

# REQUEST FOR QUALIFICATIONS



## A DESIGN-BUILD PROJECT

### Military Highway Continuous Flow Intersection

From: 0.023 Miles South of Lowery Road  
To: 0.230 Miles North of Interstate 64  
Norfolk, Virginia

State Project No.: 0165-122-V04 | Federal Project No.: STP-5403  
Contract ID Number: C00001765DB81

January 29, 2015

Submitted to: Virginia Department of Transportation  Virginia Department of Transportation

Submitted by: The Lane Construction Corporation **LANE**

In association with: Parsons Brinckerhoff



**LANE**

January 29, 2015

Bryan W. Stevenson, PE  
Alternate Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

**RE: Military Highway Continuous Flow Intersection**

State Project No: 0165-122-V04 | Federal Project No: STP-5403 | Contract ID No: C00001765DB81

Dear Mr. Stevenson:

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, bridge, and mass-transit construction. LANE has a long and successful history of project completion in the Commonwealth of Virginia.

As a leader in the Design-Build (DB) method (nationally ranked as the 43<sup>rd</sup> Top DB Firm by *Engineering News-Record*), we appreciate the importance of partnering and have constructed more than \$3 billion in DB projects during the last decade. LANE's teaming and leadership experience enables us to deliver the innovative and technically-sound results that VDOT and Virginia residents deserve.

LANE is the Offeror and will be the overall authority on the project, as well as the Lead Contractor. Parsons Brinckerhoff, Inc. (PB) joins our team as the Lead Designer. In 2013 and 2014, PB was ranked as the #1 "Go-To" Road and Highway Design Firm by *Roads and Bridges Magazine*, based on surveys from clients nationwide. Together, we provide VDOT with a reputable team capable of completing projects of this size and scope on time and within budget as evidenced in our collective project experiences.

LANE and PB, in conjunction with additional specialty firms which are experienced in VDOT processes and procedures, will provide design and construction for the Military Highway Continuous Flow Intersection (CFI) project. We are confident in our team structure and experience, and we have elaborated on our distinctive qualifications in the subsequent sections. The LANE team offers committed personnel with proven ability to deliver VDOT's requirements which meet the quality, safety, and schedule demands of this project.

**3.2.2 Offeror's Point of Contact Information:** Mr. Robert E. Watt is the point of contact and authorized representative for the LANE team for all matters associated with this qualifications submittal.

Robert E. Watt, Pursuit Manager

**Address:** 14500 Avion Parkway, Suite 200, Chantilly, VA 20151

**Tel:** (703) 222-5670 | **Fax:** (703) 222-5960 | **Email:** [REWatt@laneconstruct.com](mailto:REWatt@laneconstruct.com)

**3.2.3 Offeror's Principal Officer Information:** Mr. Mark A. Schiller is the principal officer of The Lane Construction Corporation.

Mark A. Schiller, Senior Vice President

**Address:** 14500 Avion Parkway, Suite 200, Chantilly, VA 20151

**Tel:** (703) 222-5670 | **Fax:** (703) 222-5960 | **Email:** MASchiller@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 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 with whom VDOT will execute the contract. The full legal name of the Lead Designer is: **Parsons Brinckerhoff, Inc. (PB)**. PB 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:** LANE's parent company is Lane Industries, Inc. A complete list of affiliates and subsidiary companies is included in the Appendix.

**3.2.7 Debarment Forms:** Certifications Regarding Debarment for both Primary and Lower Tier Covered Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities identified as members of the LANE team. These are included in the Appendix.

**3.2.8 Offeror's VDOT Prequalification Evidence:** Evidence from VDOT's online Prequalified List is included in the Appendix and verifies that LANE is prequalified for this SOQ submission (L002/Active). Additionally, similar evidence verifies prequalification of the team's proposed Right-of-Way Manager, Fee Appraiser, Review Appraiser, and Title & Closings entity.

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

**3.2.10 Professional Services Evidence:** The matrix in the Appendix delineates the respective state registrations and licensures of the LANE team. The Offeror and all team members are currently eligible, 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.

As we have demonstrated through successful delivery of previous VDOT DB projects, our team will deliver this project safely, on time and within budget. We appreciate the opportunity to present our qualifications, and we look forward to working with VDOT on this important project.

Respectfully submitted,



Robert E. Watt  
Pursuit Manager



**LANE**

### 3.3 OFFEROR'S TEAM STRUCTURE

We have carefully selected a group of highly-skilled team members, both firms and individuals, to create a team structure that advantageously utilizes the DB process and capitalizes on the strongest attributes of each team member's respective capabilities. LANE's role will include managing the project, supervising construction, and self-performing the major work elements. PB will provide overall project management for all design activities. PB will self-perform the majority of the design tasks. Together, we are the foundation of the LANE team.

**LANE** LANE will serve as the Lead Contractor of the DB team for the Military Highway CFI project. LANE is currently ranked as the #1 Highway Contractor and ranked #43 in Top DB Firms by *Engineering News-Record (ENR)*. Our proven heavy civil experience in bridges, roadways, and intersection-related construction and more than 70 DB projects ranging in scope and value from \$13M to \$1.5B demonstrates LANE's ability to tackle the region's most challenging infrastructure projects. We typically self-perform 75% of the critical work items, including earthwork, excavation, paving, site development, foundations and structures which allows for more direct control of safety, schedule, quality and budget.

**Construction Subcontractors:** Additionally, under subcontract to LANE are the following highly qualified subcontractors—each of which LANE has worked with in the past on DB projects:

Construction Subcontractor	Role
NXL Construction Company, Inc.	QA Manager
GET Solutions, Inc.	QA Lab
Engineering & Testing Services, Inc.	QC Lab
Pulsar	Public Relations

**PARSONS BRINCKERHOFF** An industry leader in infrastructure development and transportation engineering, PB will serve as the Lead Designer for this project. In 2013 and 2014, PB was ranked as the #1 "Go-To" Road and Highway Design Firm by *Roads and Bridges Magazine*, based on surveys from clients nationwide. For over 130 years, PB has participated in innovative projects around the world, including roadway and intersection improvement projects throughout Hampton Roads for both VDOT and the City of Norfolk. In the past decade, PB has gained national recognition for the development and design of non-traditional intersection concepts. The firm is currently completing the design of a continuous flow intersection at Indian River Road and Kempsville Road (IRRK) in Virginia Beach. This experience, as well as the experience gained from the conceptual development of over 100 and the detailed design of over 30 projects, has allowed PB to develop a core team which specializes in non-traditional intersection concept development and design. PB brings recent and relevant CFI design experience as well as qualified staff that have successfully delivered similar projects in the region.

**Design Subconsultants:** The following Subconsultant firms will provide services under subcontract to PB and will report to Mr. Derek Piper, PE, AICP, Design Manager.

