B-638, B-639, B-640, B-641, B-642, B643, D-609, D-610, D-611
Federal Project No.: NHPP-064-3 (498)
Contract ID Number: C00106689DB97

Dear Mr. Clarke:

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* and specializes in high quality roadway and bridge construction. LANE has a long and successful history of project completion in Virginia having completed nearly 150 projects worth over \$2.4B in the Commonwealth alone.

As a leader in the Design-Build method (nationally ranked as the 55th Top Design-Build Firm by *Engineering News-Record*) LANE has constructed more than 75 projects worth over \$4B in D-B projects during the past 15 years. 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 have teamed with Rummel, Klepper, & Kahl, LLP (RK&K) as the Lead Designer. Together, we provide VDOT with a reputable team that has completed projects of this size and scope on time and on budget.

LANE and RK&K, in conjunction with additional hand-selected design and construction specialty firms, are experienced with VDOT processes and procedures and will provide design and construction for the I-64 Capacity Improvements - Segment III project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LANE Team has assembled committed personnel, with proven delivery of VDOT's requirements to meet the quality, safety, and schedule demands of this project.

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

3.2.3 Offeror's Principal Officer Information: Mr. David J. Rankin is the principal officer of The Lane Construction Corporation.

David J. Rankin, Senior Vice President
6125 Tyvola Centre Drive
Charlotte, NC 28217
Tel: (704) 553-6500 Fax: (704) 553-6598
Email: DJRankin@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: **Rummel, Klepper, & Kahl, LLP**. RK&K 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 of VDOT's Prequalification (L002/Active) is included in the Appendix and verifies that LANE is prequalified for this SOQ submission.

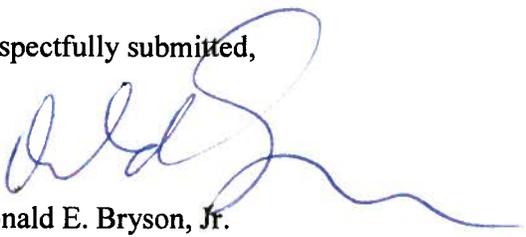
3.2.9 Letter of Surety: A surety letter from the bonding companies is included in the Appendix, confirming their willingness to provide all bonds for this project.

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 12% 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



The Lane Construction Corporation (LANE) will serve as the Lead Contractor of the D-B Team for the I-64 Capacity Improvements - Segment III (I-64 Segment III) project and will be responsible for managing the project, supervising construction, and self-performing the major work elements. LANE was named one of the 2016 Top Contractors by *ENR Mid-Atlantic* and is nationally ranked 55th in Top Design-Build Firms by *ENR*. Our proven heavy civil experience in bridge, roadway construction, and more than 75 D-B projects ranging in scope and value from \$13M to \$2.3B, demonstrates LANE's ability to successfully deliver the I-64 Segment III D-B project.



Rummel, Klepper, & Kahl, LLP (RK&K), will serve as Lead Designer and will provide overall project management for all design activities. RK&K is ranked 69th on the 2016 Engineering News Record's listing of the "Top 500 Design Firms," and serves an array of federal, state, and local clients from four Virginia offices and multiple offices throughout the Mid-Atlantic and Southeast US. RK&K has provided professional engineering and construction support services on assignments to be procured and administered in accordance with design-build, public-private partnership (P3), general engineering consultant (GEC) or program management consultant (PMC) for more than for 20 years. With more than \$2.1 B of D-B projects in the region, the firm has significant design-build and alternative delivery project experience.

Additional Subconsultants

Additionally, under subcontract to LANE and RK&K are the following highly qualified subconsultants:

- Volkert (Structures)
- ECS (Geotechnical and QC Lab)
- CES (Quality Assurance Manager)
- DMY Engineering Consultants, Inc. (QA Lab)
- Precision Measurements, Inc. (Survey)
- KDR Real Estate Services (ROW)
- Seventh Point (Public Relations)

LANE and RK&K are currently teamed together as Contractor and Lead Designer on the Route 29 Solutions D-B project located in Albemarle County. One successful element of this project is the US 29 & Rio Road Grade Separated Intersection. By utilizing dynamic interaction between the construction joint venture team, RK&K and their design subconsultants, the team determined that the preliminary design could be constructed more efficiently than originally proposed. By adjusting the roadway profile to reduce the depressed roadway section and optimizing the intersection analysis, the length of the covered roadway was reduced to eliminate it from being classified as a tunnel. This allowed the team to design and build a much more efficient bridge and wall system. The most challenging part of the project was during the midpoint of construction when the Rio Road could be closed to through traffic for up to 103 days to allow for the construction of the depressed roadway and the bridge. Due in no small part to the unprecedented extreme partnership between the Owner, construction team, designers and stakeholders, the intersection closure was completed in 58 days - an impressive 7 weeks ahead of this interim milestone. To provide VDOT the highest level of confidence, we are staffing this project with design and construction members from this same team.

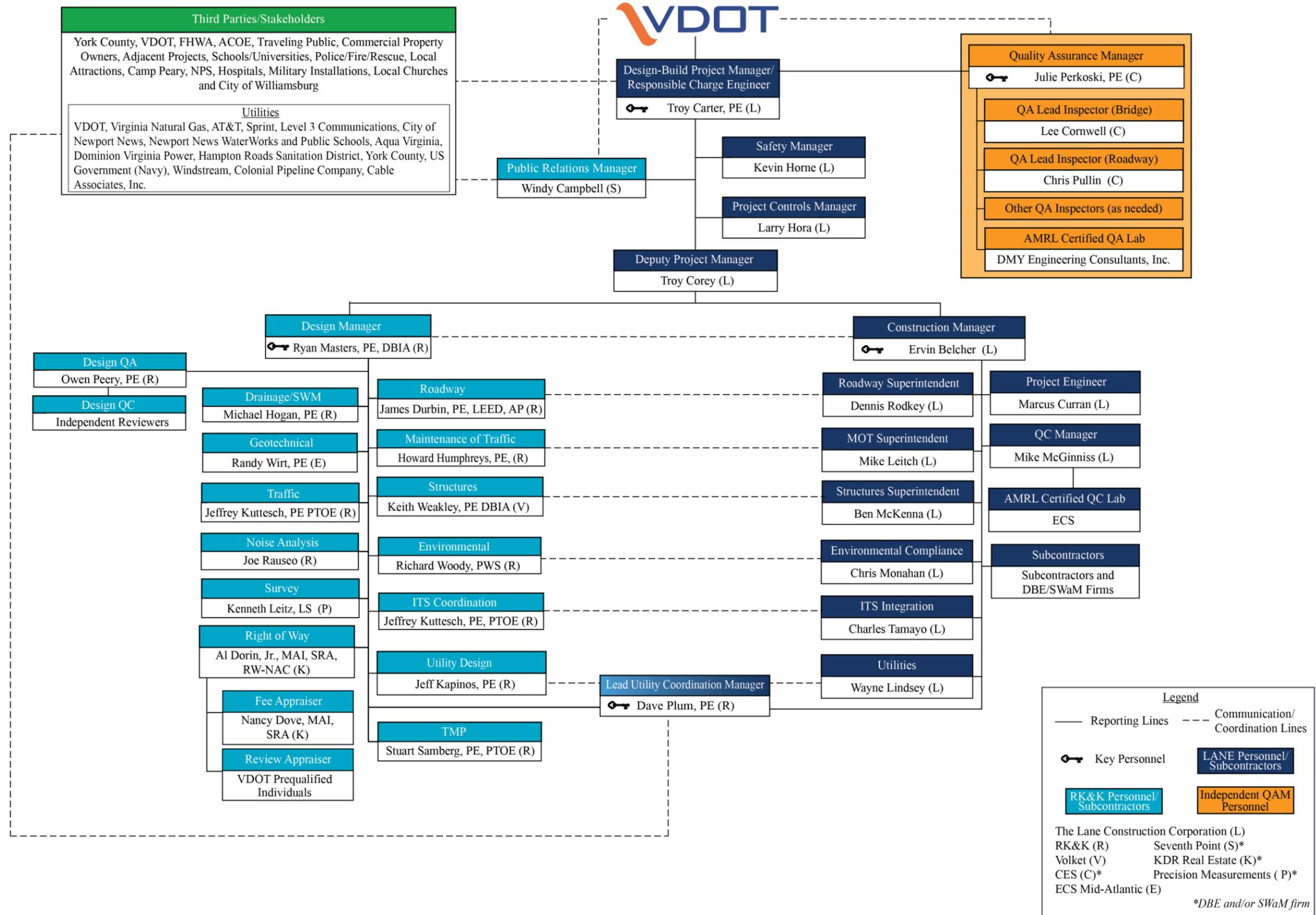
3.3.1 Qualifications of Key Personnel

All Key Personnel have noteworthy experience on projects in similar roles they will serve on the I-64 Segment III project. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Name	Position	Company
Troy Carter, PE	Design-Build Project Manager	LANE
	Responsible Charge Engineer	
Julie Perkoski, PE	Quality Assurance Manager	CES
Ryan Masters, PE, DBIA	Design Manager	RK&K
Ervin Belcher	Construction Manager	LANE
Dave Plum, PE	Lead Utility Coordination Manager	RK&K

3.3.2 Organizational Chart

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. Troy Carter, PE (LANE) will report to VDOT and serve as VDOT's central point of contact. He will facilitate communication among team partners and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, avoiding and resolving disputes, and delegate resources to deliver the project on time. He will work directly with the Team ensuring the design complies with VDOT's specifications. Mr. Carter's management from design through construction will include weekly design and construction meetings with the Team to discuss the project's progression. Additionally, he will be responsible for and oversee the construction quality management, contract administration, coordination of public outreach and public meetings, and be capable of answering questions relevant to the project.

Mr. Carter will also serve as the **Responsible Charge Engineer (RCE)**, and will supervise, direct, and control both design and construction teams and communicate directly with the Design Manager, Construction Manager, and the Quality Assurance Manager. He will be fully integrated among the project team and will have supervisory direction and control authority on engineering decisions during construction. Mr. Carter is experienced with directing engineering design and answering questions/inquiries relevant to design, construction, QA and QC, with knowledge of and proficiency in these areas. Additionally, he will communicate regularly with VDOT and will be vested with the authority to act on behalf of Design-Builder and shut down the project if warranted. He will ensure that engineering services are performed by qualified professionals licensed in the Commonwealth and that plans are signed and sealed by such qualified professionals consistent with applicable licensing regulations by the Virginia DPOR. Mr. Carter is a Professional Engineer in Virginia.

By assuming the responsibilities of both the DBPM and RCE positions, Mr. Carter provides VDOT a single point of contact that is in touch with all aspects of the project from overall contact administration to engineering decisions made during construction. This streamlined management approach will not only directly benefit VDOT but will ensure the project is being effectively and efficiently managed.

Added Value: Mr. Carter recently completed the I-85 Widening project (*included in Work Histories*). The I-85 Widening project is of similar size, scope and complexity to the I-64 Segment III project. Mr. Carter has worked on numerous D-B projects and has spent most of his career working on complex interstate projects in highly traveled corridors similar to this project. His extensive engineering background and design/construction integration experience makes Mr. Carter qualified and prepared to assume the DBPM and RCE positions.

Quality Assurance Manager (QAM), Ms. Julie Perkoski, PE (CES) will report directly to the DBPM on all quality issues. Ms. Perkoski will make sure the work is carried out and in conformance with the contract requirements and construction documents. As, QAM, she is responsible for the QA inspection and testing of all materials used and work performed, including monitoring the QC program. She has the authority to cease construction on any work failing to meet standards, enforce compliance with contract documents and specifications, and issue/require resolution of Non-Conformance Reports (NCRs). Construction personnel have no authority over QA inspection staff, and issues raised by construction personnel will be resolved by Ms. Perkoski and the DBPM. Ms. Perkoski will keep VDOT informed on the status of quality of construction and issues/solutions through weekly reports and progress meetings. **QA Lead Inspectors, Lee Cornwell (Bridge Elements) and Chris Pullin (Roadway Elements)**, will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of construction operations. **DMY Engineering Consultants, Inc.**, the independent AMRL Certified QA lab, will report to Ms. Perkoski.

Added Value: Ms. Perkoski has extensive VDOT experience in the Hampton Roads region. She was recently the Manager of Design Construction Services on the \$2.1B D-B, P3 Elizabeth River Tunnels project where she was responsible for the quality assurance reviews. Ms. Perkoski also currently serves as the Independent Assurance RCE for VDOT on the I-64 Widening Segment II.

Design Manager, Mr. Ryan Masters, PE, DBIA (RK&K) will report directly to the DBPM. Mr. Masters will maintain close communication with the DBPM and will ensure the overall project design is in conformance with

the Contract Documents. All design, ROW, and permitting disciplines report directly to Mr. Masters. He will communicate with the CM throughout design to provide designs that are ready to be implemented in the field. He will provide VDOT with design plans for review and approval. Mr. Masters will establish and oversee the Design QA/QC program for all design disciplines working on the project, including review of the design, plans, shop drawings, specifications and constructability. The design QC will be coordinated by Mr. Masters and will be performed by qualified independent staff personnel. He will be supported by Mr. Owen Peery, PE who will provide the independent design QA functions.

☑ Added Value: Mr. Masters has more than 17 years of progressive experience designing and managing transportation projects. Working on those projects has given him an extensive working knowledge of VDOT’s policies and procedures; as well as the experience to lead design teams and manage a project’s development. He was Design Manager for the Route 29 Rio Road Grade Separation project and was instrumental in the alternative roadway profile and the development of the construction sequencing which resulted in a \$7.3 M early completion incentive.

Construction Manager, Mr. Ervin Belcher (LANE) will report directly to the DBPM and will be on-site *full-time* for the duration of the project. He will coordinate all project personnel including subcontractors, and execution of the construction QC program and ensure materials and work meet contract documents and approved plans and specifications. He holds ultimate responsibility for managing the construction schedule with his staff engineers and coordinating daily with adjacent projects underway. He will coordinate daily meetings with the QAM, QA Lead Inspector, and QC Manager to discuss all ongoing construction activities. He will also review all construction QC reports and lab results. Anything not meeting standards will be addressed immediately with corrective actions mandated that same day. Mr. Belcher is currently working on the Oceana Runway & Lighting Repairs project and will be available prior to the start of I-64 Segment III construction. Mr. Belcher will hold a DEQ RLD Certification and a VDOT ESCCC prior to commencement of construction.

☑ Added Value: Mr. Belcher has been a Construction Manager on numerous interstate widening projects in Virginia and throughout the East Coast. His extensive experience working in heavily traveled corridors with extensive MOT coordination will be a benefit to the Team. Mr. Belcher was also Superintendent on the I-495 Express Lanes project (*Included in Work Histories*) where he oversaw all entire field operations.

Lead Utility Coordination Manager, Mr. Dave Plum, PE (RK&K) will report directly to the DM and CM and will coordinate directly with the design and construction utility leads. He will be responsible for coordination and construction of all utility relocations during the design and construction and remain committed to the project until completion. He will verify conflicts; work to mitigate conflicts; determine cost responsibilities; conduct utility field inspections; review and coordinate utility relocation designs; review and recommend approval of utility relocation plans; verify and modify designs if necessary based on field conditions and construction activities; and ensure continuity of service.

☑ Added Value: Mr. Plum has extensive knowledge and experience in the Hampton Roads area with every facet of the VDOT Utilities Manual and procedures and has served as the Lead Utility Coordination Manager on large multi-million-dollar transportation improvement projects. Mr. Plum has developed trusting relationships with most public and private utility owners whom have facilities within the project limits which will benefit this project and eliminate any learning curve.

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.

Geotechnical – Mr. Randy Wirt, PE (ECS) will report directly to the DM. Mr. Wirt will responsible for all aspects of geotechnical engineering and evaluation for the project, including bridge, retaining wall, and soundwall foundations, unsuitable soils, slope and embankment stability and settlement, pavements, and geotechnical construction considerations. He will also assist the DM and CM during design and construction, as needed, for earthwork and geotechnical project questions. Mr. Wirt has 18 years of geotechnical engineering

experience managing more than 250 geotechnical and construction testing projects, over 150 bridge and roadway projects, and multiple VDOT D-B projects including the I-64 Widening and Route 623 Interchange Improvements D-B project in Henrico County.

Structures – Mr. Keith Weakley, PE, DBIA (Volkert) will report directly to the DM. Mr. Weakley will be responsible for design of the repair, widening and replacement of bridges; the repair/extension of box culverts; and noise/retaining walls. His 23 years of extensive experience in structural design (both DB project and design management) also includes bridge safety inspection and construction engineering assignments, affording him in-depth, field knowledge of the types of issues relevant to this project including working in constrained project footprints while minimizing impacts. His experience provides the team with a lead structural designer with the expertise to provide, review and modify designs based on field conditions and construction activities, and the ability to provide low-maintenance, cost-effective solutions that minimize impacts.