Design Subconsultant	Role
Appraisal Review Specialists	Review Appraisal
Athavale, Lystad & Associates	Structures
Cardno TBE	Subsurface Utility Location
Crider, Buoye, Elliot & Goodwin	Fee Appraisals
EEE Consulting, Inc.	Hazardous Materials Mitigation
Engineering & Testing Services, Inc.	Geotechnical
O.R. Colan Associates	Right-of-Way

Design Subconsultant	Role
Precision Measurements, Inc.	Survey
Property Title & Escrow, LLC	Title & Closings
Solstice Environmental	Environmental Permitting

### ✓ 3.3.1 Qualifications of Key Personnel

We consider VDOT management and staff true project partners, working alongside the LANE team members. Our relationships are effective, functional, and benefit from a common goal—to safely and expeditiously design and construct the project with the highest level of quality. The LANE team is led by highly qualified and capable professionals with local roots and strong DB experience. All of the proposed Key Personnel have noteworthy experience similar to the roles they will serve on the Military Highway CFI project on other relevant transportation projects. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Name	Title	Organization
Ken Prince, PE	Design-Build Project Manager	LANE
Brian Basnight	Construction Manager	LANE
Derek Piper, PE, AICP	Design Manager	Parsons Brinckerhoff
Tim Rayner, PE, PTOE	Traffic Operations Designer/Manager	Parsons Brinckerhoff
Bill McDowall, PE	QA Manager	NXL
Gene Rutledge, PE	Lead Utility Coordination Manager	Parsons Brinckerhoff

### ✓ 3.3.2 Organizational Chart

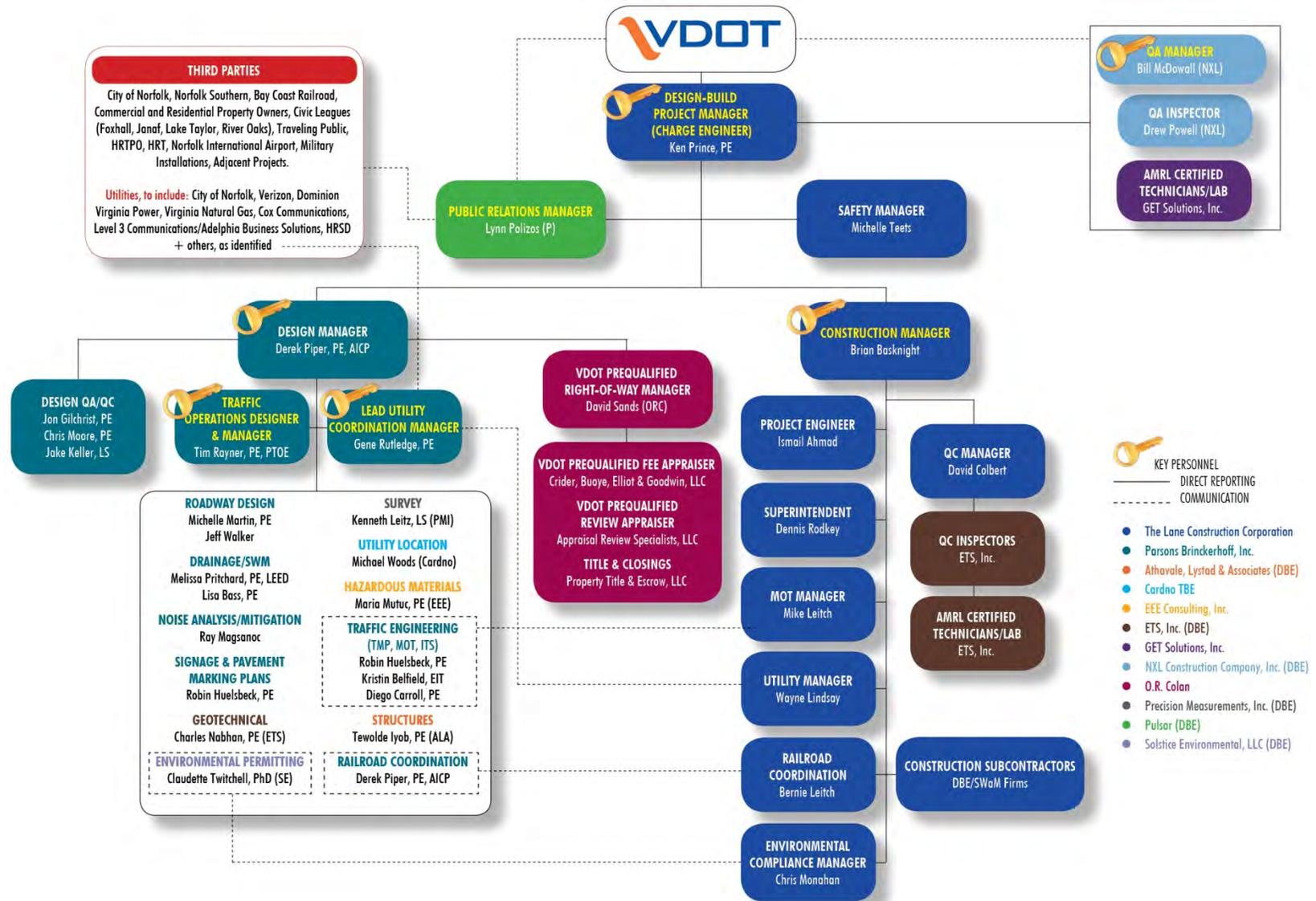
The organizational chart on the following page depicts VDOT-identified Key Personnel, the major functions each will perform, and the designated reporting structure of the team for the Military Highway CFI project. The LANE team organization has a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. We have identified specific personnel that will address the design and construction of the project and their reporting relationships. The Organizational Chart includes VDOT, third-party stakeholders, and utilities. A clear separation of Quality Assurance and Quality Control for construction activities is shown.

We recognize the importance of inclusivity of the stakeholders and utilities throughout the development of the project. The LANE team has existing relationships with many of the third party stakeholders as well the numerous utility companies that will be involved in this project. These relationships will aid in the comprehensive, expeditious, and successful delivery of this project.

#### Functional Relationships of Key Personnel

**Design-Build Project Manager (DBPM), Mr. Ken Prince, PE (LANE) will report to VDOT and serves as VDOT's central point of contact.** He will facilitate communication among team partners, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. It will be his responsibility to lead the team to ensure that the design complies with VDOT's Contract Documents. Mr. Prince's management from design through construction will include weekly design and construction meetings to discuss how the team will successfully execute the project. Additionally, he is responsible for construction quality management, contract administration, and coordination of public outreach and public meetings.

▶ **Added Value:** Mr. Prince is currently the DBPM on the adjacent I-64/I-264 Pavement Rehabilitation project in Norfolk. His knowledge and familiarity with the local area and contacts with the City of Norfolk and other local third-party stakeholders will be a benefit to this project.



**Quality Assurance Manager (QAM), Mr. Bill McDowall, PE (NXL)** will report directly to the DBPM on all quality issues. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel have no authority over QA inspection staff, and issues raised by construction personnel will be resolved by Mr. McDowall and the DBPM. Mr. McDowall will keep VDOT informed on the status of quality of construction and issues/solutions through weekly reports and progress meetings. Mr. McDowall holds the authority to stop work on the job if quality issues warrant. **QA Inspector, Mr. Drew Powell (NXL)**, will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of the project. Mr. Powell will report to NXL and will perform independent QA testing.

▶ **Added Value:** Mr. McDowall brings to the LANE team 25 years of experience working with VDOT. His prior experience as a VDOT employee will be a valuable asset. His familiarity with the Hampton Roads area through past projects also brings added value.