Drainage/SWM – Mr. Michael Hogan, PE (RK&K) will report directly to the DM. Mr. Hogan has more than 19 years of technical roadway and drainage training and experience on both rural and urban design projects. His project experience includes the design project management of drainage designs, hydrologic studies, hydraulic bridge studies, and bridge scour analysis for many of VDOT’s largest projects including projects on new location, reconstruction and widening, and major drainage improvement projects. Mr. Hogan served as the lead Drainage Engineer on the I-64 Widening/Route 623 Interchange Improvements D-B project (*Included in Work Histories*).

Roadway – Mr. James Durbin, PE (RK&K) will report directly to the DM. Mr. Durbin has 20 years of experience in the transportation field, focusing on roadway, interstate and intersection design projects. He has led and directed the geometric design and plan production for the roadway design, preparation of the Traffic Control Plans, as well as, interfacing with the various elements of the roadway design including structures, drainage, signals and lighting design. He was involved in the Route 29 Solutions Rio Road project (*Included in Work Histories*) and most recently he was lead engineer for roadway design and MOT on the reconstruction of I-81 Exit 14 interchange and main line improvements.

MOT – Mr. Howard Humphreys, PE (RK&K) will report directly to the DM. Mr. Humphreys will lead the Maintenance of Traffic design. He has 30 years of experience in the design of roadway projects as lead roadway engineer and lead developer of MOT concepts. Mr. Humphreys will ensure that all MOT designs allow for the safe travel of vehicles through the construction zone as well as safe work zones and ingress / egress of construction equipment and vehicles in accordance with the VWAPM and the MUTCD. Most recently Mr. Humphreys lead the MOT design for the very complex phasing of the reconstruction of I-81 Exit 105 including the reconstruction of the bridges over the New River.

Structures Superintendent – Mr. Ben McKenna (LANE) has over 40 years of experience in the construction industry. He is responsible for the structural operation of projects or specific structural aspects critical to projects which include construction of bridges, retaining walls, noise walls and miscellaneous structure work. His duties have included directing workers and coordinating with project engineers in the procurement and installation of site materials, scheduling and coordinating foremen and equipment, scheduling and coordinating of subcontractors, review and interpretation of contract drawings and specifications, documentation of quantities, evaluation of costs, documentation of claims, and the coordination of quality control and safety personnel. Mr. McKenna has been called into projects, both large and small, specifically when segmental bridge structures are to be constructed. He currently serves as Superintendent on the Route 29 Solutions project (*Included in Work Histories*) and served as Superintendent on the I-495 and I-95 Express Lanes projects (*Included in Work Histories*).

Roadway Superintendent – Mr. Dennis Rodkey (LANE) has more than 40 years of construction experience and brings a strong management value to each project he has been assigned to. He has been assigned to LANE’s Virginia office for over a decade, and has served as roadway superintendent on numerous VDOT D-B projects including the I-95 Express Lanes and I-495 Express Lanes (*both projects included in Work Histories*). In addition to serving on several Virginia Department of Transportation projects, he is well-versed in the operations of a VDOT roadway project.

MOT Superintendent - Mr. Mike Leitch (LANE) has over 10 years of experience as a Maintenance of Traffic (MOT) Manager on major transportation initiatives in the United States. He served as an Assistant MOT Manager on the \$1.5 billion I-495 Express Lanes project (*Included in Work Histories*) and served as MOT

Manager for the \$691 million I-95 Express Lanes project (*Included in Work Histories*). Mr. Leitch’s proactive approach to MOT management enables him to implement traffic management strategies, coordinate MOT activities, and provide accurate reporting and updates to the applicable State/Highway representative.

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 duration of the project.

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 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 reflects that weekly scheduled discipline coordination meetings throughout project execution are critical. These focused meetings, which are led and coordinated by the RCE/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.

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

Design Support During Construction	Benefit
Preparation of subcontractor statements of work	Ensures translation of design requirements into subcontractor statements of work
Assignment of design engineer(s) on-site, as needed	Provides assistance in interpretation of design requirements and responding to field changes
Providing support due to field changes requiring design changes	Ensures consistency of design changes with intent of original design
Providing and verifying final as-built drawings	Provides correlation between original design, design changes, and as-built construction

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

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

3.4 EXPERIENCE OF OFFEROR'S TEAM

3.4 | EXPERIENCE OF OFFEROR'S TEAM

The LANE Team is comprised of leading D-B contractors and designers from LANE and RK&K. Both LANE and RK&K are among Virginia's top-ranked firms in their respective disciplines. Together and individually, we have designed, built and maintained some of the Commonwealth's most important infrastructure. Each firm has achieved a widely recognized level of success by paying specific attention to detail in controlling, managing, and executing their work. Bringing this team together for the I-64 Segment III project unifies the abilities of each to perform in a complimentary manner based on our past performance together. Each team member, including our specialized subconsultants, was specifically selected due to their previous experience delivering projects of similar complexity as the I-64 Segment III project and confirms our qualifications to successfully deliver all elements of the I-64 Segment III project.

LANE and RK&K have worked together on complex interstate projects throughout the East Coast. As a team, we have received numerous accommodations and awards that further demonstrate the benefits our Team can bring to VDOT.

Route 29 Solutions, Charlottesville, VA

"We do some pretty complex projects in Virginia, and this one is right up there. You had 103-day window to shut down the intersection. People said we couldn't get it done in 103 days and they were right. We did it in 57 days. The Lane-Corman team did everything we asked and more to deliver this project." – *VDOT Commissioner Charles Kilpatrick*

"This project brought something that you cannot pay for: Good will... This should become the default model for community engagement." – *Liz Palmer, Chair, Albemarle County, Board of Supervisors*

"The speed and professionalism of Lane-Corman and the VDOT team was impressive... It's really amazing how good of a job they did – no question about it." – *Member, PDAP*

"We have found [the Rio project team] to be working exceedingly well together and significantly positively impacting the challenging business environment due to the roadway construction ... We have been impressed with the level of detail, safety and professionalism of the contractor." – *President, Free Enterprise Forum*



I-485/I-85 "Turbine" Interchange, Charlotte, NC

"Over the past three years, we have been able to move forward with critical transportation projects like this one using innovative financing and construction methods such as design-build-finance and the Mobility Fund." "It is great to see this innovation recognized at the national level." – *North Carolina Gov. Bev Perdue*

Winner of the following awards:

2015 Design-Build Institute of America (DBIA) Excellence in Design (Engineering)

"Roads and Bridges" magazine named the I-85/I-485 Turbine Interchange the #1 road project in North America for 2012.

2015 National Award of Merit - Design-Build Institute of America

2015 ENR Southeast Best Project - Highways/Bridges



3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a) and (b)) as required for LANE (Lead Contractor) and RK&K (Lead Designer) are included in the Appendix.

3.5 | PROJECT RISKS

The LANE Team has carefully considered the critical elements of work for the I-64 Segment III project to determine the three most relevant and critical project risks. During our evaluation of potential risks, we considered numerous risks to the project including: geotechnical, utilities, bridge widening/structures, rehabilitation and phasing, existing pavement condition, maintenance of traffic (MOT), agency/stakeholder coordination, public relations, permitting, and Stormwater Management and associated ROW acquisitions. We concluded that **Maintenance of Traffic, Existing Soils, and Drainage/Stormwater Management** are the three most critical risks that must be mitigated to ensure the success of the project.

RISK NO. 1 – MAINTENANCE OF TRAFFIC

Risk Identification: The average annual daily traffic volume on this segment of I-64 exceeds 70,000 vehicles per day making the delays associated with a long-term closure of an existing travel lane unimaginable, but even temporary lane closures during off-peak hours can create severe delays and congestion at different times of the year. Construction access to the work zone introduces conflicts with motorist and can impact environmental resources. Widening the existing bridges over Colonial Parkway and Lakeshead Drive may affect fewer motorists, but are equally important. Coordinating lane configurations and work zones with I-64 Segment II will also be a key to successfully completing this Project on schedule. Replacing the existing pavement while correcting existing deficiencies in the roadway complicates the Temporary Traffic Control Plan (TTCP) and requires more sequential work that could impact the schedule if delayed. Construction must be sequenced to maintain consistency for motorists while widening bridges, replacing bridges, and reconstructing the existing pavement while the overall Transportation Management Plan (TMP) must communicate the plan to all stakeholders and detail operations and incident management. Failure to clearly address potential issues, provide a well-defined traffic control plan, and communicate that plan will result in driver indecision, congestion, delays, public backlash and a decrease in worker and motorist safety.

Why the Maintenance of Traffic Risk is Critical and the Impacts to the Project: MOT is a critical risk because how the project is constructed and the work zone is designed directly impacts safety, the construction schedule, traveling public, stakeholders, public perception, and the Project's successful completion. This section of I-64 already experiences significant congestion that could be worsened with an inadequate plan. A confusing or poorly executed TTCP will increase delays and congestion. In addition to I-64, it will be important to maintain access to the areas served by Colonial Parkway when the arched overpass is widened and Lakeshead Drive while by setting beams and widening the existing bridge.



I-64 Widening & Route 623 Interchange Improvement D-B project

Additionally, how the project is constructed will have a direct effect on temporary environmental impacts. Unlike I-64 Segment I, this Project will require shifting temporary ramp alignments to replace the existing pavement. They will cross the outside work area and can result in driver confusion and accidents if not properly addressed, additional construction phases if not thoughtfully planned, and conflicts with construction access. MOT conflicts with I-64 Segment II have the potential to delay work and create driver confusion within the work zone. MOT will dictate how the Project's construction activities impact and interact with stakeholders. A poorly designed plan will negatively impact work zone safety, the project schedule, public perception, and our Team's reputation for quality work. Impacts to traffic also have the potential to create a situation where our Team would have to spend significant resources responding to public concerns which would delay construction.

Risk Mitigation Strategy: Mitigation of this risk will be accomplished with careful planning and a well developed and executed TMP. LANE and RK&K have proven they can work together to do this on projects like the recently completed Route 29 Solutions D-B. Our Team will work with project stakeholders and the adjacent I-64 project to identify needs and develop a TMP that provides safe and efficient access through the project for the duration of construction. It will take into account factors like driver fatigue associated with long work zones,

the higher proportion of tourists to regional users, the lack of parallel routes and crossings over Queens Creek, impacts to wide load restrictions and the importance of actively engaging stakeholders like Camp Perry and the National Park Service for specific requirements. The Communications Plan will keep the stakeholders informed about impacts before and during construction, as well as options to avoid construction-related delays and we will hold additional community meetings as needed. The goal is to construct the project quickly while maintaining a safe working environment with minimal disruption to the public. A Work Zone Traffic Impact Analysis (WZTIA) will be used to evaluate how traffic is impacted during construction and help identify if changes to the TTCP can minimize impacts. We will monitor operations after each phase is implemented and make adjustments to optimize the plan. The sequential nature of the Project’s improvements and high traffic volumes during construction make it critical to have a quality MOT plan that maximizes safety while completing the work quickly with minimal disruption to the public

Specific mitigations to be considered while developing the TMP are:

Temporary Lane Closures: The LANE Team will minimize the use of temporary lane closures. An example of this would be to construct the median widening without shifting traffic onto the outside shoulder which will eliminate the temporary lane closures required to strengthen the existing outside shoulder pavement.

We will use the WZTIA to identify timeframes within the “non-peak” hours so that operations requiring temporary lane closures are completed with less congestion. We anticipate that these hours may vary seasonally with travel demand and will incorporate those changes into the TMP.

Lane Shifts and Construction Phases: The number of traffic shifts and construction phases will be reduced to limit changes in the work zone and reduce the associated distractions. The general sequence of construction will be to construct the median widening, shift traffic to the new pavement, then replace the existing pavement while maintaining ramp movements. The sequential nature of the work means that a delay in one area creates a schedule risk to the remainder of the project. One strategy we employ to avoid delays is to make sure the design is constructable as it’s developed. Our experienced engineers will consider construction methods and look for opportunities to simplify field work while Lane’s staff will routinely provide input and be involved in plan reviews. This was extremely successful on the Route 29 Solutions D-B, we even collocated design and construction staff to increase synergy and efficiency. This goes a long way toward ensuring that improvements and grade changes can be efficiently constructed and avoid complications from foreseeable conflicts, such as existing bridge elements, clear zone hazards to shifted traffic, subgrade pavement drainage in superelevation sections and ramps through over work areas.

If traffic is maintained on the existing shoulders, the pavement will be strengthened prior to shifting traffic. The duration that traffic will be maintained on temporary pavement will be determined and the temporary pavement will be designed for twice the anticipated duration to accommodate any unanticipated changes during construction.

Construction Access: Accessing median work areas is challenging because the left lane typically has a higher travel speed and there is a lack of space to provide adequate acceleration and deceleration lanes at the work area access points. Breaks in the barrier create fixed object hazards for motorists and increase exposure to workers. We will detail safe ingress and egress points to the work areas and limit the overall number of access points which will make the work zone safer by reducing conflict points, including where ramps will cross outside work areas. We will also request a work zone speed reduction to match Segment II which will minimize the speed differential between construction traffic and motorists and further enhance safety.

The LANE Team will evaluate direct access to the median work area from cross streets to reduce the need for median access from the left lane of I-64 similar to what was used the I-85 widening project. If that is not feasible, we will limit haul and construction access to and from the I-64 median work area to specific times verified by the WZTIA to reduce congestion from construction traffic entering and exiting a work area.



Innovative Median Ramp on LANE
I-85 Widening Project

Construction staging and access points will be reviewed to evaluate impacts to environmental resources and minimize impacts where possible. Minor changes in staging and access can reduce temporary impacts in operations such as the replacement of the Queens Creek Bridge, and accelerate the permitting process and reduce costs.

Incident Management Plan: The TMP will detail the response to incidents, weather impacts such as accommodating the hurricane evacuation plan, special events, establishing emergency detour routes and more, to ensuring that a plan is in place for all events. In addition to developing adequate emergency pull-off areas along the corridor to use as safe pull-off areas, the Lane Team will clearly detail how incidents will be handled and engage a wrecker service to be on-call to rapidly respond to disabled vehicles and restore the travel lanes to their full capacity.

Coordination with Adjacent Projects: Early and frequent coordination with adjacent projects will ensure that this Project is not delayed by unexpected interruptions associated with those projects. The TTCP for I-64 Segment III will need to be carefully coordinated with I-64 Segment II. The Lane Team will hold weekly coordination meetings to ensure the details and timing of short-term lane closures are coordinated. The need to accelerate widening at the east end of this project or open capacity improvements to traffic early will be evaluated and the transition between the two projects will be designed to provide clear instruction to motorists.

Advanced Utility Relocation Plans: Early identification of utility conflicts, coordination with the owners, and advanced utility plans will help ensure that any conflicts are resolved ahead of construction activities within each phase of the MOT plan.

These strategies are just some of the tools our Team will use to mitigate the MOT risks for this project. Our Team has proven experience developing quality TMP plans in complex areas (Type B and C) that provide a safe work zone, clear direction limit disruption to the public, and allow work to be completed efficiently and on schedule. We understand how designing above the minimum requirements for lane shifts and buffer areas can improve operations and safety and we will incorporate lessons learned on past projects onto this one. The LANE Team will use our experience to develop a quality MOT strategy for this Project and ensure that it is implemented.

Role of VDOT and other Agencies: None, other than the traditional partnering with VDOT during the public outreach process as we provide information to update the VA 511 system and the I-64 Widening website.

RISK NO. 2 – EXISTING SOILS

Risk Identification: The project is located in the Atlantic Coastal Plain Physiographic Province of Virginia. This is characterized by a series of south-easterly dipping layers of relatively consolidated sandy clay deposits, with lesser amounts of gravel. Specifically, the roadway alignment passes through formations that primarily include alluvial and terrace deposits consisting of interbedded layers of Clayey Sand, Silty Sand, and Sandy Clay.

Based on our review of the *Geotechnical Data Reports* (GDRs), the near surface soils (below topsoil layer) are generally anticipated to include existing Fill (typically CL, ML, SM, and SC) ranging in thickness from 0 to about 22 feet and transitioning to the alluvial and terrace deposit soils (SM, SC, and CL) to depths of about 15 to 50 feet. The near surface alluvial and terrace deposit soils may contain significantly thick deposits of soft, compressible, and high plasticity soils (CH, MH and OH). We see these existing subsurface conditions as comprising risks related to potential unsuitable subgrade soils, settlement and stability of new fill placement, and soft/loose soils for deep foundations bridge structure locations.

Why the Existing Soils Risk is Critical and the Impacts to the Project: The recognition and mitigation of these geotechnical conditions will impact traffic, public safety, quality, schedule (including the critical path), and construction costs. Unsuitable subgrade materials, settlement and stability of embankment fills, and bridge foundation serviceability issues all have the potential to extend the duration of construction and increase costs. The description of risks and impacts are presented in more detail below.

Potential Unsuitable Soils: Based on the geographic location of the project alignment, there is the likelihood that subgrade soils could be unsuitable for roadway embankment and pavement subgrades. Unsuitable soils per VDOT standards are typically identified by (a) exhibiting natural moisture contents greater than 20 to 30 percent

above the respective soils optimum moisture content, (b) classifying as highly-plastic clays and silts (CH and MH), (c) low California Bearing Ratio (CBR) value as compared to minimum pavement design value, and (d) soft or loose relative density. Subgrade soils that are unsuitable must be modified in-place or removed entirely. These soils pose a risk to the project due to the additional time required to delineate their extent, the time required to modify or remove and replace these soils with suitable fill, and the uncertainty it creates with earthwork quantity estimation. Removal and replacement of unsuitable materials can dramatically increase the number of trucks entering and existing the work area which further exacerbates impacts to the traveling public.