**Design Manager (DM), Mr. Derek Piper, PE, AICP (PB)** will report directly to the DBPM. Mr. Piper will maintain close communication with the DBPM and will ensure the project is designed in accordance with the requirements of the Contract Documents. He is responsible for coordinating all design disciplines and ensuring the overall project design is in conformance with project documents; all design disciplines report directly to Mr. Piper. He will provide VDOT with design plans for review and approval to confirm that the design work complies with the requirements of the Contract Documents. Mr. Piper is also responsible for establishing and overseeing the QA/QC program for all design disciplines of the project and communicating with the CM. The design QA/QC will be coordinated by Mr. Piper and will be performed *by staff with local CFI design experience and knowledge of VDOT design and plan preparation. Mr. Piper was part of the design team for the IRRK CFI project currently being developed in Virginia Beach.*

▶ **Added Value:** Mr. Piper is a seasoned civil/roadway Design Manager with 30 years of progressively responsible design experience, including 19 years managing the delivery of complex transportation design projects. Mr. Piper has a broad range of experience in all facets of roadway design development including geometric design, utility coordination and relocation design, environmental permitting, and stormwater design throughout the Hampton Roads region. Mr. Piper has established working relationships with VDOT and City of Norfolk staff through his role on the I-264/MLK project and has provided railroad coordination for several recent and on-going projects.

**Construction Manager, Mr. Brian Basnight (LANE)** will report directly to the DBPM and will be on-site full-time for the duration of the project. His daily duties include: safety, coordination of all project personnel including subcontractors, and execution of the construction QC program. He holds ultimate responsibility for managing adherence to the construction schedule with his staff engineers and coordinating daily with the 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 that is not meeting standards will be addressed immediately with corrective actions mandated that same day. Mr. Basnight is currently working on the adjacent I-64/I-264 Pavement Rehabilitation project and will be available prior to the start of construction. Mr. Basnight holds a DEQ RLD Certification and a VDOT ESCCC.

▶ **Added Value:** Mr. Basnight has been a Construction Manager on numerous projects in the Hamptons Roads area including the current I-64/I-264 Pavement Rehabilitation project. He has been a resident of Norfolk for several years. His knowledge of the area will bring a tremendous amount of value to this project.

**Traffic Operations Designer and Manager, Mr. Tim Rayner, PE, PTOE (PB)** will report directly to the DM. Mr. Rayner has 17 years of experience in the implementation of traffic and transportation planning and design services, including: CFI; transportation system congestion analysis; system performance measurement; micro/macro-modeling; analysis of traffic impacts; travel demand forecasting; multimodal interactions; operational/safety analysis; access management; and project planning and funding. Mr. Rayner

has experience with the following software: CORSIM (Traffic Software Integration System), Highway Capacity Software 2010, Synchro, VISSIM, AutoCad, ArcMap, and Cube Voyager.

▶ **Added Value:** Mr. Rayner specializes in and is a recognized expert in the design of non-traditional intersection design. He is currently managing the design of the IRRK Continuous Flow Intersection project, one of the first within the Commonwealth.

**Lead Utility Coordination Manager, Mr. Gene Rutledge, PE (PB) will report directly to the DM.** Mr. Rutledge has over 15 years of experience, focusing specifically on private and public utility relocations, design and coordination efforts for transportation projects. Mr. Rutledge offers a unique combination of utility relocation design as well as utility coordination experience during design and construction. Mr. Rutledge excels at identifying owner needs and tailoring deliverables accordingly.

▶ **Added Value:** Mr. Rutledge has extensive experience with utility coordination/utility design for projects throughout Hampton Roads. As such, he has established working relationships with public and private utility providers in the region—many of which will be involved in the Military Highway CFI project.

**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 qualifications are provided below.

**Other pertinent design disciplines that will report directly to Mr. Piper, PE, AICP (DM) include:**

<b>Michelle Martin, PE Roadway Design</b>	<b>11 years experience</b> in roadway design, including CFI design and roadway widening. Experience with VDOT and City of Norfolk. Currently working on the IRRK project in Virginia Beach, one of the Commonwealth’s first CFI projects.
<b>Melissa Pritchard, PE Drainage/SWM</b>	<b>7 years experience</b> specializing in stormwater hydraulic and hydrological analyses, water quality and watershed management, low impact development design, BMPs, and stormwater systems analysis, design, construction and permitting.
<b>Ray Magsanoc Noise Analysis/ Mitigation</b>	<b>18 years experience</b> in noise analysis and noise abatement for roadway design projects. He has performed a wide variety of tasks, including assisting with public information efforts. Proficient with FHWA TNM 2.5 and previous versions 1.1 and 2.1, FHWA STAMINA, and OPTIMA. Experienced using various models of Quest, Bruel & Kajer, and Larson Davis sound level meters and calibrators.
<b>Tewolde Iyob, PE Structures</b>	<b>37 years experience</b> specializing in the design and rehabilitation of highway structures and bridges. Extensively familiar with the standards and regulations of VDOT and FHWA, as well as AASHTO LRFD.
<b>Claudette Twitchell Environmental Permitting</b>	<b>22 years experience</b> in numerous watershed level and site-specific natural resource investigations as they pertain to the construction of transportation infrastructure.
<b>Charles Nabhan, PE Geotechnical</b>	<b>25 years experience</b> , including design and analysis of shallow and deep foundation systems for various size roadways, bridges and earth retaining structures. QC experience includes field and laboratory testing of soil and concrete; subgrade and foundation soil inspection; and monitoring of test pile installation and load testing.

**Other pertinent construction disciplines that will report directly to Mr. Basnight (CM) include:**

<b>Dennis Rodkey Superintendent</b>	<b>33 years experience</b> including roadway Superintendent on numerous VDOT projects. Experienced with roadway/intersection construction.
<b>Wayne Lindsay Utility Manager</b>	<b>30 years experience</b> coordinating with utility companies, ensuring compliance of all SCC regulations, and overseeing utility relocations and related MOT.

**Other pertinent construction disciplines that will report directly to Mr. Basnight (CM) include:**

<p><b>Mike Leitch</b> MOT Manager</p>	<p><b>9 years experience</b> ensuring proper work zones are established at each and every phase of construction. Will oversee adherence to the TMP to provide proper operations and flow of traffic throughout the limits of construction.</p>
<p><b>Bernie Leitch</b> Railroad Coordinator</p>	<p><b>40 years experience</b>, including 13 years as a Washington Metropolitan Area Transit Authority (WMATA) Access Manager and Construction Inspector. Recently provided railroad coordination with Norfolk Southern on the I-495 Express Lanes project. Will be responsible for daily interface and project railroad coordination, including compliance with Contract Documents.</p>
<p><b>Chris Monahan</b> Environmental Manager</p>	<p><b>12 years experience</b> coordinating with environmental permitting personnel to ensure all compliance requirements are met. Currently holds a DEQ RLD Certification and a VDOT ESCCC.</p>

**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 design-build delivery and this methodology optimizes opportunities for collective excellence.” DB delivery carries with it a united team responsibility to gain a full understanding of the owner’s intentions and the factors that will drive value into the process and outcome. Put into practice, PB will interface with LANE’s DBPM, CM, Superintendent, and construction personnel throughout the design and construction phases.

The LANE team’s extensive DB experience has shown that regularly scheduled discipline coordination meetings throughout project execution is critical to ensuring a successful project. These focused meetings, which are led by the DBPM, serve as a conduit for disseminating project-critical information and are the central point of decision-making and communication among all involved in the project. These regular, open forums of discussion among team members (both design and construction) and VDOT to address respective project elements serve to clearly define project criteria, ensure VDOT’s intentions are being met, address corridor-wide constructability issues, and provide consistency in design before becoming schedule-critical. Through this approach, we create a firm relationship that sets 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.

<p><b><u>Construction Support During Design:</u></b> Construction staff are engaged to ensure designs are constructible and tailored to support the most efficient execution strategy.</p>	<p><b><u>Design Support During Construction:</u></b> Engineering staff continue to support construction to ensure design intent is achieved.</p>
<p>Critical input in development of work packaging and DB strategy</p>	<p>Preparation of subcontractor statements of work</p>
<p>Advising design team on self-performance vs. subcontracting of specific construction elements</p>	<p>Assignment of design engineer(s) on-site, as required</p>
<p>Providing input on construction means and methods to design packages</p>	<p>Providing support due to field changes requiring design changes</p>
<p>Constructability, operability and pricing reviews of design documents</p>	<p>Providing and verifying final as-built drawings</p>



# LANE

### 3.4 EXPERIENCE OF OFFEROR'S TEAM

The LANE team has recent experience constructing high-profile roadway projects in Virginia, including the I-64/I-264 Pavement Rehabilitation DB project. Both LANE's asphalt plant (Virginia Paving Company) and Virginia Sign & Lighting Company, each a division of LANE, have been located in Norfolk (3.5-miles from the project) for many years. LANE has constructed several projects designed by PB for the Cities of Norfolk and Chesapeake as well as numerous other VDOT bid-build projects in the region.

LANE's non-traditional intersection and interchange experience includes roundabouts, diverging diamonds, turbine interchanges, SPUIs, and Smart Streets.

**Experience in Innovation.** PB's Virginia Beach office is nearing design completion for a CFI at Indian River Road and Kempsville Road (IRRK). The project is past the 90% design phase, with ROW acquisition ongoing. All CFI elements and related challenges have been resolved and are included in the approved design.

PB was selected as Lead Designer because of their recent experience designing the IRRK CFI in Virginia Beach and other non-traditional designs in the U.S.

Much like Military Highway CFI, the IRRK intersection is one of the area's most congested intersections. It is bordered by commercial properties, and as such, the MOT and sequence of construction presented

similar challenges. PB's comprehensive IRRK design provides for a safe work zone while minimizing impacts to traffic from construction. As will be implemented on the Military Highway CFI project, a robust TMP with analysis at each stage of construction has been integral to creating this balance on IRRK. Temporary signals and detours were included in the design; however, by developing a strong TMP, detours will be limited to some left turn movements and only during certain phases of construction.

Minimizing the ROW acquisition and disruption to property access has also been a top priority. Due to new Virginia laws, relocating or reducing the width of a driveway can incur damages owed to the property owners. ROW acquisition was minimized by decreasing the cross section of the CFI design. The length of the turn lane features were customized to the site conditions, taking into consideration ROW acquisition, adjacent intersections, and property access.

Tim Rayner, the team's proposed Traffic Operations Designer and Manager, developed the TMP for the phased construction of IRRK including detouring specific movements, traffic signal modifications to account for detoured movements, and public information and notification regarding changing traffic patterns. For the I-264/MLK project, Mr. Rayner developed the TMP as a "living document" receiving VDOT approval for each successive iteration. This same technique is proposed for the Military Highway CFI project, to allow project construction to commence simultaneously with further design development.

**IRRK is the first CFI design in the Commonwealth of Virginia.** This is the first such design to be vetted in the public forum and has been featured repeatedly in the local press. IRRK was also the subject of two public meetings attended by approximately 350 citizens who learned about the design and operation of a CFI and viewed the traffic models. The response was overwhelmingly positive, and public input supported the more efficient design. *\*This project was not included on the Work History forms, as it is 90% complete at this time. The same PB design team that developed the IRRK project is being assigned to the Military Highway CFI project, bringing recent and relevant design experience in the unique challenges of CFI design. Key Personnel that worked on this project include: Derek Piper, Tim Rayner and Gene Rutledge. Other staff includes Melissa Pritchard, Michelle Martin, Jeff Walker, Lisa Bass, Robin Huelsbeck and Kristin Belfield.*

*"PB's creativity and 'out of the box' thinking proved very beneficial to the City on IRRK, as they have developed an innovative solution to our #1 most congested intersection."*  
Phil Pullen  
[ppullen@vbgov.com](mailto:ppullen@vbgov.com)

#### ✓ 3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a) and (b)) are included in the Appendix.



# LANE

### 3.5 PROJECT RISKS

We have reviewed the available project information, visited the project site during various traffic and weather conditions, and evaluated potential risks. The LANE team has identified the following three risks as the most critical to the success of the project.

#### Risk No. 1: Traffic Management and Safety

**Risk Identification:** VDOT's preliminary staging plans include a temporary roadway on new ROW to be acquired to the west, with traffic detoured to this temporary roadway while the new CFI is constructed on the existing intersection footprint. Once complete, the detour will be removed and traffic will be directed to the newly constructed CFI. Based on 2011 data included in the RFQ, the 75,000 vehicles per day (vpd) traveling through the intersection will increase to 94,000 vpd in 2038. Most of the left-turn movements for the intersection of Military Highway and Princess Anne/Northampton operate at LOS E/F. Safety, changing traffic patterns, potential queuing, driver confusion, public outreach, business and work zone access are all components of this risk that must be managed and properly mitigated and are critical to the success of the project. **Impact:** Impacts to the traveling public during construction are always a concern but even more so when they involve a high-volume corridor such as Military Highway. As one of the most congested corridors in Hampton Roads, Military Highway provides a vital north/south link for commuter, commercial/retail, airport, port and naval station related traffic. At peak hours, traffic must queue through several cycles of the signal at Princess Anne/Northampton, delaying first responders, commuters and local retail traffic. Construction within the limited footprint, coupled with detours, will potentially serve as a source of distraction for drivers, exacerbating queue lengths and increasing the potential for incidents. MOT signage and devices that are used to guide drivers through the work zone can also reduce intended speeds. The result is often congestion and queuing in new locations. If traffic control and safety are not properly managed, the results could increase queue times, create an unsafe construction zone for the traveling public and the workforce and create negative public perception and press coverage. **Mitigation Strategy:** To mitigate this risk, we will leverage lessons learned from previous similar projects:

#### ➔ **Utilize staff experienced in the design and construction effort:**

It is very important when designing these types of intersections to use personnel with non-traditional intersection experience. LANE and PB will staff this job accordingly. Both LANE and PB have significant experience designing and constructing non-traditional intersections in urban, high volume corridors such as Military Highway. LANE's recent non-traditional intersection/interchange experience includes successfully constructing numerous roundabouts, diverging diamonds, turbine interchanges, SPUIs and Smart Streets. PB has successfully designed four CFIs and a host of other non-traditional intersections. PB recently designed the Indian River Road and Kempsville Road (IRRK) CFI in Virginia Beach. Tim Rayner led the conceptual development and alternatives analysis, and is the Project Manager for the final design effort. Mr. Rayner's, as well as PB's relevant CFI experience will greatly assist in minimizing this risk.

➔ **Develop and implement a robust TMP:** A TMP implemented by experienced MOT crews, coupled with the use of proven practices, is an effective method to mitigate potential traffic and safety problems through the construction zone. The TMP will consider the appropriate lane widths, signage, pavement markings, tapers, etc. to provide clear direction to drivers, warn motorists in advance, and maximize the friendliness/forgiveness of the work zone, all while balancing the needs of safety and construction. LANE prides itself on frequent policing/maintenance of MOT devices and signs in order to avoid driver confusion and uphold safety. Of specific concern are the high volume peak hour left-turn movements at the intersection of Military Highway



*IRRK Public Hearing Display - SOC*

and Princess Anne Road/Northampton Boulevard. There are several roadways surrounding the project area that can be considered for alternate routes utilizing advanced directional signage to divert a portion of the traffic away from potential congestion; we will consider and evaluate diverted traffic and elimination of specific movements in various phases/stages of construction to maintain adequate LOS at affected intersections—specifically at Military Highway and Princess Anne Road/Northampton Boulevard and at Military Highway and Robin Hood Road. Temporary Advanced Traffic Management Systems (ATMS) are also proven mitigation tools (e.g., CCTV, DMS, etc.) to provide real-time updates.