Settlement and Global Stability of Embankment Fills: New embankment fills will primarily be constructed within the existing median along the corridor for new travel lanes and shoulder construction. Substantial fills, greater than 5 feet, will be required at isolated locations of deeper ravines and for bridge structure approaches. Soft soil layers were identified in the GDR soil test borings; therefore, new fill induced settlement and stability of wedge or “sliver” fills must be evaluated by the Team prior to construction. The risk of fill induced settlement or local stability failures of wedge fills, if not addressed during construction, could potentially lead to post-construction settlement of new pavements, affecting the levelness and “rideability” of the new lanes and approaches. Settlement monitoring of the deeper fill areas, if necessary, could impact the project schedule if unaccounted for early in the construction process. Unanticipated settlement could require additional fill material to maintain the roadway grade and create future maintenance issues for the roadway. The impact of down drag on foundation elements could influence the performance of the bridge joints and bearings, which would impact the quality of work and could end up providing an uneven riding surface.

Soft/Loose Soils for Deep Foundations at Bridges: The bridge foundation design will be dependent on soil types and relative densities/consistencies. The borings presented in the GDRs show very soft/loose to soft/loose soil profiles to the termination depth of the bridge borings. Significant risk to the project can occur without sufficient geotechnical boring data up to and beyond the anticipated foundation bearing elevation(s). Soft and loose soil deposits can have a significant impact on overall serviceability of bridge structures. As such the performance of the structure foundation must be analyzed for (a) foundation type and size, (b) scour depths, (c) anticipated settlement of discrete soils layers that can lead to “down drag” forces on individual pile/shaft elements, (d) lateral squeeze factor of safety, and (e) overall slope stability of approach embankments. Further, these soil conditions are critical factors because they affect not only the new foundations but the existing adjacent substructure units as well.

Limited data is available in the GDRs for performing scour analyses for the bridges crossing Queen Creek. The scour depth is critical to the design of the bridge foundations and impacts the applicable foundation types and sizes.

Risk Mitigation Strategies: We will mitigate the geotechnical risks associated with the Project by confirming the extent of the potential impacts, selecting appropriate design and remediation strategies in coordination with VDOT’s recommendations, and safely and efficiently managing construction operations to minimize cost and schedule impacts. We will confirm the extent of potential impacts by performing a thorough geotechnical investigation in accordance with VDOT Manual of Instructions Chapter 3 guidelines to supplement the subsurface information provided in the GDRs. The mitigation strategies are presented in more detail below.

Potential Unsuitable Soils: To mitigate the potential for unsuitable soils to negatively affect the project schedule, the Project Team will focus early phase geotechnical explorations around low-lying areas and portions of the alignment where unsuitable soils have been noted in the existing Standard Penetration Test (SPT) soil test boring logs. The early phase exploration will also focus on laboratory tests of the samples to include natural moisture contents, gradation, Atterberg Limits (VTM-7), Standard Proctor (VTM-1) and CBR (VTM-8) tests. We used a similar approach on the I-64 Short Pump D-B to delineate the lateral extent and depth of unsuitable soils and take proactive measures early in the earthwork construction phases. Locations where unsuitable soils are anticipated to be encountered will be delineated on the project drawings (both depth and lateral extent). A Soils Remediation Plan will be developed and approved by VDOT’s geotechnical and materials engineers prior to the commencement of construction. The Soils Remediation Plan may include undercut/replacement, in-place drying/scarification, lime modification (moisture reduction), or lime/cement stabilization (altering the plasticity of the soil). Potential borrow sources will be identified and approved by VDOT prior to the start of construction to provide suitable fill material for the roadway fills and potential undercuts.

Settlement and Stability of Embankment Fills: In-situ testing consisting of Cone Penetrometer Testing (CPT), including pore pressure dissipation testing, Dilatometer Testing (DMT), and/or Pressure Meter Testing (PMT) can be performed at deep fill locations to compliment traditional SPT and laboratory consolidation and shear strength testing. The test results will be used to determine settlement rates, magnitudes and provide anticipated settlement monitoring durations for inclusion in the project schedule. Test results will also evaluate sufficient slope geometry and acceptable global stability factors of safety. To mitigate against large anticipated settlement values, long-term settlement behavior, and/or global stability failures alternative construction techniques may include (a) utilizing light weight fill material, (b) installing stabilization geosynthetic grids or fabrics, or (c) surcharging embankment fills that may or may not include vertical drains. These approaches will be evaluated by the Team and our approach finalized in alignment with VDOT.

Soft/Loose Soils for Deep Foundations at Bridges: Deep foundation systems developing most of their capacity from skin friction should be considered in lieu of nondisplacement deep foundation systems such as H-piles. This typically reduces the overall number of foundation elements for each structure and accommodates the “soil setup” capacity increase common in this geology. Deeper borings and in-situ tests can be completed at the bridge locations to evaluate the depth and consistency of deeper soil strata that can also contribute to increased skin friction and end bearing capacity. If bridge foundation “downdrag” or negative skin friction is deemed to be a viable risk after further investigation, mitigation strategies may include (a) oversizing the foundation elements to accommodate the anticipated downdrag load, (b) use of light weight fill material to minimize settlement of subsurface soils, (c) bituminous coating of piles to reduce friction of subsurface soils pulling down on the pile, or (d) working with the team to modify the construction sequencing to allow for settlement of subsurface soils to occur prior to driving of foundation elements. To mitigate against long-term movement of new and/or existing structures, the proposed and existing structures can be monitored for adjacent ground movement. Existing piers and bridge beams will be protected during construction to ensure global stability of the foundations during construction.

Role of VDOT and other Agencies: Other than the traditional review of the Team’s geotechnical investigation plan and designs we expect VDOT’s role will be minimal (likely none). We recognize that soil conditions will vary between borings and may vary between the subsurface conditions observed to date.

RISK NO. 3 – STORMWATER MANAGEMENT/DRAINAGE

Risk Identification: Based on our review of the information provided by VDOT and our Team’s extensive experience in the Tidewater region, we have identified the design and construction of Drainage and Stormwater Management as a project risk. Specifically, the high water table, flat terrain, FEMA floodplains, and permitting represent significant challenges that must be accounted for during the design and construction phases so that stormwater management/drainage risk is minimized.

Why the Stormwater Management/Drainage Risk is Critical and the Impacts to the Project: The seasonable high water table in this region is often less than 2-feet below existing ground in some areas. This high water table represents a critical risk because commonly used infiltration type BMP facilities such as bioretention basins and dry swales, which provide highly efficient runoff reduction and water quality treatment, contain an engineered soil media layer with an underdrain system that must be at least 1-foot above the seasonal high water table. If the seasonal high water table elevation is not accounted for in the selection and design of BMP facilities, the project can be impacted by compromised BMP functionality, problematic construction, increased BMP maintenance requirements, and potential DEQ VSMP violations.

The flat terrain of the area is a critical risk that limits the ability to efficiently drain the project and limits the drainage area that can be diverted to each BMP facility. For ditches, the flat terrain makes it difficult to maintain positive ditch flow over significant distances. For storm drain systems, it is challenging to maintain VDOT required minimum pipe cover, minimum 3-feet per second velocity requirements, and suitable outfall location. Improper consideration of these factors during design result in impacts to the project by insufficient treatment of drainage areas in the proposed BMP’s, deficient storm conveyance system capacities, and increased maintenance requirements. During construction, the minimum elevation drop requires very tight tolerances on ditch and pipe construction.

Our team must ensure that floodplain impacts, if any, to Skimino Creek (FEMA Zone A) and Queen Creek (FEMA Zone AE) are negligible and compliant with VDOT and FEMA policies. Determination and avoidance of floodplain impacts is a critical risk because of potential schedule delays associated with a FEMA Floodplain Letter of Map Revision (LOMR), and approval of the County's Floodplain Manager prior to securing VMRC wetlands/water permit within floodplain areas. If the floodplain risks are not properly managed, the project can experience significant time delays and mitigation requirements that will impact both project schedule and budget.

We must also consider the fact that a portion of this project drains to Waller Mill Reservoir, which is designated by the County as a Watershed Protection Area and will require special considerations during design and construction that could impact the project if not properly accounted for.

Each of the risks above directly correlates to the ability of the LANE Team to obtain the necessary permits to construct the project. Failure to appropriately consider these critical risks will jeopardize our ability to obtain permits in a timely basis, resulting in costly schedule delays. Failure to adhere to the permit conditions during construction may result in violations and shutdowns, unauthorized discharge of sediment laden water, and inability to provide a compliant storm water management/drainage system.

Risk Mitigation Strategies: To mitigate this risk associated with the water table elevation, our geotechnical experts will review available groundwater/boring data, obtain additional groundwater readings, and use historical trends to assess the groundwater conditions and develop the seasonal high water table elevations for all potential BMP facility locations. BMP locations and types will then be selected to ensure appropriate placement relative to the seasonal high water table. For example, on the I-64 Short Pump D-B project, we used Type I bioretention facilities, which are shallower than Type II facilities, to provide sufficient freeboard above the water table. Another solution used on the project was the construction of BMPs in open median space where the roadway fill is typically higher than surrounding existing ground, or on the outside of the roadway on top of the fill slope.

To accommodate the flat terrain and limited drainage areas, we will utilize multiple bioretention basins, which are highly efficient at providing pollutant removal and runoff reduction within limited footprint. Where the drainage area exceeds the maximum allowable for bioretention basins, we will consider wet pond facilities which can also utilize the groundwater table as a source for the permanent water surface elevation. Our design team recently used this exact process for the 9 mile long MD404 Design-Build dualization project, which is located on the eastern shore of MD with very similar terrain, water table, and BMP selection risks.

As we have done for multiple VDOT project, we will also consider purchasing phosphorous nutrient credits from a DEQ approved mitigation bank to satisfy the maximum allowable of 25% of the project phosphorous pollutant removal requirement. This strategy reduces the number of BMPs and VDOT's long term maintenance. Because this project crosses two separate HUC boundaries (York River and James River), we will coordinate with nutrient banks in each watershed.

Our approach to mitigating the risk associated with the FEMA floodplain analysis and compliance includes: obtaining all existing hydraulic models available prior to beginning our analysis to streamline the floodplain; obtaining field surveys to supplement existing models to ensure accurate; and early and consistent coordination with the County's Floodplain Manager.

With respect to the Wallmer Mill Reservoir, our team will conduct a thorough impact study in accordance with York County Code Section 24.1-376.f. This study will be coordinated with the development of our SWPPP (including spill prevention), stormwater management plan, and E&S to ensure protection of the reservoir.

Our team will work collaboratively with the regulatory agencies to achieve consensus on the appropriate avoidance and minimization measures required to secure all environmental clearances. Early informal meeting with the regulatory agencies will ensure complete understanding of the nuances of environmental issues specific to our project, and regular consultation as the project progresses will eliminate surprises and risk.

Role of VDOT and other Agencies: Minimization of risk for stormwater management/drainage is primarily the responsibility of the Lane Team. In addition to coordinating with VDOT and providing regular progress updates, we will engage VDOT with respect to items such as BMP access, planting materials, and outlet structures to ensure that long term maintenance is minimized.

ATTACHMENT 3.1.2
SOQ CHECKLIST

ATTACHMENT 3.1.2

Project: 0064-965-229, Contract ID: C00106689DB97

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix Attachment 3.1.2
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix Attachment 2.10
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	Page 2
Offeror's point of contact information	NA	Section 3.2.2	yes	Page 1
Principal officer information	NA	Section 3.2.3	yes	Page 2
Offeror's Corporate Structure	NA	Section 3.2.4	yes	Page 2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	Page 2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix Attachment 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix Attachment 3.2.7(a) & 3.2.7(b)
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Page 2 & Appendix

ATTACHMENT 3.1.2

Project: 0064-965-229, Contract ID: C00106689DB97

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

ATTACHMENT 3.1.2

Project: 0064-965-229, Contract ID: C00106689DB97

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix Attachment 3.3.1
Key Personnel Resume – RCE	Attachment 3.3.1	Section 3.3.1.1	no	Appendix Attachment 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix Attachment 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix Attachment 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix Attachment 3.3.1
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix Attachment 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 4
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 4-8
Experience of Offeror’s Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix Attachment 3.4.1(a)
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix Attachment 3.4.1(b)

ATTACHMENT 3.1.2

Project: 0064-965-229, Contract ID: C00106689DB97

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 10-15

ATTACHMENT 2.10
FORM C-78-RFQ

ATTACHMENT 2.10

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

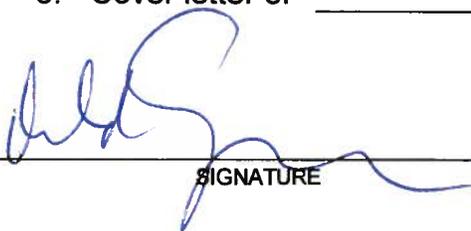
PROJECT: I-64 Capacity Improvements – Segment III
RFQ NO. C00106689DB97
PROJECT NO.: 0064-965-229

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 – March 29, 2017
(Date)
- 2. Cover letter of _____
(Date)
- 3. Cover letter of _____
(Date)

 <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center; margin: 0;">SIGNATURE</p>	<p style="text-align: center; margin: 0;"><u>5/2/2017</u></p> <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center; margin: 0;">DATE</p>
<p style="text-align: center; margin: 0;"><u>Donald E. Bryson, Jr.</u></p> <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center; margin: 0;">PRINTED NAME</p>	<p style="text-align: center; margin: 0;"><u>Pursuit Manager</u></p> <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center; margin: 0;">TITLE</p>

**ATTACHMENT 3.2.6
AFFILIATED AND SUBSIDIARY COMPANIES
OF THE OFFEROR**

ATTACHMENT 3.2.6

State Project No. 0064-965-229, Contract ID: C00106689DB97

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
ULTIMATE PARENT COMPANY	Salini Impregilo, S.p.A.	Via dei Missaglia, 97 – 20142 Milan, Italy
GRANDPARENT	Salini-Impregilo US Holdings, Inc.	2711 Centerville, Suite 400 Wilmington, DE 19808
PARENT COMPANY	Lane Industries Incorporated	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Worldwide Infrastructure, Inc.	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Infrastructure. Inc.	90 Fieldstone Court Cheshire, CT 06410
AFFILIATE	Lane International, B.V.	Prins Bernhardplein 200 1097 JB Amsterdam, the Netherlands
AFFILIATE	Lane Mideast Contracting, LLC	P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets
AFFILIATE	Lane Mideast, Qatar, LLC	Grand Hamad Street Bin Al Sheikh Bldg. 3rd Floor

SUBSIDIARY	S.A. Healy Company	901 N. Green Valley Parkway, Suite 260 Henderson, NV 89074
JOINT VENTURE (30% PARTNER)	Skanska-Granite-Lane	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (30% PARTNER)	I4 Leasing, LLC	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	929 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (51% MANAGING PARTNER)	Lane-Abrams Joint Venture	3001 Meacham Boulevard, Suite 215 Fort Worth, TX 76137
JOINT VENTURE (60% MANAGING PARTNER)	Lane-Corman, A Joint Venture	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (30% PARTNER)	Purple Line Transit Constructors, LLC (PLTC)	6811 Kenilworth Avenue East Riverdale, MD 20737
JOINT VENTURE (45% PARTNER)	Fluor-Lane South Carolina	100 Fluor Daniel Drive Greenville, SC 29607
TRADE NAME	Civil Wall Solutions, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Cold River Materials, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

TRADE NAME	Lane Concrete Frames, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Prestress of the Carolinas, A Division of the Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Senate Asphalt, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Paving Company, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Sign and Lighting Company, Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

ATTACHMENT 3.2.7(a)
DEBARMENT FORM- PRIMARY COVERED
TRANSACTIONS

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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.

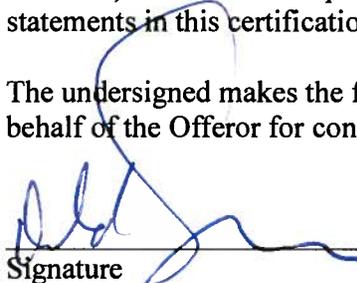
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

May 2, 2017

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: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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

May 2, 2017

Date

Partner

Title

Rummel, Klepper & Kahl, LLP

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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

gn. Howarth 4/4/17 PRINCIPAL
Signature Date Title

CES CONSULTING LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

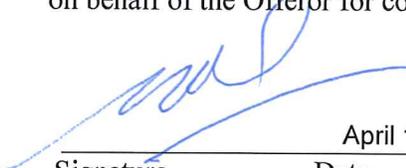
Project No.: 0064-965-229

Contract ID: C00106689DB97

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

	April 13, 2017	Vice President
_____ Signature	_____ Date	_____ Title

DMY Engineering Consultants Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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

J. Randy Wirt 4/3/17 VICE PRESIDENT
Signature Date Title

ECS MID-ATLANTIC, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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



Signature

4/4/17

Date

PRESIDENT

Title

KDR REAL ESTATE SERVICES

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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.

Thomas J. Szyja 04/05/2017
Signature Date

President
Title

Precision Measurements, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

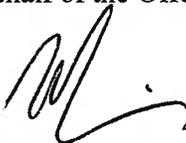
Project No.: 0064-965-229

Contract ID: C00106689DB97

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

4/4/2017

Date

Vice President of Public Affairs

Title

Seventh Point Transportation PR

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: I-64 Capacity Improvements – Segment III

Project No.: 0064-965-229

Contract ID: C00106689DB97

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

May 2, 2017
Date

Senior Vice President
Title

Volkert, Inc.
Name of Firm

**ATTACHMENT 3.2.8
OFFEROR'S VDOT PREQUALIFICATION
CERTIFICATE**



COMMONWEALTH OF VIRGINIA



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

Handwritten signature of Suzanne FR Lucas in black ink.

Suzanne FR Lucas, State Prequalification Officer

Handwritten signature of Don E. Silies in blue ink.

Don E. Silies, 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

April 21, 2017

Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: **The Lane Construction Corporation**
Request for Qualifications - A DESIGN-BUILD PROJECT
I-64 Capacity Improvements - Segment III; From: 1.15 Miles West of Route 199 (Lightfoot)
To: 1.05 West of Route 199 (Humelsine Parkway), York County, Virginia
State Project No.: 0064-965-229, P-101, R-201, C-501, B-638, B-639,
B-640, B-641, B-642, B-643, D-609, D-610, D-611; Federal Project No.: NHPP-064-3(498)
Contract ID Number: C00106689DB97
Estimated Contract Price: \$240,000,000.00

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, Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), Berkshire Hathaway Specialty 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 National Union Fire Insurance Company of Pittsburgh, PA (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,

Liberty Mutual Insurance Company
Berkshire Hathaway Specialty Insurance Company
Fidelity and Deposit Company of Maryland
National Union Fire Insurance Company of Pittsburgh, PA



Theresan E. Rowedder
Attorney-in-Fact

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

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

Certificate No. 7555383

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

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Brian Driscoll; Bryan Huft; Gregory J. Steele; Jane Gilson; Jean Correia; Kevin A. White; Maria Chaves; Mark P. Herendeen; Theresan 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 30th day of November, 2016.



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

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

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 30th day of November, 2016, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 21st day of April, 2017.



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

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

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

Power Of Attorney

**BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY**

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131, and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **María Chaves, Jean Correia, Theresan Rowedder, Jane Gilson, Mark P. Herendeen, One Federal Street, 20th Floor of the city of Boston State of Massachusetts**, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of November 18, 2014. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively.

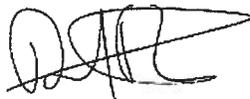
BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY,



By: _____
David Fields, Executive Vice President



NATIONAL INDEMNITY COMPANY,
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,



By: _____
David Fields, Vice President

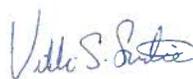


NOTARY

State of Massachusetts, County of Suffolk, ss:

On this 18th day of November, 2014 before me appeared David Fields, Executive Vice President of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY** and Vice President of **NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]

Notary Public

I, Brennan Neville, the undersigned, Assistant Secretary of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, I have hereunto affixed the seals of said companies this date of April 21, 2017.




Assistant Secretary

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, 100 Federal Street, 20th Floor, Boston, MA 02110 | (617) 936-2971 or by email at Courtney.Walker@bhspecialty.com. THIS POWER OF ATTORNEY IS VOID IF ALTERED. To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

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

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **GERALD F. HALEY, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT 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 21st day of July, 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
Eric D. Barnes*

State of Maryland
County of Baltimore

Gerald F. Haley

*Vice President
Gerald F. Haley*

On this 21st day of July, A.D. 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, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

Maria D. Adamski

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



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 4th day of APRIL, 2017.



Michael Bond, Vice President

POWER OF ATTORNEY

American Home Assurance Company
National Union Fire Insurance Company of Pittsburgh, PA.
Principal Bond Office: 175 Water Street, New York, NY 10038

Power No. 713

No. 04-B-07407

KNOW ALL MEN BY THESE PRESENTS:

That American Home Assurance Company, a New York corporation, and National Union Fire Insurance Company of Pittsburgh, PA., a Pennsylvania corporation, does each hereby appoint

--Mark P. Herendeen, Jean Correia, Maria Chaves, Jane Gilson, Theresa E. Rowedder of Boston, Massachusetts--

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. have each executed these presents

this 9th day of January, 2017



Handwritten signature of Michael C. Fay

Michael C. Fay, Vice President

STATE OF NEW YORK)
COUNTY OF NEW YORK) ss.

On this 9th day of January, 2017 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

Handwritten signature of Juliana E. Hallenbeck

JULIANA HALLENBECK
Notary Public - State of New York
No. 01HA8125671
Qualified in Bronx County
My Commission Expires April 18, 2017

CERTIFICATE

Excerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. on May 18, 1976.

"RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

"RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance and other contract of indemnity and writing obligatory in the nature thereof.

"RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

I, Martin Bogue, Assistant Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, PA. do hereby certify that the foregoing excerpts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney are in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation

this 21st day of APRIL, 2017



Handwritten signature of Martin Bogue

Martin Bogue, Assistant Secretary

ATTACHMENT 3.2.10
SCC AND DPOR INFORMATION TABLES

ATTACHMENT 3.2.10

State Project No. 0064-965-229, Contract ID: C00106689DB97

SCC and DPOR Information

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.							
SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Contractor Class A	2701011871	01-31-2018
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Business Entity Registration	0407002174	12-31-2017
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	14500 Avion Parkway, Suite 200 Chantilly, VA 20151	Business Entity Branch Office Registration	0411000988	02-28-2018
Rummel, Klepper & Kahl, LLP (RK&K)	K0004178	LLP	Active	2901 S. Lynnhaven Rd Suite 300 Virginia Beach, VA 23452	Business Entity Branch Office Registration	0411000667	02-28-2018
				2100 East Cary Street, Suite 309, Richmond, VA 23223	Business Entity Branch Office Registration	0411000271	02-28-2018
				721 Lakefront Commons Suite 203 Newport News, VA 23606	Business Entity Branch Office Registration	0411000443	02-28-2018
				12600 Fair Lakes Cir, Ste 300 Fairfax, VA 22030	Business Entity Branch Office Registration	0411000577	02-28-2018
				81 Mosher Street Baltimore, MD 21217	Business Entity Registration	0407002860	12-31-2017
CES Consulting, LLC	S3416007	Limited Liability Company	Active	23475 Rock Haven Way Suite 255 Dulles, VA 20166	Business Entity Registration	0407005783	12-31-2017
DMY Engineering Consultants, Inc.	07688955	Corporation	Active	45662 Terminal Drive, Suite 110, Dulles, VA 20166	Business Entity Registration	0407005631	12-31-2017

ATTACHMENT 3.2.10

State Project No. 0064-965-229, Contract ID: C00106689DB97

SCC and DPOR Information

ECS Mid-Atlantic, LLC	S1208216	Limited Liability Company	Active	2119-D North Hamilton Street, Richmond, VA 23230	Business Entity Branch Office Registration	0411000384	02-28-2018
				108 Ingram Road Suite 1, Williamsburg VA 23188	Business Entity Branch Office Registration	0411000382	02-28-2018
				2700 International Pkwy Suite 100, Virginia Beach, VA 23452	Business Entity Branch Office Registration	0411000385	02-28-2018
KDR Real Estate Services, Inc.	05712104	Corporation	Active	2500 Grenoble Road, Richmond, VA 23294	Real Estate Firm License	0226007129	12-31-2018
Precision Measurements, Inc.	04504361	Corporation	Active	4215 Lafayette Center Drive Suite 2A, Chantilly, VA 20151	Business Entity Branch Office Registration	0411000562	02-28-2018
Seventh Point, Inc.	02675411	Corporation	Active	N/A	N/A	N/A	N/A
Volkert, Inc.	F1366592	Foreign Corporation	Active	283 Constitution Dr. Suite 303 Virginia Beach, VA 23462	Business Entity Branch Office Registration	0411001275	02-28-2018
				6225 Brandon Ave. Suite 540 Springfield, VA 22150	Business Entity Branch Registration	0407002610	12-31-2017

ATTACHMENT 3.2.10

State Project No. 0064-965-229, Contract ID: C00106689DB97

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	Troy Carter, PE	Chantilly, VA	5944 McGregor Drive Charlotte, NC 28227	Professional Engineer License	0402055381	09-30-2017
Rummel, Klepper & Kahl, LLP (RK&K)	Ryan Wendell Masters, PE	Richmond, VA	9506 Indianfield Drive Mechanicsville, VA 23116	Professional Engineer License	0402038025	06-30-2017
Rummel, Klepper & Kahl, LLP (RK&K)	David W. Plum, PE	Virginia Beach, VA	4201 Wakefield Court, Virginia Beach, VA 23455	Professional Engineer License	0402016205	02-28-2018
CES Consulting, LLC	Julie Perkoski, PE	Virginia Beach, VA	4000 Monitor Drive Hampton, VA 23669	Professional Engineer License	0402026174	06-30-2017
KDR Real Estate Services, Inc.	Nancy Gossett Dove	Richmond, VA	5370 Orion Avenue Norfolk, VA 23502	Real Estate Appraiser License	4001003797	11-30-2017

ATTACHMENT 3.2.10.1
SCC SUPPORTING DOCUMENTATION



THE LANE CONSTRUCTION CORPORATION

SCC eFile

SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

General

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

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

On September 25, 2001, a statement of registration as a foreign registered limited liability partnership was filed in the Clerk's Office of the Commission by Rummel, Klepper & Kahl, LLP, a Maryland limited liability partnership.

As of the date below, this statement of registration is in effect.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:
January 12, 2016*



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



CES Consulting, LLC

SCC eFile

SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback

Business Entities

General

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



DMY ENGINEERING CONSULTANTS INC.

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: 07688955
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 9/6/2013
Status: Active
Shares Authorized: 10000



ECS - Mid-Atlantic, LLC

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: S1208216
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 4/16/2004
Status: Active



KDR Real Estate Services, Inc.

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: 05712104
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 1/30/2002
Status: Active
Shares Authorized: 100



PRECISION MEASUREMENTS, INC.

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: 04504361
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 7/24/1995
Status: Active
Shares Authorized: 5000



Seventh Point, Inc.

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: 02675411
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 3/4/1985
Status: Active
Shares Authorized: 3000



Volkert, Inc.

SCC eFile

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Business Entities

UCC or Tax Liens

General

SCC ID: F1366592
Entity Type: Foreign Corporation
Jurisdiction of Formation: AL
Date of Formation/Registration: 1/21/1999
Status: Active
Shares Authorized: 2250

ATTACHMENT 3.2.10.2
DPOR SUPPORTING DOCUMENTATION
FOR EACH OFFICE

DPOR License Lookup License Number 2701011871

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
DBA Name	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number	2701011871
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Specialties²	Commercial Building (CBC) Highway / Heavy (H/H) Residential Building (RBC)
Initial Certification Date	1972-10-12
Expiration Date	2018-01-31

DPOR License Lookup License Number 0407002174

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
License Number	0407002174
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Initial Certification Date	1985-09-30
Expiration Date	2017-12-31

DPOR License Lookup License Number 0411000988

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
License Number	0411000988
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	14500 AVION PKWY SUITE 200, CHANTILLY, VA 20151
Initial Certification Date	2013-04-18
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000667

License Details

Name	RUMMEL KLEPPER & KAHL LLP
License Number	0411000667
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2901 S. LYNNHAVEN ROAD SUITE 300, VIRGINIA BEACH, VA 23452
Initial Certification Date	2009-09-24
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000271

License Details

Name	RUMMEL KLEPPER & KAHL LLP
DBA Name	RK&K
License Number	0411000271
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2100 EAST CARY ST SUITE 309, RICHMOND, VA 23223
Initial Certification Date	2001-10-19
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000443

License Details

Name	RUMMEL KLEPPER & KAHL LLP
DBA Name	RK & K
License Number	0411000443
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	721 LAKEFRONT COMMONS SUITE 203, NEWPORT NEWS, VA 23606
Initial Certification Date	2006-07-07
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000577

License Details

Name	RUMMEL KLEPPER & KAHL LLP
DBA Name	RK&K
License Number	0411000577
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	12600 FAIR LAKES CIR, STE 300, FAIRFAX, VA 22030
Initial Certification Date	2009-03-26
Expiration Date	2018-02-28

DPOR License Lookup License Number 0407002860

License Details

Name	RUMMEL KLEPPER & KAHL LLP
License Number	0407002860
License Description	Business Entity Registration
Rank	Business Entity
Address	81 MOSHER ST, BALTIMORE, MD 21217
Initial Certification Date	1988-03-29
Expiration Date	2017-12-31

CES Consulting, LLC

DPOR License Lookup License Number 0407005783

License Details

Name	CES CONSULTING LLC
License Number	0407005783
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	23475 ROCK HAVEN WAY SUITE 255, DULLES, VA 20166
Initial Certification Date	2010-11-05
Expiration Date	2017-12-31

DMY Engineering Consultants, Inc.

DPOR License Lookup License Number 0407005631

License Details

Name	DMY ENGINEERING CONSULTANTS INC
License Number	0407005631
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	45662 TERMINAL DRIVE SUITE 110, DULLES, VA 20166
Initial Certification Date	2010-03-10
Expiration Date	2017-12-31

DPOR License Lookup License Number 0411000384

License Details

Name	ECS MID-ATLANTIC LLC
License Number	0411000384
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2119-D NORTH HAMILTON ST, RICHMOND, VA 23230
Initial Certification Date	2004-12-10
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000382

License Details

Name	ECS-MID-ATLANTIC LLC
License Number	0411000382
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	108 INGRAM RD STE 1, WILLIAMSBURG, VA 23188
Initial Certification Date	2004-12-10
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000385

License Details

Name	ECS-MID-ATLANTIC LLC
License Number	0411000385
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2700 INTERNATIONAL PKWY SUITE 100, VIRGINIA BEACH, VA 23452-7855
Initial Certification Date	2004-12-10
Expiration Date	2018-02-28

DPOR License Lookup License Number 0226007129

License Details

Name	KDR REAL ESTATE SERVICES INC
License Number	0226007129
License Description	Real Estate Firm License
Rank	Firm License
Address	2500 GRENoble RD, RICHMOND, VA 23294
Initial Certification Date	2002-12-26
Expiration Date	2018-12-31
In Charge Of	DORIN, ALLEN GUNN JR

Precision Measurements, Inc.

DPOR License Lookup License Number 0411000562

License Details

Name	PRECISION MEASUREMENTS INC
License Number	0411000562
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	4215 LAFAYETTE CENTER DRIVE SUITE 2A, CHANTILLY, VA 20151
Initial Certification Date	2009-01-20
Expiration Date	2018-02-28

Seventh Point, Inc.

N/A

Volkert, Inc.