➔**Develop a comprehensive public outreach program:** A comprehensive public outreach effort will be implemented, led by our local public involvement expert, Pulsar. LANE and Pulsar are currently working together on the adjacent I-64/264 Pavement Rehabilitation project with our proposed DBPM and CM. Construction team members will meet with Pulsar weekly to discuss lane closures, detours, and/or other changes in the traffic patterns for dissemination through VDOT’s Traffic Operations Center.

**Role of VDOT and Other Agencies:** As on any DB project, our team will strive to limit VDOT’s role in mitigating this risk. Obviously, VDOT will approve design plans and the TMP. As the LANE team coordinates with stakeholders (City of Norfolk, utilities, NSRR, etc.), VDOT is an invited partner in all discussions and meetings, with the effort led by the LANE team.

## Risk No. 2: ROW and Utilities

**Risk Identification:** The Military Highway CFI project involves numerous property acquisitions and utility relocations (including railroad coordination) which create potential risks for timely project delivery due to schedule uncertainties with these activities. Specifically, a primary risk is the timing of the acquisitions and the commercial relocations required for Calvary Cars and Harris Tire properties at the intersection of Military Highway and Princess Anne Road. The VDOT ROW acquisition process can be time-consuming. The timely completion of this process is of special concern since the MOT phasing presented at the Design Public Hearing is dependent upon the temporary relocation of Military Highway using these properties as the detour route in the initial construction phase. Likewise, utilities pose an analogous risk because the scope of utility relocations and undergrounding of overhead utilities is currently undefined. Timely railroad coordination will also need to be addressed. Each of these elements is discussed below.

➔**ROW Acquisition:** A review of RFQ preliminary plans indicates approximately 50 acquisitions, including nine “total takes.” The total takes are of most concern due to the commercial relocations necessary for Calvary Cars and Harris Tire. Maintaining access to existing businesses during construction, specifically the businesses that have a single access point to Military Highway (Pep Boys, Charles Barker Nissan, Wells Fargo Bank) is a critical concern. **Impact:** The ROW acquisition process for commercial business relocation properties (Calvary Cars and Harris Tire) must be completed to allow for construction of the temporary roadway. In addition, utility relocations requiring new easements must be presented on the Final ROW plans. Delays in completing commercial property acquisitions and defining utility easements will impact the overall project schedule. **Mitigation Strategy:** The initial task will be to simultaneously advance ROW plans and utility coordination, to define necessary easements, while proceeding with design efforts. The LANE team will further mitigate risks associated with ROW acquisition by developing construction sequencing to avoid the need for additional ROW in the initial phases of construction. The LANE team will also coordinate with the City of Norfolk during design development to obtain early rights-of-entry for City owned properties to allow construction to occur prior to the completion of all formal ROW acquisition requirements. The TMP noted above will address property access during construction, with emphasis on those properties with a single access point.

➔**Utility Coordination and Relocation:** Numerous utilities are located within the project limits. Widening to the outside of the existing pavement, numerous drainage culvert installations and changes to roadway

elevation will impact utilities. This risk is critical since these utilities will need to be accurately located (including depth of cover) to minimize and define necessary utility impacts. Through conversations with VNG staff, we have confirmed that the 16-inch gas line (recently constructed) should not be impacted by culvert construction, while the 12-inch gas line will be relocated at the existing/proposed box culvert as part of project development. **Impact:** There are significant overhead utilities throughout the project corridor that will need to be relocated. Although we have previously discussed the scope of the project with utility providers, there is no way to know the exact scope of the utility relocations and the “undergrounding” of overhead utilities at this time, until the design is further developed and direction provided to utility owners. Unknown scope of relocation and undergrounding of utilities creates an undefined variable early in the project schedule. Additionally, since many of these utility companies perform (or subcontract) their own design and use in-house or preferred subcontractors for relocations, the design-builder typically has limited influence on these relocations, outside workforces or private utility work schedules or phasing of their work. Impacts of this risk include schedule impacts for the overall project as certain items of our work cannot begin until completion of utility relocations. For example, delays in getting the 12-inch gas line relocated could affect box culvert construction. **Mitigation Strategy:** The LANE team’s mitigation approach includes continuous coordination with impacted utility companies commencing at NTP and continuing throughout design development and construction. Obviously, one of our priorities will be coordinating with VNG concerning the relocation of the 12-inch gas line to ensure no delays are encountered. Weekly, on-site utility coordination meetings to define relocations required, potential conflicts, schedule for relocations, and required reimbursement through the utility agreement process will be held. Prior to release of the RFQ, LANE team representatives met with City Utilities staff to determine the potential for water and sewer utility impacts and betterments. From this meeting, it was clear that the City expects the DB team to accurately locate, protect in place and design around the large diameter water transmission mains and sewer mains located within the project limits, and the LANE team will do so. We also reviewed the location of sanitary sewers within the project. There are existing sanitary force mains and gravity sewers that will likely be impacted by the project, but the LANE team is currently developing mitigation through design to avoid these impacts. Any required culvert foundation system or ground improvement will be designed to avoid impacting any existing utilities where possible. LANE team representatives have confirmed that HRSD has no facilities within the project limits. The assigned Lead Utility Coordination Manager, Mr. Gene Rutledge, has been working with local utilities for many years, most recently providing utility coordination services on the Pacific Avenue improvements project in Virginia Beach. Mr. Rutledge has established working relationships with *all* of the providers that could be affected by the project.

Utilities already identified include:

- VNG 16-inch gas line on west side of Military Hwy
- City of Norfolk 30-inch and 42-inch water transmission mains crossing Military Hwy
- 12-inch gas line located on the east side of Military Hwy
- Several communications duct banks parallel to and crossing Military Hwy
- Multiple overhead DVP lines located along the west side of Military Hwy
- Many existing service lines, backflow preventers, meters, private extensions
- Level 3 Communications ducts (Adelphia Business Solutions)

Impacts of this risk include schedule impacts for the overall project as certain items of our work cannot begin until completion of utility relocations. For example, delays in getting the 12-inch gas line relocated could affect box culvert construction. **Mitigation Strategy:** The LANE team’s mitigation approach includes continuous coordination with impacted utility companies commencing at NTP and continuing throughout design development and construction. Obviously, one of our priorities will be coordinating with VNG concerning the relocation of the 12-inch gas line to ensure no delays are encountered. Weekly, on-site utility coordination meetings to define relocations required, potential conflicts, schedule for relocations, and required reimbursement through the utility agreement process will be held. Prior to release of the RFQ, LANE team representatives met with City Utilities staff to determine the potential for water and sewer utility impacts and betterments. From this meeting, it was clear that the City expects the DB team to accurately locate, protect in place and design around the large diameter water transmission mains and sewer mains located within the project limits, and the LANE team will do so. We also reviewed the location of sanitary sewers within the project. There are existing sanitary force mains and gravity sewers that will likely be impacted by the project, but the LANE team is currently developing mitigation through design to avoid these impacts. Any required culvert foundation system or ground improvement will be designed to avoid impacting any existing utilities where possible. LANE team representatives have confirmed that HRSD has no facilities within the project limits. The assigned Lead Utility Coordination Manager, Mr. Gene Rutledge, has been working with local utilities for many years, most recently providing utility coordination services on the Pacific Avenue improvements project in Virginia Beach. Mr. Rutledge has established working relationships with *all* of the providers that could be affected by the project.