DPOR License Lookup License Number 0411001275

License Details

Name	VOLKERT INC
License Number	0411001275
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	283 CONSTITUTION DR STE 303, VIRGINIA BEACH, VA 23462
Initial Certification Date	2016-05-19
Expiration Date	2018-02-28

DPOR License Lookup License Number 0407002610

License Details

Name	VOLKERT INC
License Number	0407002610
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	6225 BRANDON AVE STE 540, SPRINGFIELD, VA 22150
Initial Certification Date	1983-07-29
Expiration Date	2017-12-31

ATTACHMENT 3.2.10.3
DPOR SUPPORTING DOCUMENTATION
FOR KEY PERSONNEL

KEY PERSONNEL DPOR

Troy Carter, PE

DPOR License Lookup License Number 0402055381

License Details

Name	CARTER, TROY M
License Number	0402055381
License Description	Professional Engineer License
Rank	Professional Engineer
Address	CHARLOTTE, NC 28227
Initial Certification Date	2015-09-22
Expiration Date	2017-09-30

Ryan Wendell Masters, PE

DPOR License Lookup License Number 0402038025

License Details

Name	MASTERS, RYAN WENDELL
License Number	0402038025
License Description	Professional Engineer License
Rank	Professional Engineer
Address	MECHANICSVILLE, VA 23116
Initial Certification Date	2003-06-10
Expiration Date	2017-06-30

David W. Plum, PE

DPOR License Lookup License Number 0402016205

License Details

Name	PLUM, DAVID W
License Number	0402016205
License Description	Professional Engineer License
Rank	Professional Engineer
Address	VIRGINIA BEACH, VA 23455
Initial Certification Date	1986-02-13
Expiration Date	2018-02-28

Julie Perkoski, PE

DPOR License Lookup License Number 0402026174

License Details

Name	PERKOSKI, JULIANNE
License Number	0402026174
License Description	Professional Engineer License
Rank	Professional Engineer
Address	HAMPTON, VA 23669
Initial Certification Date	1995-06-13
Expiration Date	2017-06-30

Nancy Gossett Dove

DPOR License Lookup License Number 4001003797

License Details

Name	DOVE, NANCY GOSSETT
License Number	4001003797
License Description	Real Estate Appraiser License
Status	Active
Rank	Certified General RE Appraiser
Address	NORFOLK, VA 23502
Initial Certification Date	1997-11-24
Expiration Date	2017-11-30

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: TROY CARTER, PE, SENIOR PROJECT MANAGER	
b. Project Assignment: DESIGN-BUILD PROJECT MANAGER	
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): THE LANE CONSTRUCTION CORPORATION (Full Time)	
d. Employment History: With this Firm 11 Years With Other Firms 10 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, 2013–Present, Senior Project Manager: Mr. Carter, a registered licensed PE in Virginia and North Carolina, serves as Senior Project Manager for LANE on large complex D-B projects in the Mid-Atlantic. He is responsible for overall management of the design, project development from beginning to end, construction, quality, safety, and contract administration on these projects. He provides strategic planning and execution for projects, provides leadership for 20 plus superintendents and engineers, and works with design and construction teams on innovative techniques and means and methods. He organizes and assigns equipment, personnel, and subcontractor resources to execute each project. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place. The Lane Construction Corporation, 2005–2012, Project Manager: As Project Manager, Mr. Carter was responsible for project management and development of CPM schedule, managing numerous projects throughout North and South Carolina and the construction schedule, project buyout, and construction of pre-stressed girders and steel beams. Negotiated with SCDOT, NCDOT and FHWA on all matters and additionally coordinated with City of Columbia, River Alliance, SCE&G, Inc. AT&T, US Army Corp of Engineers, DHEC, SHPO, and FHWA on projects as needed. He supervised/managed environmental obligations, all subcontractors' activities, and installation of underground sanitary, watermain and storm in phases. AMES Construction Corporation, Inc., 2002–2005, Project Manager: Mr. Carter was responsible for development of CPM schedule (maintenance and updates), management of construction schedule and project buyout, contract change orders (estimate and negotiate); and managed all subcontractor activities. Martin K. Eby, 2002, Project Manager/Project Engineer: Mr. Carter was responsible for project engineering and planning for bridge construction, formwork design and coordination, developing construction schedule and project layout, and assisted the Project Superintendent with field leadership. He supervised/managed work crews and subcontractors on projects with interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Southern Illinois University at Edwardsville (SIUE), IL / B.S. / 1995 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2015/Professional Engineer/VA #0402055381; Professional Engineer/NC #032649	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
NCDOT, I-85 Widening, Cabarrus County, NC (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2012	End Date: 2014
Specific Responsibilities: As DBPM, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. He was 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. His responsibilities also encompassed all the required retaining and noise walls, storm drainage, foundations, embankments, slopes and temporary structures. Mr. Carter also coordinated public outreach and public meetings.

Project Relevance: This \$125M D-B project consisted of interstate widening approximately seven miles of I-85 from four to eight lanes and improvements to roads around the Bruton Smith Boulevard interchange. Like the proposed I-64 Segment III project, this section of roadway required widening in order to reduce traffic congestion and this segment of the roadway also encompassed two popular attraction destinations: Charlotte Motor Speedway and Concord Mills Mall, (North Carolina's No. 1 visitor attraction). For this project, LANE removed the deteriorated pavement of a four-lane divided highway and replaced and extended it with eight lanes of new concrete pavement. LANE designed and constructed an interchange and side road and service roads to improve access to I-85. Additional similarities to the I-64 Segment III project included: interstate rehabilitation; phased construction; total pavement replacement; median widening; 120,000 ADT; median access during construction; worked within the existing Interstate right of way; QA/QC; utility and other third-party coordination; public involvement; adjacent project coordination. The innovative MOT plan involved constructing a temporary two-span bridge over I-85 near the project's on-site pavement plant, with ramps down to the median, allowing access to the median construction zones of the project, and later access to the outside construction zones, unimpeded by existing traffic.



NCDOT, I-485/I-85 Interchange and Widening, Charlotte, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2013	End Date: 2014

Specific Responsibilities: As DBPM, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. Mr. Carter was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with the Owner and subcontractors and overseeing the overall safety and QC programs.

Project Relevance: This \$98.7M D-B project consisted of the design and construction of the widening of I-85 and the interchange of I-85 and I-485 (Charlotte Outer Eastern Loop). The existing I-85/I-485 Interchange was modified to a turbine interchange that utilizes smaller, single-span bridges, smaller columns and flatter roadway profiles. This innovative two-level turbine interchange allowed for a significant reduction of earthwork eliminating the need to haul material from off-site and drastically reducing costs by approximately \$40M. The reduction in hauling reduced wear on existing infrastructure and the project's impact on traffic congestion, improving safety for the traveling public. "Roads and Bridges" magazine named the I-85/I-485 turbine interchange the #1 road project in North America for 2012. Innovative design reduced environmental, ROW and utility impacts. Similarities to the I-64 Segment III project included: interstate rehabilitation; phased construction; pavement replacement; roadway widening; 120,000 ADT; QA/QC; working within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination.



NCDOT, I-95 at US-74 Maxton Bypass, Robeson County, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2005	End Date: 2009

Specific Responsibilities: As DBPM, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. Mr. Carter was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with the Owner and subcontractors and overseeing the overall safety and QC programs. Mr. Carter also developed and maintained NCDOT reclamation plans for borrow sources. He tracked job cost, negotiated with the Owner on all matters, supported GPS dozers and survey crews as needed, and coordinated and supported traffic control operations as needed.

Project Relevance: This \$108M D-B construction project consisted of 11 miles of new roadway, including 6 million CY of borrow, 500,000 TN of asphalt, construction of 7 bridges, and a major interchange with I-95 in Robeson County. The project required extensive MOT which included multiple phases of construction to accommodate new ramps, collector-distributor roadways, and multiple bridges in a physically constrained, high ADT environment.



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 (including part time assignments). N/A. Mr. Carter is not required on-site full-time.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: TROY CARTER, PE, SENIOR PROJECT MANAGER	
b. Project Assignment: RESPONSIBLE CHARGE ENGINEER	
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): THE LANE CONSTRUCTION CORPORATION (Full Time)	
d. Employment History: With this Firm 11 Years With Other Firms 10 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, 2013–Present, Senior Project Manager: Mr. Carter, a registered licensed PE in Virginia and North Carolina, serves as Senior Project Manager for LANE on large complex D-B projects in the Mid-Atlantic. He is responsible for overall management of the design, project development from beginning to end, construction, quality, safety, and contract administration on these projects. He provides strategic planning and execution for projects, provides leadership for 20 plus superintendents and engineers, and works with design and construction teams on innovative techniques and means and methods. He organizes and assigns equipment, personnel, and subcontractor resources to execute each project. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place. The Lane Construction Corporation, 2005–2012, Project Manager: As Project Manager, Mr. Carter was responsible for project management and development of CPM schedule, managing numerous projects throughout North and South Carolina and the construction schedule, project buyout, and construction of pre-stressed girders and steel beams. Negotiated with SCDOT, NCDOT and FHWA on all matters and additionally coordinated with City of Columbia, River Alliance, SCE&G, Inc. AT&T, US Army Corp of Engineers, DHEC, SHPO, and FHWA on projects as needed. He supervised/managed environmental obligations, all subcontractors' activities, and installation of underground sanitary, watermain and storm in phases. AMES Construction Corporation, Inc., 2002–2005, Project Manager: Mr. Carter was responsible for development of CPM schedule (maintenance and updates), management of construction schedule and project buyout, contract change orders (estimate and negotiate); and managed all subcontractor activities. Martin K. Eby, 2002, Project Manager/Project Engineer: Mr. Carter was responsible for project engineering and planning for bridge construction, formwork design and coordination, developing construction schedule and project layout, and assisted the Project Superintendent with field leadership. He supervised/managed work crews and subcontractors on projects with interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Southern Illinois University at Edwardsville (SIUE), IL / B.S. / 1995 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2015/Professional Engineer/VA #0402055381; Professional Engineer/NC #032649	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) <i>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</i>	
NCDOT, I-85 Widening, Cabarrus County, NC (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2012	End Date: 2014
Specific Responsibilities: Mr. Carter was responsible for the project design and construction. Mr. Carter was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Carter was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Carter communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (though not necessary on this project). Mr. Carter also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the North Carolina Board of Examiners for Engineers and Surveyors (NCBELS). Mr. Carter communicated frequently with the DM, CM and Quality persons.	

Project Relevance: This \$125M D-B project consisted of widening approximately seven miles of I-85 from four to eight lanes and improvements to roads around the Bruton Smith Boulevard interchange. Like the proposed I-64 Segment III project, this section of roadway required widening in order to reduce traffic congestion. This segment of roadway also encompassed two popular attraction destinations: Charlotte Motor Speedway and Concord Mills Mall, (North Carolina’s No. 1 visitor attraction). For this project, LANE removed the deteriorated pavement of a four-lane divided highway and replaced and extended it with eight lanes of new concrete pavement. LANE designed and constructed an interchange and side road- and service roads to improve access to I-85. Additional similarities to the I-64 Segment III project included: interstate rehabilitation; phased construction; pavement replacement; median widening; 120,000 ADT; median access during construction; worked within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination. The innovative MOT plan involved constructing a temporary two-span bridge over I-85 near the project’s on-site pavement plant, with ramps down to the median, allowing access to the median construction zones of the project, and later access to the outside construction zones, unimpeded by existing traffic.



NCDOT, I-485/I-85 Interchange and Widening, Charlotte, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2013	End Date: 2014

Specific Responsibilities: Mr. Carter was responsible for the project design and construction. Mr. Carter was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Carter was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Carter communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (though not necessary on this project). Mr. Carter also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the NCBELS. Mr. Carter communicated frequently with the DM, CM and Quality personnel.

Project Relevance: This \$98.7M D-B project consisted of the design and construction of the widening of I-85 and the interchange of I-85 and I-485 (Charlotte Outer Eastern Loop). The existing I-85/I-485 Interchange was modified to a turbine interchange that utilizes smaller, single-span bridges, smaller columns and flatter roadway profiles. This innovative two-level turbine interchange allowed for a significant reduction of earthwork eliminating the need to haul material from off-site and drastically reducing costs by approximately \$40M. The reduction in hauling reduced wear on existing infrastructure and the project’s impact on traffic congestion, improving safety for the traveling public. “Roads and Bridges” magazine named the I-85/I-485 turbine interchange the #1 road project in North America for 2012. Innovative design reduced environmental, ROW and utility impacts. Similarities to the I-64 Segment III project included: interstate rehabilitation; phased construction; pavement replacement; roadway widening; 120,000 ADT; working within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination.



NCDOT, I-95 at US-74 Maxton Bypass, Robeson County, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2005	End Date: 2009

Specific Responsibilities: Mr. Carter was responsible for the project design and construction. Mr. Carter was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Carter was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Carter communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (though not necessary on this project). Mr. Carter also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the NCBELS. Mr. Carter communicated frequently with the DM, CM and Quality personnel.

Project Relevance: This \$108M D-B construction project consisted of 11 miles of new roadway, including 6 million CY of borrow, 500,000 TN of asphalt, construction of 7 bridges, and a major interchange with I-95 in Robeson County. The project required extensive MOT which included multiple phases of construction to accommodate new ramps, collector-distributor roadways, and multiple bridges in a physically constrained, high ADT environment.



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 (including part time assignments). **N/A. Mr. Carter is not required on-site full-time**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **JULIE PERKOSKI, PE, REGIONAL DIRECTOR AND SENIOR PROJECT MANAGER**

b. Project Assignment: **QUALITY ASSURANCE MANAGER**

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): **CES CONSULTING, LLC (Full Time)**

d. Employment History: With this Firm <2 Years With Other Firms 32 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):
CES Consulting, Inc. 2015-Present, Regional Director and Senior Project Manager. Ms. Perkoski currently serves as Independent Assurance RCE for VDOT on the Segment II of the I-64 Widening. She also manages the inspectors/engineers in the Hampton Roads Area. This staff provides quality assurance services, VDOT independent assurance inspection and project controls services on various VDOT project. She is thoroughly familiar with VDOT's *Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects, January 2012*. She also is Regional Director for CES Consulting in the Hampton Roads area, responsible for marketing and business development. Ms. Perkoski also serves on the VTCA subcommittee formed to do an industry review of the proposed QAM Material Book.
Parsons Brinckerhoff, Inc. 2002-2015, Assistant Vice President and Project Manager. Ms. Perkoski served as Quality Assurance Manager (QAM), providing quality assurance services for various VDOT DB projects. She is thoroughly familiar with VDOT's *Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects, January 2012*. She also has experience as a Project Lead Construction Engineer, providing construction management and design services for numerous highway, airport, military, governmental, recreational, and residential facilities. She has extensive VDOT experience including the I-295 Widening/Interchange at Meadowville Road, I-66 Advanced Traffic Management System (ATMS), I-295/I-64 Interchange Construction Management, Virginia Capital Trail (Sherwood Phase), and the Pinner's Point Intelligent Transportation System (ITS). Managed the construction inspection staff of 10 inspectors in the Hampton Roads area, and performed company project management duties for project invoicing and cost control. Also, assisted in development of bridging documents, project controls (Constructability, Bid ability, Scheduling and Risk analysis).

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Pennsylvania State University, University Park, PA / Bachelor of Architectural Engineering / 1985

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1995 / Professional Engineer / VA #0402026174

g. Document the extent and depth of experience and qualifications relevant to the Project.
 1. *Note your specific responsibilities and authorities 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-64 Widening - Segment II, Hampton Roads, VA (DESIGN-BUILD)

Name of Firm: CES Consulting, Inc.	Project Role: Independent Assurance/Regional Director
Beginning Date: 05/2016	End Date: Present

Specific Responsibilities: Independent Assurance Responsible Charge Engineer for this Design-Build project. Ms. Perkoski's oversees the independent assurance team for VDOT and manages the CES staff on the project. Her responsibilities include reviewing the Design-Builder's project QA/QC plan, ensuring that the Design-Builder is conducting their QA and QC on the project in accordance with the contract, attending project meetings and preparatory meetings, reviewing work conducted by the IA team to ensure compliance with the requirements, ensuring the OIA and OVST testing and inspection is conducted in the frequencies required, and conducting reviews of the Design Builder's monthly report.

Project Relevance: This \$138.7M D-B project consists of widening approximately 7 miles of I-64 to three lanes. The proposed improvements include pavement reconstruction of existing lanes and additional 12-foot wide travel lanes and 12-foot wide shoulders,

and widening of nine existing bridges and six box culverts that lie inside the project limits. Widening of the existing roadway and bridges occur in the median of the existing interstate, avoiding impacts to existing interchanges. Similar to the I-64 Segment III project, this project includes QA/QC, structures and bridges, environmental, survey, TMP, ROW, MOT, public relations/involvement, geotechnical, construction engineering and inspection and overall project management.

VDOT I-66 Advanced Traffic Management Systems, Prince William & Fairfax Counties, VA (DESIGN-BUILD)

Name of Firm: Parsons Brinckerhoff	Project Role: Quality Assurance Manager
Beginning Date: 2013	End Date: 2015

Specific Responsibilities: As QAM, Ms. Perkoski was responsible for the overall quality assurance on this project. Her responsibilities included: managing daily quality assurance for concrete foundation, conduit installation and ITS operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, engineer, and VDOT to resolve construction issues that were impacting the cost and schedule of the project. She assisted VDOT in prioritizing the schedule for the portions of the I-66 corridor that needed the functioning of the ATM System the most. As QAM, Ms. Perkoski was also responsible for monitoring of the contractor's QC program.

Project Relevance: The I-66 ATMS project along I-66 in Fairfax and Prince William Counties, is one of the busiest thoroughfares in Virginia. This project has several similarities to the I-64 Capacity Improvements - Segment III project including: interstate shoulder widening, interstate MOT, utility relocations, day and night operations, coordination with Design-Build Project Manager and VDOT Project Manager, project documentation, and project material certifications.

VDOT Elizabeth River Tunnels Project, Portsmouth, VA (DESIGN-BUILD)

Name of Firm: Parsons Brinckerhoff	Project Role: Manager of Design Construction Services
Beginning Date: 2012	End Date: 2015

Specific Responsibilities: Ms. Perkoski's responsibilities included assisting in the Quality Assurance review of the design documents, designing the ITS layout for the project, managing the RFI and shop drawing reviews, and coordinating with the project design team and contractor to ensure the RFI and shop drawing reviews were correct and timely. Ms. Perkoski was responsible for the QA inspection and testing of all materials used and work performed on the project, which included monitoring of the contractor's QC program. She ensured that all work and materials, testing, and sampling were performed in conformance with the contract requirements, plans, and specifications.

Project Relevance: Ms. Perkoski served as manager of the design construction services for this \$2.1B D-B, P3 project. The project included the design and construction of a new Midtown Tunnel, rehabilitation of the existing Midtown and Downtown Tunnels and design and construction of the new MLK extension, which is an elevated roadway connection to I-264. The project scope included major road construction from Hampton Blvd. and Brambleton Blvd. to the Norfolk approach of the Midtown Tunnel, from existing MLK Expressway and Rt. 164 to the Portsmouth approach of the Midtown Tunnel, and major road and bridge construction of the new MLK Expressway extension.

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 (including part time assignments). **N/A. Ms. Perkoski is not required on-site full-time. Current assignment:** VDOT I-64 Segment II **Role:** Responsible Charge Engineer **Duration of assignment:** Present – 06/2019

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: RYAN M. MASTERS, PE, DBIA – MANAGER, TRANSPORTATION	
b. Project Assignment: DESIGN MANAGER	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : RK&K (Full Time)	
<p>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):</p> <p><u>Manager/ Project Manager, RK&K (2010-present):</u> Mr. Masters, a registered licensed PE in Virginia, has been the project manager and/or the lead project engineer on many transportation and civil engineering projects, including design build, for VDOT and local transportation agencies. His responsibilities include management of in-house engineering staff, client and owner/agency coordination, the direction of design by in-house staff and subconsultant personnel, public interaction including public hearings and workshops, and the management of budgets and schedules. Mr. Master’s specific experience includes the development of preliminary and final roadway designs for highway rehabilitation and widening projects. Management thereof includes highway design, maintenance of traffic (MOT)TMP, drainage design, hydrologic/hydraulic (H&H) analyses, stormwater management (SWM), erosion/sediment control (E&S), geotechnical, right of way, utility impact studies and design, striping, signing and structure plan coordination. He has an extensive working knowledge of VDOT’s policies and procedures, the VDOT Road & Bridge Standards and Work Area Protection Manual as well as FHWA and AASHTO design guidelines.</p> <p><u>Senior Project Engineer/Project Engineer/Engineer, RK&K (2002-2010):</u> In this role, Mr. Masters specialized in developing and preparing roadway design plans for state and municipal transportation projects. Projects included interstate, primary and secondary roadways, urban roadways, roundabouts, major intersection improvements, capacity improvement and widening projects. He directed the work of teams that included designers, technicians and other engineers, as well as coordinating with other disciplines and agencies. His successful management of multifaceted projects contributed to consistently meeting his clients’ needs and achieving or exceeding the project objectives. His specific experience included the development of horizontal and vertical alignments using MicroStation and Geopak.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic and State University, Blacksburg, VA / B.S. / 1998 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2003/Professional Engineer/VA (#0402038025)	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p>	
VDOT, I-64 Widening & Route 623 Interchange, Henrico and Goochland Counties, VA (DESIGN-BUILD)	
Name of Firm: RK&K	Project Role: Lead Roadway Engineer
Beginning Date: 10/2013	End Date: 11/2015
<p><i>Specific Responsibilities:</i> As Lead Roadway Engineer Mr. Masters was responsible for development of the roadway design and Transportation Management Plan (TMP) in accordance with the Contract Documents. In addition to managing the team that developed those elements he was responsible for coordinating with other design disciplines to maintain the submittal schedule and integrating their work into phased construction packages. He assisted in creating and administering the Design QA/QC plan and verified that each submittal was checked in accordance with the plan prior to submission. He used an environmental compliance matrix to track the status of each clearance to ensure it was incorporated in the final design and coordinated with the field staff throughout construction to quickly resolve questions that arose during construction.</p> <p><i>Project Relevance:</i> This \$33M design-build project consisted of the widening of Interstate 64 from a four-lane divided freeway, to a six-lane divided freeway and improvements to the I-64/Route 623 Interchange. The project extended from approximately 1 mile west of Route 623 to the I-64/I-295 Interchange, over 4.5 miles and impacting three interchanges. The additional through lanes were constructed to the inside (median widening) of I-64 in both directions and the outside</p>	

shoulders were reconstructed with a deeper pavement section. The widening also required replacing the existing bridges over Little Tuckahoe Creek with new 125' long bridges. The interchange improvements included upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left turn lane on Route 623 to I-64 eastbound, and widening the I-64 eastbound off ramp to Route 623 to provide an additional turn lane. This experience relates directly to the proposed improvements to I-64 Segment III.

VDOT, Route 29 Solutions, Albemarle County, VA (DESIGN-BUILD)

Name of Firm: RK&K	Project Role: Rio Road Design Manager
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Beginning Date: 1/2015	End Date: 10/2017
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Specific Responsibilities: As Rio Road Design Manager, Mr. Masters is responsible for overseeing the design of the Route 29 grade separated intersection at Rio Road, (one of three project elements of the Route 29 Solutions D-B project with LANE). He also designed the sequence of construction which allowed elements of the proposed walls and bridge to be built at night while maintaining all lanes of traffic during the day. Mr. Masters was responsible for coordinating the work of the individual design disciplines; as well as coordination with the DBPM, RCE and construction staff before and during construction. He helped create the Design Quality Plan, was responsible for overseeing its implementation on this project, and certifying that each submittal had been reviewed in accordance with the plan and met the Contract Requirements. He coordinated with the DBPM, RCE and VDOT to maintain a collaborative atmosphere, resolve comments quickly and maximize cost and schedule savings to help make the project successful.

Project Relevance: This D-B project constructed 1,400 feet of depressed roadway in the median of Route 29 and a 200-foot-wide bridge at the intersection to create a grade separated intersection in the center of an active intersection between an eight-lane divided roadway and a four-lane divided roadway. The sequence of construction and construction techniques were critical because all existing travel and turn lanes were required to be open throughout the day except during a 103-day period which allowed the left turning movements to be detoured. The 2014 ADT for Route 29 and Rio Road was 83,000. The improvements required relocating 1400 feet of 18 and 24-inch water line, 1600 feet of six-inch high pressure gas line, and 3,000 feet of duct bank to relocate private utilities. Innovative design and construction concepts, avoidance of the environmental resources, an aggressive schedule, colocation with the contractor, and VDOT cooperation allowed the intersection to be reopened 57 days into the 103-day period, earning a \$7.3 million early completion incentive. The total cost of the design-build project was \$116M. The experience gained on this fast paced, complex and high-profile project will be an asset to the LANE Team and VDOT on the I-64 Segment III Project.

VDOT, Route 250 Bypass Interchange at McIntire Road, City of Charlottesville, VA

Name of Firm: RK&K	Project Role: Lead Roadway Engineer
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Beginning Date: 09/2005	End Date: 07/2015
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Specific Responsibilities: Lead Roadway Engineer provided Engineering Services to the City of Charlottesville for this project which was part of VDOT's Urban Construction Initiative (First Cities) program. Mr. Masters was responsible for development of the roadway design and Transportation Management Plan (TMP), as well as leading the team of engineers and technicians under his direction. He coordinated with the other disciplines to ensure conflicts were identified and resolved and he assembled the plans, specifications and estimate for the project. He was responsible for ensuring that all work was reviewed in accordance with RK&K's QA/QC Plan and coordinated plan reviews with the City and VDOT. He supported development of the EIS and other permits, and ensured that the design complied with the conditions of the final permits. He was heavily involved in the public outreach which included coordination with City Staff, City Council, community meetings and Citizen Informational Meetings. He worked with the Construction Engineering Team to solve issues during construction and ensure the project was completed on time.

Project Relevance: RK&K provided complete engineering services for planning and design of this new \$30 million interchange on the Route 250 Bypass, a Limited Access Right-of-Way, at the intersection with McIntire Road. The context sensitive interchange minimized impacts to the adjacent park, historic properties, residential neighborhoods, a private school and regional rescue squad facility. Phase I included development of 14 interchange alternatives and preparing the NEPA and environmental documents (including noise analysis). Phase II (Final Design) included detailed design of the interchange and coordinating the design of the bridge, two box culverts, landscaping, and six traffic signals along with gas, power, sewer and water utility relocations. MOT was complicated by constructing the interchange on top of the existing intersection while relocating a gas regulator station, installing a 30" sanitary sewer 25 feet deep and maintaining the rescue squad's 24/7 access. Those relocations involved large diameter jack and bore and directional drilling operations under the Limited Access Right-of-Way and stream. The project had limited Right-of-Way and we found innovative ways to meet the SWM requirements and reduce the footprint, such as retrofitting older BMPs from an adjacent project. Our Team acquired the proposed Right-of-Way, all permits, lead public involvement during construction, and Construction Inspection. The Team also created a project website for use during design and construction, and kept the public informed of construction impacts and delays by using TV, radio, Facebook, Twitter and email. The knowledge and experience working on this complex project with countless stakeholders will be an asset to LANE Team and VDOT on the I-64 Segment III Project.

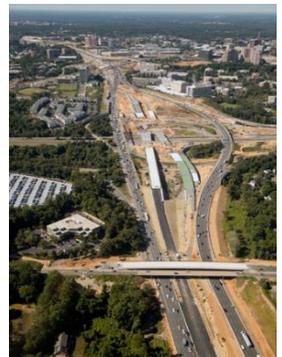
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: ERVIN BELCHER, SUPERINTENDENT	
b. Project Assignment: CONSTRUCTION MANAGER	
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): THE LANE CONSTRUCTION CORPORATION (Full Time)	
d. Employment History: With this Firm 37 Years With Other Firms 3 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Belcher is a seasoned construction veteran with nearly 40 years of experience in bridge, road widening, paving, and grading and project/subcontractor coordination. He has extensive field management experience and has led Quality Control efforts, safety meetings and toolbox talks. The Lane Construction Corporation, 2002-Present, Superintendent: Mr. Belcher serves as Project Superintendent for LANE for various D-B projects in the Mid-Atlantic ranging from \$10M to \$1.5B. He is responsible for the planning and supervision of work crews in the construction of bridges and ramps. His experience includes: Managing the D-B construction process; cost control tracking; field layouts; survey; form and false-work design; method analysis studies; and safety implementation for bridges. He is accountable for all project QC activities, CPM scheduling, submittals, RFIs; progress reports, and subcontractor coordination. He has control over constructability reviews with the designer and VDOT to ensure all work meets approved construction plans and specs. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, monitors budgets, and assures that a quality management system is in place.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Mansfield High School / Mansfield, PA / 1978	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
VDOT, 495 Express Lanes, Fairfax County, VA (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Superintendent
Beginning Date: 2010	End Date: 2014
Specific Responsibilities: Mr. Belcher oversaw all entire field operations including GPS grading, traffic control, under drains and culvert installation, demolitions, and existing pavement removal. He coordinated subcontractors' schedules, created a progress schedule to maintain cost-effectiveness, earmarked safety issues and discussed with crews, calculated erosion control maintenance, and communicated effectively with quality control for inspections and daily routines. He was responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He coordinated with and monitored contract progress with VDOT and subcontractors (including adherence to contractual requirements and specifications), and oversaw the overall safety and quality control programs.	
Project Relevance: Like the I-64 Segment III project, the 495 Express Lanes the project consisted of extensive median interstate widening, shoulder reconstruction, ROW, geotechnical explorations, survey, hydraulics, QA/QC, structural bridge work, extensive MOT plans, utility relocation efforts and coordination with utility companies. Construction of four new Express 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, bridge over and underpasses and bridge widening's, and pedestrian crossings. 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. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public.

FDOT District 5, I-95 from SR-406 to North of SR-44, Brevard & Volusia, FL (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Superintendent
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Beginning Date: 2014	End Date: 2015
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Specific Responsibilities: Mr. Belcher managed the day-to-day operations between excavation and embankment crews, paving and milling crews, bridge crews, pipe crews, and subcontractors. He was responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He devised and implemented hazard analysis and safety procedures for crews and equipment, and worked with the designer and owner to ensure materials used and work performed met contract requirements, design plans, and specifications.

Project Relevance: This \$118M D-B project involved the widening of the existing I-95 interstate highway from four lanes to six from south of SR 406 (Garden Street) to a half mile north of SR 44. Similar to I-64 Segment III, this project included new pavement, drainage system improvements, bridge widening and replacement, survey, QA/QC, hydraulics, public involvement/relations, soundwall, median barriers, signing and pavement markings, signalization, stormwater, and milling and resurfacing.



NCDOT, I-540 Extension, Wake County, NC

Name of Firm: The Lane Construction Corporation	Project Role: Superintendent
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Beginning Date: 2004	End Date: 2007
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Specific Responsibilities: Mr. Belcher supervised and coordinated all field activities on the project. He monitored area utility work and marked existing lines. In addition, he determined daily, weekly, and monthly work progress needed to maintain on-time schedule. He was also responsible for and accountable for schedule, cost, contract conformance, quality of structures being built, QC program, safety of crew and overseeing subcontractors' work.

Project Relevance: This \$109M project consisted of two new consecutive sections of I-540 between US 55 and I-40. LANE cleared in excess of 200 acres, moved more than 1.9 million yards of excavation materials and 3.5 million metric tons of borrow and placed 110,000 tons of base course, 197,000 metric tons of asphalt and 115,000 cubic yards of concrete pavement. LANE also built 21 bridge structures, including box culverts and three stream realignments. Quantities included 110,332 yds of concrete paving.



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 (including part time assignments).

Current Assignment: Oceana Runway & Lighting Repairs Project **Role:** Superintendent **Duration of Assignment:** Mr. Belcher will be available on-site full-time at the start of construction for the I-64 Capacity Improvements – Segment III project. Mr. Belcher 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: DAVE PLUM, PE – SENIOR MANAGER, MUNICIPAL ENGINEERING	
b. Project Assignment: LEAD UTILITY COORDINATION MANAGER	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : RK&K (Full Time)	
<p>d. Employment History: With this Firm 17 Years With Other Firms 10 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Senior Manager, RK&K (2010-present): Mr. Plum is a Senior Manager responsible for the complete utility coordination process for the design and relocation of water and sewer projects. He was previously employed for 10 years at RK&K from 1989 thru 1999 as a Projector Manager and Associate performing utility relocation design for VDOT. Mr. Plum has served as the lead utility coordinator on numerous roadway projects directly for VDOT and many local government agencies implementing utility relocations in accordance with the VDOT Utility Manual of Instructions. He has been actively involved in the planning, design, and construction of Virginia’s infrastructure projects for more than 37 years, providing industry leadership through addressing the region's infrastructure needs. That experience has allowed him to develop relationships with the utility owners in the I-64 corridor. He has an in depth understanding of construction methods, standards, scheduling, permits, and VDOT procedures for utility relocations, right-of-way impacts, private developments, and road improvements, widening and interchange projects. His experience affords him the ability to identify conflicts and construction problems early where he then recommends design options for mitigation and avoidance of possible problems.</p> <p>Vice President-Office Manager, URS (2002 -2010): Mr. Plum was responsible for managing five branch offices in two states. His work included oversight of highway, water, sewer, drainage, structural and environmental engineering design projects.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Old Dominion University, Norfolk, VA / B.S.C.E / 1979 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1986/Professional Engineer/VA (#0402016205); Also registered in MD and NC.	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p>	
Route 250 Bypass Interchange at McIntire Road, City of Charlottesville, VA	
Name of Firm: RK&K	Project Role: Utility Coordination and Relocation Project Manager
Beginning Date: 01/2006	End Date: 06/2015
<p>Specific Responsibilities: Utility Coordination and Relocation Project Manager for the design of all water and sewer relocations associated with a new interchange within a Limited Access Right-of-Way. Coordinated the relocation of Dominion Power, Comcast, Century Link, Windstream and Verizon franchise utilities and incorporated them into the construction contract. Determined prior rights and compensable rights and calculated all pro-rates for the entire project. Relocated water distribution and transmission mains included 400 LF of 6-inch, 1,260 LF of 8-inch, 1,820 LF of 18-inch. Included in the design were 195 LF of 24-inch bore and jack casing pipe for the 18-inch water distribution main and 400 LF of 48-inch casing pipe for a replacement 30-inch gravity interceptor sewer. Both casing pipes crossed below US250, a Limited Access Right-of-Way.</p> <p>Project Relevance: This \$30M project was one of the largest in VA under VDOT’s First Cities (LAP) Initiative with VDOT and FHWA oversight. Work included roadway design; interchange layout and design; bridge design; environmental studies; traffic data collection and analysis; drainage design, stormwater management and hydraulics, and landscape and hardscape design. The initial phase of the project was the preparation of NEPA documentation to secure the appropriate level of environmental documentation for the proposed improvements. This included performing extensive interchange alternatives analysis to avoid and minimize impacts to 4(f) and Section 106 properties. RK&K, in</p>	

conjunction with the City's project manager, led a City Council-selected Steering Committee through this process which included the analysis of 14 interchange alternatives, including roundabout alternatives.

VDOT, Downtown Tunnel/Midtown Tunnel/Martin Luther King Freeway Extension Design Build, Cities of Norfolk and Portsmouth, VA (DESIGN-BUILD)

Name of Firm: RK&K	Project Role: Utility Relocation Project Manger
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Beginning Date: 01/2011	End Date: 01/2017
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Specific Responsibilities: Utility Relocation Manager provided staff augmentation for VDOT to review all public utility relocations and franchise utility relocations. Worked with the construction contractor's design team to prepare two party agreements with franchise "dry" utility owners and ensure the documents were correctly prepared for the multiple phases of construction. Earlier work on this contract included reviewing and justifying all utility conflicts identified at the 30-percent design stage, preparation of preliminary quantity estimates and working with the contractor to develop their final cost estimate prior to financial close.