➔ **Railroad Coordination & Approval:** The project involves widening Military Highway crossing the Norfolk Southern Rail Road (NSRR) ROW carrying the Bay Coast Railway (BCR) single track. The BCR connects the floating bridge at Little Creek to Norfolk Southern mainline in Norfolk. BCR is responsible for operations and maintenance of the crossing track and signals at Military Highway. This short line access track averages 8-10 weekly crossings of 4-20 cars each at the Military Highway crossing. Most of these movements are M-F during normal construction and travel hours. Coordination with and approval by NSRR/BCR will be schedule critical, as the roadway widening will involve work within the railroad ROW, using equipment that could potentially foul the track (excavators, pavers, etc.). Railroad flaggers will also have to be coordinated.

**Impact:** The potential project impacts include schedule delays in getting the railroad agreement executed with NSRR, since significant coordination will need to occur with their lessee (BCR). The work will also involve a phased widening of the rail crossing, requiring temporary MOT measures, RR flaggers and railroad signals. Existing utilities crossing under the track in the widening area will also likely need modification to meet current NSRR standards, involving new agreements between NSRR and the respective utilities (separate from the project Railroad Agreement with NSRR). **Mitigation Strategy:** Mitigation will include early and direct coordination with local NSRR staff and BCR staff (located at Cape Charles), via an initial meeting to present the project, develop the scope of work and discuss concerns. Permit exhibits will be developed and submitted to NSRR/BCR review as a precursor to VDOT executing an agreement with NSRR. To minimize the need to access NSRR property early in design development, surveys can be performed using LiDAR scanning. During construction, LANE will coordinate with NSRR/BCR officials in accordance with the Railroad Agreement. Such coordination will involve regularly-scheduled meetings as necessary with NSRR & BCR throughout design development and construction. We do intend to encourage NSRR/BCR to allow the LANE team to design and construct the rail crossing modifications to minimize coordination requirements with a separate engineer and railroad contractor. LANE has extensive successful experience constructing rail crossings for NSRR. We fully understand and will adhere to all NSRR and VDOT regulations regarding this work.

**Role of VDOT and Other Agencies:** We understand VDOT has commenced ROW acquisition for the commercial business relocation properties. VDOT's role in mitigation on remaining properties is limited to oversight and processing documentation and payments for ROW, oversight and review of utility agreements to be executed by the Design-Builder, and executing the Railroad Agreement. For ROW acquisition, VDOT involvement will be needed for review and approval of relocation documents and processing payments. VDOT's participation in meetings with NSRR/BCR is also encouraged to ease the railroad agreement approval process.

### **Risk No. 3: Stakeholder Coordination/Public Relations**

**Risk Identification:** Military Highway is a critical link in the transportation network, serving commuters, area businesses, connections to I-64 and I-264, the airport, and two HRT bus routes. As a result, there are a number of stakeholders that will take interest in this project. Ensuring that these stakeholders are kept informed about the progress of the project will be critical to obtaining timely approvals from third parties with regulatory authority over project elements and to maintaining project momentum. Third party coordination/approvals and accurate, timely communications with the public are essential to the success of the project.

Third party approvals will be required from the following:

- Environmental permitting agencies (DEQ, VRMC, USACE, etc.)
- City of Norfolk for design and traffic operations approvals

Another key stakeholder is the public that utilize this corridor to access work, local businesses, residences and other destinations in the area. As stated by Project Manager, Frank Fabian, at the VDOT Project Information Meeting, "the public relations aspect of this project will be extremely important". During construction, the public must be made aware of changing traffic patterns to avoid confusion and allow for a safe work/travel construction zone. In addition, ensuring that the public has an understanding of how to navigate this new type of intersection once it is constructed will also be an important measure of success for the project.

### **THIRD PARTY COORDINATION AND APPROVALS**

➔ **Environmental Permitting:** Based on our extensive knowledge of the area and the RFP Conceptual Plans provided, this project involves minor wetland and stream impacts associated with the replacement/re-alignment of the box-culvert carrying Broad Creek under Military Highway. Impacts to wetlands and streams will require Section 401/404 permits from the U.S. Army Corps of Engineers, VDEQ, and the VMRC. Obtaining the required environmental permits is a critical risk from both a schedule and mitigation cost

perspective. **Impact:** Any delay in obtaining the environmental permits for Broad Creek relocation could potentially impact the construction schedule and overall project development as this scope of work will need to occur in the early phases of construction. Permits will be needed during initial phases of the construction to allow for phased installation of the box-culvert and temporary pavements/detours associated with this phasing so that the final pavement and lane configurations can be implemented at this location to coincide with final CFI intersection configurations. **Mitigation Strategy:** Wetland delineation field work will be given the highest priority in order to obtain a final jurisdictional determination, confirm the limits of waters of the U.S. within the project area and to determine compensatory stream credits. Concurrently with the jurisdictional determination, the drainage design, including stormwater pond location/sizing, culvert design, and rough grading will be accelerated. In addition, the LANE team will initiate early agency coordination to identify specific areas of concern. The permit application will be developed during early stages of the project for timely submittal to regulatory agencies and will incorporate avoidance and minimization measures to the maximum extent practicable. We will explore cost effective options to compensate for jurisdictional streams and wetlands impacts while limiting liability.

➔ **Stormwater Management:** This project includes a large increase in impervious area that must be accounted for in development of the stormwater management system. Stormwater quantity/quality impacts must be addressed in accordance with the Virginia Stormwater Management Act and the accompanying VSMP Permit Regulations. This is a critical risk due to the large increase in impervious area and limited locations for stormwater management facilities. In addition, the flat terrain and existing utilities complicate design and construction of the drainage collection system. **Impact:** The stormwater quantity/quality management must be evaluated and designed to meet the regulations noted above to allow construction to commence. Designing the system to meet the requirements while minimizing utility impacts could impact scope of work, schedule and cost. **Mitigation Strategy:** Mitigation will initially include an evaluation of stormwater management needs during proposal development including: location/sizing of stormwater facilities, development of a drainage collection system that minimizes utility impacts, and stormwater management phasing to coincide with overall project construction phasing. Mitigation also includes appropriate erosion control measures, stormwater management facilities as BMPs, and treatments for stormwater management facilities located in impaired watersheds, detailed in a Stormwater Pollution Prevention Plan (SWPPP).

➔ **Noise Abatement:** Final design includes development of the Final Noise Abatement Design Report (NADR), adhering to the VDOT Noise Manual. The manual includes requirements for conducting surveys of property owners. **Impact:** When it is necessary to communicate with local residents about changes to their community, it is critical to get it right. Consistency in messaging is a must. Failure along these lines could lengthen the public hearing process, lead to public contempt for the project and impact construction schedule and budget. **Mitigation Strategy:** The LANE team will perform preliminary noise modeling prior to submission of the technical and price proposal to define the limits and height of proposed barriers. After NTP, the Draft NADR and barrier evaluation will be finalized for submission to VDOT. As elaborated in the VDOT Noise Manual, specific requirements for conducting surveys of property owners are involved. The LANE team has retained Pulsar as our public relations and communications subconsultant. Pulsar will be integrally involved in the formulation, packaging and roll out of the LANE team's public communications approach with regard to noise abatement as well as all other public communication related issues (see below).

➔ **Traffic Operations:** This CFI project involves installation of complex traffic control systems that will be operated and maintained by the City of Norfolk, at project completion. **Impact:** Failure to receive prompt and favorable approval of specific design elements by the City, namely the traffic operations systems, could easily delay design approvals and affect project scope and timeline. **Mitigation Strategy:** The LANE team will include City representatives in design development meetings to minimize design revisions, expedite the review schedule, and ensure the City's input is received and incorporated into the design as appropriate. Our

Lead Designer on this project, PB, has a long standing working relationship with the City of Norfolk, in particular staff from the Division of Transportation who will be responsible for approving the design and integrating the proposed traffic control systems into the city's network. Leveraging this working knowledge of the City's traffic control systems and incorporating specific requirements into the design will help to expedite approvals and allow for a more efficient DB process.

### **STAKEHOLDER INVOLVEMENT AND PUBLIC RELATIONS**

Public relations and stakeholder involvement will be the vehicle to convey information on the project schedule and updates, changes in traffic patterns, changes in work hours or special construction events, detours, and public approval of any proposed noise wall locations determined as part of the Noise Abatement Design Report. Stakeholder coordination will include property owners, utilities, NSRR and BCR as noted above, first responders, HRT, the airport, as well as the travelling public that uses the corridor. **Impact:** The project involves a non-traditional intersection type that has not yet been implemented in Virginia. Additional queuing and traffic safety issues will be realized if the area businesses and the traveling public are not well-informed of changing traffic patterns, temporary lane closures, detour routes and access constraints. There is absolute certainty that affected citizens will contact political leaders (both City and VDOT) as well as the press when perceived issues arise, which will negatively impact project development, acceptance, and implementation. For a high profile project within a congested corridor, we must maintain public confidence in our team, the City and VDOT in executing this complex road improvement project. **Mitigation Strategy:** A multi-faceted public communications plan approach will be implemented to address the needs of the numerous jurisdictional stakeholders, approving entities and the general public while simultaneously gaining public acceptance and stakeholder support, as follows:

➔ **Public Communications and Public Education:** To mitigate this risk, LANE will provide project stakeholders with regular communications on project progress and anticipated traffic phase changes. Pulsar, our public relations firm, will handle these efforts under the direction of DBPM, Ken Prince. We will maintain consistency in messaging to the public through readily available means (e.g., project website, social media, etc.) by which the public may provide feedback. Having successfully constructed more than 15 non-traditional intersections, LANE has confirmed that intersections in corridors such as Military Highway require an extensive public outreach during construction and at implementation. Mitigation will be performed through careful messaging based the LANE team's experience with non-traditional intersection implementation.

**Role of VDOT and Other Agencies:** VDOT's primary and most critical role will be the timely review and approval of all submittals and review/approvals. We will invite/request VDOT and the City of Norfolk, to participate in preparatory meetings for the implementation of major design and construction elements. VDOT will also have their standard role in review/approval of the NADR and any identified noise barriers as well as in the VSMP approval process for stormwater management. Additionally, various other permitting agencies (DEQ, VRMC, USACE) will necessarily have approving/authorization role(s) with regard to the specific environmental permits discussed above over which they respectively have jurisdiction.

The VDOT Hampton Roads District Communications section will approve the public relations plan, oversee the dissemination of information to the public, and approve all public communications to assure accountability and proper messaging.



# LANE

## **Attachment 3.1.2: SOQ Checklist**

**ATTACHMENT 3.1.2**

**Project: 0165-122-V04**

**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.

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>Statement of Qualifications Checklist and Contents</b>	Attachment 3.1.2	Section 3.1.2	no	Appendix
<b>Acknowledgement of RFQ, Revision and/or Addenda</b>	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix
<b>Letter of Submittal (on Offeror's letterhead)</b>				1
Authorized Representative's signature	NA	Section 3.2.1	yes	2
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	2
Offeror's Corporate Structure	NA	Section 3.2.4	yes	2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix

**ATTACHMENT 3.1.2**

**Project: 0165-122-V04**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	Appendix
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	Appendix
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	2
<b>Offeror's Team Structure</b>				3
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix
Key Personnel Resume – Traffic Operations Designer and Manager	Attachment 3.3.1	Section 3.3.1.6	no	Appendix
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.7	no	Appendix

**ATTACHMENT 3.1.2**

**Project: 0165-122-V04**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
Organizational chart	NA	Section 3.3.2	yes	5
Organizational chart narrative	NA	Section 3.3.2	yes	4
<b>Experience of Offeror's Team</b>				9
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
<b>Project Risk</b>				10
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	10

**Attachment 2.10:  
Form C-78-RFQ**



**Attachment 3.2.6:  
Affiliates/Subsidiaries**

## ATTACHMENT 3.2.6

### State Project No. 0165-122-V04

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

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
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. 3 <sup>rd</sup> Floor Doha, Qatar
SUBSIDIARY	Lanecon Corporation	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (51% PARTNER)	Virginia Guardrail Partners	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039

**ATTACHMENT 3.2.6**

**State Project No. 0165-122-V04**

**Affiliated and Subsidiary Companies of the Offeror**

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
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	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	Sunquip, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Sunrise Materials, 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
TRADE NAME	Wardwell Contracting, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	White Brothers, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

## **Attachment 3.2.7: Debarment Forms**

**ATTACHMENT NO. 3.2.7(a)**

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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.

 January 29, 2015 Pursuit Manager  
\_\_\_\_\_  
Signature Date Title

The Lane Construction Corporation  
\_\_\_\_\_  
Name of Firm



**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

- 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.

R. Curt Be                      1/29/2015                      Managing Partner  
Signature                      Date                      Title

Appraisal Review Specialists, LLC  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

- 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.

Tunde Dye                      1/29/15                      President  
Signature                      Date                                      Title

Athavale, Lystad & Associates, Inc.  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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.

 \_\_\_\_\_ 1-29-15 \_\_\_\_\_ Assistant Vice President - Principal  
Signature Date Title

\_\_\_\_\_  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

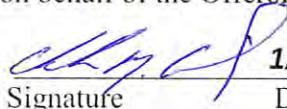
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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



Signature

**1/29/2015**

Date

**Partner**

Title

**Crider, Bouye, Elliott & Goodwin, LLC**

Name of Firm

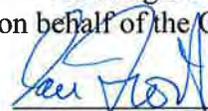
**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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



Signature

January 29, 2015

Date

President

Title

EEE Consulting, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

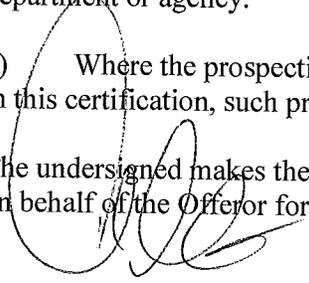
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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

  
Signature

Date

1-29-2015

President  
Title

Name of Firm

Engineering and Testing Services, Inc (ETS, Inc.)