Project Relevance: This D-B project constructed a new two-lane tunnel under the Elizabeth River adjacent to the existing Midtown Tunnel; maintenance and safety improvements of the existing Midtown Tunnel; minor modifications to the interchange at Brambleton/Hampton Boulevard in Norfolk; maintenance and safety improvements to the existing Downtown Tunnel; and extending the Martin Luther King Freeway from London Boulevard to Interstate 264 (I-264), with an interchange at High Street in Portsmouth. Major utility improvements involved relocating a 36" water main under the Elizabeth River utilizing Horizontal Directional Drilling (HDD) and designing a new 16" water main to provide fire protection to the new and existing Midtown tunnels. Detailed phasing plans were developed with Dominion Power, Verizon and Cox Communications to maintain service while relocating their facilities to coordinate with roadway construction. The total cost of the design-build project was \$2.1B.

Hampton Roads Transit (HRT) Virginia Beach Transit Extension, Virginia Beach, VA

Name of Firm: RK&K	Project Role: Deputy Project Manager/Utility Design Coordinator/Utility Design Manager
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Beginning Date: 07/2015	End Date: 12/2016
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Specific Responsibilities: Deputy Project Manager responsible for development of 30% design documents to extend Light Rail from the Norfolk-Virginia Beach City Limits to Virginia Beach Town Center. In addition to managing the development of the 30% design documents, specific responsibilities included coordination and relocation design for all public utilities and coordination of the relocation of Dominion Transmission and Distribution systems, Virginia Natural Gas, Cox Communications, Verizon, and Windstream within the 3.5 mile corridor. All franchise utilities were designed to be relocated underground in a new duct bank. DVP Transmission required relocation of transmission towers from Greenwich Road to Town Center. Cost sharing was negotiated with VDOT, Dominion Power, the City and HRT. Project was completed on schedule and below budget. The City of Virginia Beach then decided on not advancing the project due to the resident's opposition. All utility relocation and design was performed in accordance with the VDOT Utility Manual of Instructions.

Project Relevance: The project scope included a 3.5-extension that is bound within a 66-foot corridor and spans three watersheds within the City from the Tide Light Rail in Norfolk to the Town Center in Virginia Beach. RK&K's services on this 3.5-mile extension included environmental documentation, wetland delineations, coordination with the USACE, utility relocation coordination, bridge design, roadway improvements, drainage, stormwater management, quantity take-off and detailed cost estimating. Major utility relocations included abandoning an approximately 8,700 LF of 24" sanitary force main, relocating a 48" water transmission main and relocating a 42" water transmission main to avoid conflicts with the light rail tracks and system components. RK&K's quality driven approach featured internal and external quality control processes. The HRT project director issued a letter of appreciation validating the effectiveness of RK&K's efforts and our ability to work with the client's staff as a cohesive team.

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

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

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR WORK HISTORY FORMS

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: 495 EXPRESS LANES Location: Fairfax County, VA DESIGN-BUILD	Name: 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

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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> Design-Build Roadways Survey Structures and Bridges Environmental Geotechnical Hydraulics Traffic Control Devices Transportation Management Plan Maintenance of Traffic QA/QC Noise Walls Right-of-Way Utilities Landscaping Guardrail Public Involvement/Relations Construction Engineering and Inspection ITS Overall Project Management 	<p align="center">PROJECT SCOPE</p> <p>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, bridge over and underpasses and bridge widening's, and pedestrian crossings. The Project encompassed the replacement of more than \$260M of aging infrastructure, including 12 interchanges and 58 bridges. Construction of the project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. As a 35% member of the Fluor-Lane LLC CJV, LANE provided nearly all of the project supervision and workforce, plus all asphalt paving as a subcontractor to the CJV. <i>Only LANE of Fluor-Lane LLC will be a team member on the I-64 Widening Segment III project.</i></p>	
<p align="center">Proposed Personnel on Project:</p> <p>Ervin Belcher (LANE) Dennis Rodkey (LANE) Chris Monahan (LANE) Mike Leitch (LANE) Wayne Lindsey (LANE) Ben McKenna(LANE) Charles Tamayo (LANE) Mike Hogan (RK&K) Owen Peery (RK&K) Ryan Masters (RK&K) Randy Wirt (ECS)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Innovative Design/Solution/Construction Techniques: Numerous ATCs, combined with reduction in the originally approved Record of Decision regarding ROW and length of the project, <i>saved VDOT over \$500 million in overall project cost.</i> The challenge from the start was to complete the project in five construction seasons. Our team tightly controlled schedules and improved the sequence of construction where possible. For example, the original concept called for three-stage replacement of bridges over the Beltway, but we were able to plan and execute several bridge replacements in two stages. Only the Route 7 bridge was constructed in three phases.</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities: Similar to the I-64 Segment III project, a key challenge on the 495 Express Lanes project was accommodating extreme volumes of commuter, residential and commercial vehicular traffic. Numerous shopping malls, community colleges, sports and concert stadiums, and corporate employment centers adjacent to the Beltway added greatly to the traffic, as had the passenger growth of regional airports accessed by the I-495. The 495 Express Lanes crosses several streets and busy state routes, and included interchange reconstruction on the nation's 4th ranked busiest highway, requiring intensive MOT planning and coordination to keep the congested traffic moving throughout construction. The contract required the project to maintain the existing traffic and pedestrian access during construction; affecting every phase of the planning, design and construction of the Express lanes, feeder roads and shared use paths. By conducting extensive traffic studies and through close coordination with VDOT and the local jurisdictions, our team produced a number of innovative designs, carefully planned lane shifts, and construction phasing sequences that helped to minimize disruption during construction.</p> <p>Public Outreach/Involvement: More than 2,000 public outreach meetings were conducted and, in coordination with VDOT, the team kept the public involved through various media methods: project website, routine newsletters, and brochure mailings to residents and business.</p> <p>Implementing/Maintaining QA/QC Plan: The team developed and implemented a 'just-in-time' inspection protocol such that inspections were planned over the last 18 months of the project instead of the last month. This helped the team achieve substantial completion ahead of schedule, with confidence the work had been properly inspected by the contractor's quality control as well as VDOT. VDOT was updated each week with the quantities placed and the tests required and performed. Our through inspections uncovered several conflicts in the original plans, which were clarified for all future work.</p> <p>Roadway: The 495 Express Lanes project is one of the largest roadway projects constructed in the Commonwealth. Similar to the I-64 Segment III project, the 495 Express Lanes project widened the existing interstate roadway and improved numerous interchanges. The Express Lanes project has similar scope elements including: roadway widening, box culvert extensions, ITS, QA/QC, ramp extensions, shoulder strengthening, work in high volume ADT's, sound barriers, complex MOT schemes and bridge widenings. The team constructed three new access points and upgraded 12 key interchanges that increased capacity and mobility, improved driver safety and removed operational deficiencies, with minimal impact to the traveling public, residences, and businesses.</p> <p>Bridges/Structures: Our team widened and/or replaced 58 bridges on this project adjacent to high ADT count/live traffic. LANE devised an innovative phasing and design for the widening/replacement of the Rt. 7 Bridge over 495; the original plan consisted of building a temporary bridge to maintain traffic, however, our Team decided that phased construction of the permanent bridge improved MOT and was more cost-effective.</p> <p>Safety: The 495 Express Lanes project has been the recipient of numerous awards including a safety award for more than 5,000,000 manhours without a lost time incident in September 2012. Despite working alongside traffic in a limited area, with many key activities like bridge demolition and steel erection occurring at night, the construction team achieved a Total Recordable Incident Rate (TRIR) of 0.69, which ranks the project among the best heavy civil projects in the nation.</p> <p>Complex Utility Relocation: There was a significant utility coordination effort, both in relocation of existing utilities and the installation of new services for lighting and toll facilities. 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 transmission line had to be raised by installing an insert in one supporting tower. More than 102,000 linear feet of utilities, owned by 15 utility owners were relocated including water, sanitary sewer, electric, and telecommunications. In total, over 175 utility conflicts were identified and resolved.</p> <p>Environmental: The project alignment traversed multiple wetlands, wooded areas, and state and county park lands, which required identification and protection of specimen trees on the project perimeter as well as wetland delineation, protection and conversion.</p> <p>*There were no construction cost overruns attributable to the JV. The only difference in original cost and final cost is entirely the result of increases in scope, the largest of which was improvements for MWAA in the Dulles Toll Road/Access Road interchange with I-495.</p>	
<p align="center">EVIDENCE OF PERFORMANCE</p> <p>"A solid experienced company that has built to standard and worked well under difficult traffic and space constraints to minimize impact on travel." - <i>Garrett Moore, P.E., VDOT Chief Engineer</i></p> <p>"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, making it among the safest heavy civil projects ever built in the U.S." - <i>Public Works Financing Newsletter, 12/2012</i></p> <p>"As the primary self-perform entity in the Flour-Lane Joint Venture, Lane has demonstrated outstanding ability to complete construction on time under these heavy traffic conditions," wrote Tim Steinhilber (General Manager, Capital Beltway Express, LLC)</p>		

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: 95 EXPRESS LANES Location: Fairfax, Prince William, Stafford Counties, VA DESIGN-BUILD	Name: HDR/HNTB	Name of Client./ Owner: VDOT Phone: 571.483.2651 Project Manager: Charlie Warraich, PE Phone: 571.273.8229 Email: H.S.Warraich@VDOT.Virginia.gov	12/30/2014	12/14/2014	\$691,147	\$726,194*	\$326,850

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.

Similar Scope of Work: <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Traffic Control Devices • Transportation Management Plan • Maintenance of Traffic • QA/QC • Noise Walls • Right-of-Way • Utilities • Landscaping • Guardrail • Public Involvement/Relations • Construction Engineering and Inspection • ITS • Overall Project Management 	<p>PROJECT SCOPE</p> <p>LANE, as a Construction Joint Venture (CJV) member, shared responsibility for the design and construction of the \$726M 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 in the median 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 (29 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, plus, all of the asphalt paving, soundwall construction and some roadway signage. <i>Only LANE of Fluor-Lane LLC will be a team member on the I-64 Widening Segment III project.</i></p> <p>RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Innovative Design Solutions/Construction Techniques: The team established an electronic survey control network that was utilized to provide high quality corrections for Robotic Controlled Paving. This process utilizes 3D models installed in a computer module that is installed on the asphalt paving machine. Several Trimble robotic total stations are set up on control stations at approximate 500' intervals along the paving sections. Throughout the paving process the total stations continuously locate a prism target that is mounted on the screed of the paving machine. The horizontal and vertical locations were also continuously sent back to the computer module on the paving machine via a radio connection. The computer module then processes this data and makes adjustments to the paving machine screed based on these locations. This process has allowed for a high quality (+/-0.25") and consistent final paving product while assuring quantity yields are very close to design volumes. A similar process was utilized in some areas for subgrade preparation, using a fine grade control system that was set up for wireless Robotic controlled grading.</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities: 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 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. Unimpeded access to the existing median was necessary to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, and accelerate the project schedule.</p> <p>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.</p> <p>Implementing/Maintaining QA/QC Plan: The team utilized a 'just-in-time' inspection protocol (which was developed on the 495 Express Lanes) such that inspections were planned over the last 18 months of the project instead of the last month. This helped the team achieve substantial completion ahead of schedule, with confidence the work had been properly inspected by the contractor's quality control as well as VDOT. VDOT was updated each week with the quantities placed and the tests required and performed.</p> <p>Roadway: Similar to the I-64 Segment III project, LANE performed pavement widenings as well as new pavement in the median of an existing high ADT count interstate. Additionally, LANE performed shoulder strengthening operations on existing shoulders adjacent to this traffic. Extensive asphalt mill and overlays were also executed. As lane closures were needed for various reasons including overhead steel erection, LANE devised many innovative ways to keep traffic flowing on existing roadways as well as temporary pavements, some of which were on poor soils that required amendments. This new construction in the median of the roadway provides 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.</p> <p>Structures/Bridges: Nine (9) new bridges were constructed along the project corridor. The new bridges included: two curved steel girders, two double span flyovers, three single span bridges with steel girders, one two-span concrete girder bridge and a two-span steel girder bridge. LANE also widened and/or rehabilitated 29 bridges. All of these involved keeping existing traffic moving while performing the work.</p> <p>Safety: The project recorded nearly 4,000,000 man hours worked with 0 Lost Time Accidents. The project OSHA Recordable Incident Rate was 0.44, well below the industry average of 3.6.</p> <p>Expedited Project Delivery: The Team had 1,009 days to design and construct this fast track D-B project. 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 complete the project early... 29 miles in 29 months!</p> <p>Environmental: Beginning in January 2013, the D-B team led the efforts to restore Swan's Creek—a tributary to the Potomac River and Chesapeake Bay which had been severely eroded and degraded—by installing erosion and sediment controls, placing stone along the creek bed, and micro-grading to allow for habitats and improvements to the overall water quality. With the completed restoration, the stream now feeds higher quality water into the region's waterways. In addition, nearly 7,500 new trees and shrubs were planted as part of the restoration effort.</p> <p><i>*There were no construction cost overruns attributable to the JV. The only difference in original cost and final cost is entirely the result of increases in scope.</i></p>	
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EVIDENCE OF PERFORMANCE

"The progress 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. Connaughton, [former] Virginia Secretary of Transportation.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-85 WIDENING Location: Cabarrus County, NC DESIGN-BUILD	Name: HDR	Name of Client./ Owner: NCDOT Phone: 704.983.4171 Project Manager: Davis Diggs, PE Phone: 704.983.4171 Email: DDiggs@ncdot.gov	10/2014	10/2014	\$125,000	\$145,000*	\$145,000

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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Traffic Control Devices • Transportation Management Plan • Maintenance of Traffic • QA/QC • Right-of-Way • Utilities • Landscaping • Guardrail • Public Involvement/Relations • Construction Engineering and Inspection • ITS • Overall Project Management 	<p align="center">PROJECT SCOPE</p> <p>The widening of the heavily traveled Interstate 85 (I-85) was needed to accommodate additional traffic and reduce congestion. This \$145 million DB project included the widening of approximately seven miles of I-85 from four to eight lanes starting south of Bruton Smith Boulevard/Concord Mills Boulevard to north of NC 73. LANE (as Lead Contractor) removed the existing deteriorated pavement and replaced it with eight lanes of new concrete pavement. Improvements to area roads and interchanges were also performed, including two diverging diamond intersections and a super street. Similar to the I-64 Segment III project, this I-85 project included many tourist attractions including the popular Charlotte Motor Speedway and Concord Mills Mall (North Carolina's No. 1 visitor attraction) which are both accessed by this route Specific project related elements included; major interstate corridor widening in the median, shoulder strengthening, work in high ADT counts, structures, MOT, ITS, drainage/hydraulics/SWM, geotechnical (poor soils mitigations), earthwork, permitting, demolition, noise walls and pavement markings/signage.</p>	
<p align="center">Proposed Personnel on Project:</p> <p>Troy Carter (LANE)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Innovative MOT Design/Construction Techniques: Our Team's ability to collaborate and devise innovations was exemplified on this project in a major way. The majority of the new roadway capacity was constructed in the existing 70-foot median, which had the potential to create difficult access for construction equipment and personnel. The need for an innovative work zone traffic control and access plan was particularly critical due to the severe state of deterioration of existing facilities and a high Average Daily Traffic count of 118,000 vehicles. Unimpeded access to the existing median was critical to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, accelerate the project schedule, and save costs. LANE staff determined that the construction of a temporary bridge with direct median access would solve their needs for unimpeded access. This concept was developed by LANE on previous D-B projects utilizing an existing bridge and a temporary access ramp – LANE used a temporary ramp off an existing bridge for direct median access on the I-95 Widening at Dumfries, VA for VDOT that greatly increased safety, schedule and other impacts. LANE was able to accelerate the schedule during the proposal phase by 11 months ahead of the owner's schedule. The I-85 temporary bridge was the first time a dedicated temporary bridge was constructed along with temporary access ramps. The safety improvements resulting from this concept were significant. The need to haul 40,000 loads of material across interstate traffic into the median was completely eliminated. Thousands of trips by construction and NCDOT inspection staff were also made safely and without entering traffic. The project won several major awards including the 2012 TransOvation Award from the American Road & Transportation Builders Association (ARTBA) and the 2012 Asphalt Operations Safety Innovation Award from the National Asphalt Paving Association (NAPA).</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities/Safety: The safety improvements resulting from this concept are significant. The need to haul 40,000 loads of material across interstate traffic into the median has been completely eliminated and, while hauling is critical, thousands of trips by construction and NCDOT inspection staff have also been made safely and without entering traffic.</p> <p>Public Outreach/Involvement: LANE coordinated with several stakeholders including two (2) municipalities, over 60 business owners, six (6) utility owners, and multiple local residential communities.</p> <p>Implementing/Maintaining QA/QC Plan: The use of the temporary median access bridge and ramps provided a significant quality improvement for not only the temporary traffic control measures, but also for the new concrete pavement. This concept allowed the concrete pavement to be placed continuously, without the need for "breaks" in the paving, because there was no need for multiple traditional median ingress/egress points. The result was superior concrete pavement quality and exceptional ride smoothness.</p>	

Interstate Roadway Widening: The project included the widening of approximately seven miles of I-85 in the median from four to eight lanes.

Bridge and Structures: Six existing bridges were replaced with new structures, two major interchanges were replaced with DDIs, and another major interchange was improved. The project also included the improvement of several miles of crossing streets with a superstreet arrangement.

Median Construction: A temporary access bridge with an access ramp was constructed, construction vehicles can access the median areas by traversing this ramp, eliminating any conflict with the normal flow of traffic on these heavily traveled interstate highways. Upon completion of the work, the ramps are removed and existing facilities restored to their original condition or better. The LANE team owns all necessary structural components to build this bridge. The project won multiple awards for this innovative access concept.

Schedule: By leveraging the efficiency afforded by the access bridge and ramp system, LANE provided the NCDOT and FHWA with a very aggressive schedule and highly competitive cost proposal. Utilizing this concept, LANE was able to submit a project completion date 11 months earlier than the required final completion and a bid price \$8.5 million below the engineers' estimate at bid time. To our knowledge, this was only the fourth time a temporary median access ramp has been implemented in the US, *all implemented by LANE.*

Utility Coordination: The LANE Team's responsibilities included coordinating the relocation of multiple major utilities. These included power distribution (two separate owners), natural gas transmission and distribution, water, sanitary sewer, and extensive communication utilities. To successfully resolve the utility conflicts, LANE utilized a utility coordination subconsultant and also assigned a LANE engineer to that task exclusively throughout design and construction.

Right of Way: The D-B team was responsible for acquiring the right of way necessary to construct the project and relocate utilities. Both scopes were very extensive, requiring 96 acquisitions.

Environmental: This project involved 2,000 feet of street and wetland impacts. The permit modification application was completed ahead of schedule and subsequently approved by the USACE.

**The project contract value increased as a result of owner-initiated changes including the introduction of DDI concepts at two interchanges, the addition of a roundabout intersection, and the implementation of a Superstreet concept on a major crossing road.*

EVIDENCE OF PERFORMANCE

"The I-85 Widening project is a success story that is a result of LANE's people, effective project management, and proactive change management. LANE is committed to the delivery of a quality project that will meet the needs of the community. The project would not have been successful without LANE's willingness to partner with NCDOT and work together towards a common goal." -Davis Diggs, PE, District Engineer, NCDOT Division 10

ATTACHMENT 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-64 Widening and Route 623 Interchange Improvements (Short Pump) Location: Goochland and Henrico Counties, VA DESIGN-BUILD	Name: Corman Construction	Name of Client./ Owner: VDOT Phone: 804.524.6433 Project Manager: Shane Mann Phone: 804.524.6433 Email: shane.mann@vdot.virginia.gov	10/2013	11/2015	\$33,238	\$34,862*	\$2,500

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. 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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Traffic Control Devices • Transportation Management Plan • Maintenance of Traffic • QA/QC/QA/QC • Public Involvement/Relations 	<p align="center">PROJECT SCOPE</p> <p>RK&K's Richmond office served as the Lead Designer for this D-B project involving the inside widening of 4.5 miles of I-64 from a four-lane divided freeway to a six-lane divided freeway. The project began west of the interchange with Route 623 and extended to Route 295 (Pouncy Tract Road), and included two replacement bridges and improvements to the I-64/Route 623 interchange. The I-64 interchange with Route 288 is also located within the project limits. This project is an excellent match to the I-64 Capacity Improvements – Segment II project in both scope and complexity. This segment of I-64 provides a critical link between downtown Richmond and the Richmond's "West End," with traffic volumes in this area at nearly 50,000 vehicles per day. I-64 also serves as the primary connection between the cities of Richmond and Charlottesville.</p>	
<p align="center">Proposed Personnel on Project:</p> <p>Owen Peery (RK&K) Randy Wirt (ECS) Ryan Masters (RK&K) Stuart Samberg (RK&K) Michael Hogan (RK&K) Richard Woody (RK&K) Jeff Kapinos (RK&K) James Durbin (RK&K)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Interstate Widening: Design and construction of this freeway, with a 75-mph design speed, included the following roadway improvements: widening of the existing I-64 to provide one 12-foot wide lane in each direction of I-64 median; addition of a 12-foot-wide paved shoulder in each direction; median guardrail installation; and outside shoulder guardrail replacement. Upgrades to the existing outside shoulder included full depth reconstruction for a portion of the project length, as well as 2" mill and overlay of the existing travel lanes and remaining shoulder. Improvements to the I-64/Route 623 interchange included widening both off ramps from I-64 to Route 623 to provide additional turn lanes, the addition of a left turn lane on Route 623 to access I-64 eastbound, and upgrading the existing traffic signal.</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities/Safety: RK&K developed a comprehensive Transportation Management Plan (TMP) and Maintenance of Traffic (MOT) plan to manage traffic during construction, which included a traffic operations plan, temporary traffic control plan and public communications plan. Access to entrance and exit ramps at all three interchanges were maintained while completing the improvements. Other innovations, including the use of MSE walls in lieu of culvert extensions resulted in reduced construction durations, limiting impacts to the traveling public.</p> <p>Innovative Design/Construction Techniques: The bridges over Little Tuckahoe Creek utilized an innovative abutment design of rock-socketed steel H-piles with MSE-type straps carrying a portion of the lateral loads, reducing the number of augured piles required for lateral stability of the abutments. Another innovative design and construction technique was the use of five MSE retaining walls at existing culvert locations which reduced the cost of the project, review times, and construction durations.</p> <p>Implementing/Maintaining QA/QC Plan: Our design quality management plan, developed specifically for this project, resulted in quality design submittals that were easily reviewed by VDOT. Efficient reviews allowed the design and construction to proceed on schedule. Because of our ability to maintain an effective Quality Assurance and Quality Control Plan, this project earned the second highest CQIP score for a design-build project.</p> <p>Structures and Bridges: Structures design included 130' simple span prestressed concrete girder bridges for I-64 over Little Tuckahoe Creek to replace the existing three-span steel girder bridges. Design included foundations, substructure, and superstructure. Special considerations included significant skew, extreme scour conditions, and staged construction to support maintenance of traffic during bridge replacement. The two replacement bridges provided VDOT with new structures with a longer life and fewer maintenance issues than rehabilitating and maintaining the existing bridges, at a lower cost than repair and rehabilitation. Structural design tasks on this project also included design of foundations for signal and sign structures, upgrades to pier protection barriers to meet current standards at existing overpasses.</p> <p>MOT/TMP: The sequence of construction was designed so that construction could be accomplished in two phases, with two lanes of traffic in each direction maintained throughout construction. Access to entrance and exit ramps at all three interchanges were maintained while completing the improvements. The TMP was designed in accordance with the allowable work hours and holiday and weekend restrictions implemented by VDOT for this project. The WZTIA was used to evaluate traffic impacts associated with construction activities and refine the MOT to minimize congestion during construction.</p> <p>Environmental: RK&K provided full service environmental design and permitting for this project, including: wetland delineations and stream assessments; determination of wetlands/stream mitigation requirements; securing rare, threatened and endangered species clearances; securing cultural resource clearances from the Virginia Department of Historic Resources; acquiring water quality permit authorizations/ modifications; securing Clean Water Act Individual Permit, State Programmatic General Permit, Water Protection General Permit, and Virginia Stormwater Management Permit from the VDEQ; and compliance with environmental commitments contained in the NEPA document.</p> <p>Geotechnical: As part of the team, ECS provided full geotechnical services including subsurface explorations; laboratory testing & soil classification, strength, and consolidation parameters; pavement design; assessment and mitigation for unsuitable soils; foundation design for overhead sign/signal structures; and analysis of MSE retaining walls at culvert locations. ECS also provided foundation design for the replacement bridges and associated wingwalls.</p> <p>Hydraulics/Drainage: RK&K performed a full Hydrologic and Hydraulic Analysis (H&HA) for the bridge crossings over Little Tuckahoe Creek, including HEC-RAS modeling and scour analysis. RK&K determined that a replacement bridge with a smaller hydraulic opening than the original bridge was feasible, resulting in significant cost savings related to the bridges. Drainage design included design of stormwater management facilities, erosion and sediment control measures, bridge deck drainage, adequate outfall analysis, underdrains, storm sewer systems, and design of temporary drainage needs for MOT sequencing.</p>	

* The project contract value increased as a result of owner initiated changes to the project scope.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-4711: I40 Widening Location: Wake County, NC DESIGN-BUILD	Name: S.T. Wooten	Name of Client: North Carolina DOT Phone: 917.707.2900 Project Manager: Roger Rochelle, PE Phone: 919.707.2900 Email: rdrochelle@ncdot.gov	6/2009	6/2011	\$49,000	\$49,000	\$3,900

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects 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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<p align="center">Proposed Personnel on Project:</p> <p>Stuart Samberg, PE (RK&K)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Interstate Widening: I-40 is a high volume, critical freeway in Wake County, NC. This rolling urban freeway with a 70-mph design speed included the following roadway improvements: design and construction of median widening to provide one additional 12-foot wide lane in each direction of I-40 (expanding the interstate from four to six lanes); additional of a 12-foot-wide paved shoulder in each direction; median guardrail installation; shoulder guardrail replacement; and widening of the roadway from two to three at the eastbound I-40/Wade Avenue split.</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities/Safety: Widening to the median presented construction access challenges, including safety issues resulting from slow moving construction traffic entering and existing the high speed travel lanes. To alleviate these concerns, our team used alternate means of delivering materials to the median whenever possible to limit the exposure to traffic and reduce construction time. Additional traffic studies were also conducted to evaluate the most appropriate times and days of the week that construction activities could be performed adjacent to active travel lanes.</p> <p>Innovative Design/Construction Techniques: Because a significant amount of work was confined to the median, where right of way and permit requirements were minimized, our team staged design and construction submittals for the median work to allow this work to proceed very early during the project. The remaining work outside of the median followed a more typical design schedule, and construction was able to be expedited since significant construction progress had already been made on the median work. The innovative scheduling allowed the project to be completed a full year ahead of the client's required completion date.</p> <p>Implementing/Maintaining QA/QC Plan: RK&K developed a project specific design QA/QC plan requiring design quality checks, peer reviews, constructability reviews, environmental reviews, and cross-discipline coordination. Special care was taken to coordinate erosion and sediment control plans with the contractor's staff, such that plans and procedures were easily followed during construction resulting in minimal impacts to adjacent natural resources.</p> <p>Pavement Markings and Signing: As a heavily traveled urban facility, special attention was required to ensure that both temporary and permanent signing and pavement markings were maintained at all times. Short term lane and roadway closures, coordinated with other construction activities to minimize the number of times traffic was impacted, were used to construct sign gantries.</p>
<p>Intelligent Traffic Systems: Our team was responsible for the design of a full suite of ITS components in conformance with NCDOT standards, including CCTV cameras and the routing of ITS communications cable throughout the project.</p> <p>Bridge Design: Structures design included widening the bridges at Wade Avenue and US 1 / 64 to accommodate the additional lanes of traffic. Our team was also responsible for the design and construction of two sound barrier walls deemed necessary due to the increased capacity and associated noise levels of the widened roadway.</p> <p>Utilities: RK&K led the utility coordination efforts and was responsible for obtaining Level "A" S.U.E. data, coordination with the utility companies, and development of the utility conflict matrix. In addition to utility coordination and relocations required for construction of the project, utility design included the design and permitting of water services for the construction office and asphalt plant facilities.</p>	
<p align="center">EVIDENCE OF PERFORMANCE</p> <p>"I commend the entire Design-Build Team for completing this project quickly, safely, and cost effectively. The Design-Build Team's efforts exceeded NCDOT's expectations in innovation during both design and construction. Despite the numerous and complicated traffic control, schedule, subgrade, and public information challenged of this project, the S.T. Wooten/RK&K total 'team approach' and responsiveness to the NCDOT contributed to one of North Carolina's finest transportation achievements." – Mr. Rodger Rochelle, PE Director of the NCDOT Transportation Program Management Unit - Source: ACEC Award - Endorsement Letter</p>	



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: Route 29 Solutions (Rio Road) Location: Albemarle, VA DESIGN-BUILD	Name: LANE/Corman	Name of Client./ Owner: VDOT Phone: 434.422.9373 Project Manager: David Covington, PE Phone: 434.422.9373 Email: Dave.covington@vdot.virginia.gov	03/2015	10/2017	\$116,700	\$128,700*	\$10,444

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects 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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<p align="center">Proposed Personnel on Project:</p> <p>Ben McKenna (LANE) Larry Hora (LANE) Chris Monahan (LANE) Owen Peery (RK&K) Ryan Masters (RK&K) James Durbin (RK&K) Stuart Samberg (RK&K) Mike Hogan (RK&K) Dave Plum (RK&K) Richard Woody (RK&K) Howard Humphreys (RK&K)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT III PROJECT</p> <p>Innovative Design/Construction Techniques: Through the proprietary meeting process, RK&K developed a profile with a sump, rather than the straight line grade shown on the preliminary plans, to be used on US 29 at Rio Road. While requiring additional capacity in the drainage system, this alignment reduced the overall project length by 30%, the retaining walls by 40%, and saved VDOT millions of dollars. RK&K’s design of the bridge structure was also innovative, using a prefabricated box beam superstructure as a compression strut to effectively hold up the retaining wall below the bridge. This allowing the bridge abutments to be an integral part of the wall and reduced the overall length of the bridge over a traditional design, providing much needed room construction in the interchange.</p> <p>Limiting Impacts to the Traveling Public/Businesses/Communities/Safety: The innovations discussed above significantly contributed to the Team’s ability to deliver the project in advance of the required completion date. In such a tight, urban environment, this reduction in construction duration effectively limited permanent and temporary impacts to the traveling public, businesses and the surrounding communities. Through the collaboration and the partnership between VDOT and our team, the project was successfully delivered ahead of the fixed completion date. In addition, the extremely aggressive interim requirement to complete the grade separation in 103 days was completely surpassed by the this D-B Team’s ingenuity, allowing that phase of the work to be completed in 58 days.</p> <p>Implementing/Maintaining QA/QC Plan: Due to the unique and innovative solutions used at Rio Road, constructability reviews required by the design quality plan were enhanced to ensure that there were no flaws in the plans or construction means and methods that would prevent completion of the work within the allowable closure period.</p> <p>Maintenance of Traffic: RK&K provided traffic engineering and the regional transportation management plan (TMP) as well as maintenance of traffic (MOT) for the Rio project element. MOT on the Rio project was critical because the contract required all existing lanes to be maintained during the day except for a 103 days in the summer. RK&K used the WZTIA to predict the impacts associated with detouring Rio’s left turn and through movements in this interim period and included two temporary U-turns on US 29 to improve operations. The TMP included re-timing and phasing of Route 29 corridor signals to facilitate the modified traffic patterns, development of queue lengths at the U-turn locations and the use of detours to reduce the number of U-turning vehicles. The TMP included outreach in conjunction with VDOT to publicize the detours and re-timed signals. RK&K monitored traffic impacts after implementing traffic changes and made adjustments to optimize the plan to actual conditions.</p> <p>Structures & Bridges: RK&K performed the structural engineering for the Rio project. The superstructure functions as a compression strut, allowing the bridge abutments to be an integral part of the retaining walls below the bridge, and reducing the overall length of the bridge. This configuration, developed by RK&K, was an integral part of our team’s ability to complete construction ahead of schedule.</p> <p>Environmental: RK&K provided full service environmental design and permitting including: wetland delineations and stream assessments; determination of wetlands and stream compensatory mitigation requirements; secured rare, threatened and endangered species clearances; and secured numerous other clearances and permits.</p> <p>Public Outreach/Involvement: Our Team provided a Public Relations Manager to work alongside VDOT’s Public Outreach Manager, providing support to the Project Development Advisory Panel and providing updates to VDOT from the D-B team. The Public Relations Manager handled Hot Line calls, met with citizens, business owners, homeowners associations and others to brief on project developments and upcoming events. Many visits were performed just ahead of when construction activities were about to impact a property or facility. The results of this outreach can be seen in the Evidence of Performance listed below.</p> <p>Safety: The project included design and construction of bike lanes and multi-use paths, increasing safety for these users. On Rio Road, separating the local and through traffic at this intersection, which had a history of high crash rates, improved safety.</p> <p><i>* The project contract value increased as a result of owner initiated changes to the project scope and the incentive bonus.</i></p>	
<p align="center">EVIDENCE OF PERFORMANCE</p> <p>“LANE/CORMAN and RK&K did an excellent job of selecting the right design for a unique need, designing the bridge quickly to meet the needs of an aggressive schedule, working closely with VDOT to provide solutions for long-term maintenance and providing high quality design and construction.” —David Covington, PE, Regional Manager, VDOT</p> <p>“This project brought something that you cannot pay for: Good will ... This should become the default model for community engagement.” - Liz Palmer, Chair, Albemarle County Board of Supervisors</p> <p>“The partnership between VDOT and LANE/CORMAN, as well as the cooperation of Albemarle County, the nearby businesses and neighborhoods and the community at large, were instrumental in the success of this project. Without the involvement of the businesses and the community – and their understanding for the inconveniences they experienced – we would not have attained this successful outcome.” - Charles Kilpatrick, VDOT Commissioner</p>		

LANE

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