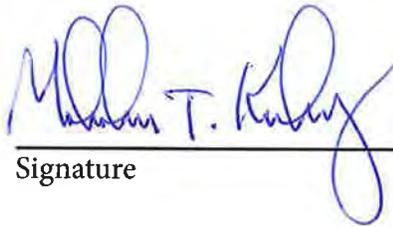


ATTACHEMENT 10.8.6 (B)  
CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

Project No. 0165-122-V04

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

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror.



1/29/15

President

Signature

Date

Title

NXL Construction Services, Inc.

Name of Firm

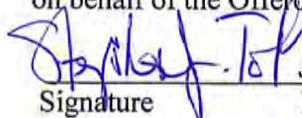
**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

- 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.

	January 29, 2015	Chief Operating Officer
Signature	Date	Title

O. R. Colan Associates of Florida, LLC  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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.

John V. Day      1/29/2015      President  
Signature                  Date                                  Title

Precision Measurements, Inc.  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

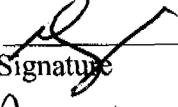
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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.

      1-29-15      Owner + Managing Member  
Signature      Date      Title

Property Title + Escrow, LLC  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

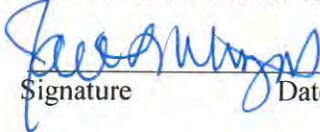
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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.

	1/29/15	Partner
Signature	Date	Title

Pulsar Advertising, Inc.

Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

Signature	Date	Title

\_\_\_\_\_  
Name of Firm

**Attachment 3.2.8:  
VDOT Prequalification Supporting Documentation**

TRANSPORT - E22  
LSPPREQ

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
PREQUALIFIED VENDORS SORTED BY VENDOR NAME  
THIS LIST INCLUDES ALL PREQUALIFIED LEVELS  
AS OF 07/18/2014  
- L -

07/18/2014  
2:01 PM  
PAGE 240

=====

L002  
THE LANE CONSTRUCTION CORPORATION  
PREQ. EXP : 06/30/2015

--PREQ ADDRESS -----	WORK CLASSES (LISTED BUT NOT LIMITED TO)
90 FIELDSTONE COURT	002 - GRADING
CHESHIRE, CT 06410-1212	003 - MAJOR STRUCTURES
PHONE : 203-235-3351	004 - ASPHALT CONCRETE PAVING
FAX : 203-237-4260	006 - PORTLAND CEMENT CONCRETE PAVING
	007 - MINOR STRUCTURES
	045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: CAIOLA, VINCENT JAMES  
EMAIL: VAPREQUAL@LANECONSTRUCT.COM

-----DBE INFORMATION-----

DBE TYPE : N/A  
DBE CONTACT: N/A

=====

**PANEL OF RIGHT OF WAY ACQUISITION CONSULTANTS**

**FIRMS WHO ARE PREQUALIFIED FOR VDOT ADMINISTERED CONTRACTS  
INCLUDES P3, DESIGN BUILD AND  
LOCALLY ADMINISTERED PROJECTS**

KDR Real Estate 2500 Grenoble Road Richmond, Virginia 23294	Allen G. Dorin	(804) 672-1368 Ext. 302
O. R. Colan 22710 Fairview Center Drive Fairview, Ohio 44126	Catherine Muth Kevin Robison Steve Toth	(704) 529-3115 Ext. 255 (440) 827-6116 Ext. 202 (440) 827-6116
Pinnacle Consulting Management 4516 N. W. 36 <sup>th</sup> Street, Suite 100 Oklahoma City, OK 73122	Lisa Harrison	(405) 879-0600
Vaughn & Melton Consulting Engineers, Inc. P. O. Box 1425 109 S. 24th Street Middlesboro, Kentucky 40965	Randolph Scott	(606) 248-6600
Volkert & Associates 5400 Shawnee Road, Suite 301 Alexandria, VA 22312	Dennis Morrison	(703) 642-8100
Universal Field Services P. O. Box 35666 (74153-0666) 6666 South Sheridan Rd., Suite 230 Tulsa, Oklahoma 74133-1763	Steve Benson Leslie Pacheco	(918) 494-7600 (856) 795-1314
Rinker Design Associates, P. C. 9385 Discovery Boulevard Suite 200 Manassas, VA 20109	Christopher R. Reed, CSI	(703) 368-7373
Telics PO Box 830 Statesville, NC 28687	Steve Nichols David Bailey, Senior Mgr. Taylor Keith, Manager	(704) 872-5060 (919) 356-6695 (252) 375-5010
Bowman Consulting Group 9813 Godwin Drive Manassas, VA 20110	Ronnie Van Cleve Senior Project Manager	(703) 302-8740 (703) 867-5197

**FEE REVIEW APPRAISERS/FEE REVIEW APPRAISAL FIRMS  
APPROVED BY VDOT TO PERFORM  
APPRAISAL REVIEW SERVICES**

<u>NAME</u>	<u>ADDRESS &amp; TELEPHONE #</u>	<b>SWAM/ DBE</b>
Pratt, Robert M. Manager/Review Appraiser	Appraisal Review Specialist, LLC 3058 Mt. Vernon Road, Suite 12 Hurricane, West Virginia 25526-9458 Telephone: 304-760-2156 Fax: 304-760-2158 <a href="mailto:appraisalreview@frontier.com">appraisalreview@frontier.com</a>	
Barber, R. Scott Manager/Review Appraiser	Appraisal Review Specialist, LLC 3058 Mt. Vernon Road, Suite 12 Hurricane, West Virginia 25526-9458 Telephone: 304-760-2156 Fax: 304-760-2158 <a href="mailto:appraisalreview@frontier.com">appraisalreview@frontier.com</a>	
Schwartz, Phil Review Appraiser	Appraisal Review Specialist, LLC 3058 Mt. Vernon Road, Suite 12 Hurricane, West Virginia 25526-9458 Telephone: 304-760-2156 Fax: 304-760-2158 <a href="mailto:appraisalreview@frontier.com">appraisalreview@frontier.com</a>	
Bradford, Jennings Review Appraiser	Appraisal Review Specialist, LLC 3058 Mt. Vernon Road, Suite 12 Hurricane, West Virginia 25526-9458 Telephone: 304-760-2156 Fax: 304-760-2158 <a href="mailto:appraisalreview@frontier.com">appraisalreview@frontier.com</a>	
Crawford, Steven M. CEO	Riverridge Valuations, Inc. 135 Brassy Court Johns Creek, Georgia 30022 <a href="mailto:stevencrawford@bellsouth.net">stevencrawford@bellsouth.net</a> (404) 401-3838 (Cell) (770) 640-1922 (Fax)	<b>SWAM</b>
Davis, Lorraine	647 Beall Avenue Luray, VA 22835 (540) 743-3610 <a href="mailto:davisappraisals@embarqmail.com">davisappraisals@embarqmail.com</a> <a href="mailto:douglad@embarqmail.com">douglad@embarqmail.com</a>	<b>SWAM</b>

**HAMPTON ROADS**

<b><u>NAME</u></b>	<b><u>ADDRESS &amp; TELEPHONE #</u></b>	<b><u>SWAM/ DBE</u></b>
Armstrong, Allen ASA, R/W-AC, SR/WA RW-URAC, R/W-RAC, R/W-NAC	Mountain Empire Acquisitions 598 West Valley Drive Kingsport, TN 37664 (512)940-9192 <a href="mailto:aaa@mountainempire.com">aaa@mountainempire.com</a>	
Aufrance, Claire MAI	Aufrance Valuations, LLC 3721 C West Market Street Greensboro, NC 27403 <a href="mailto:Claire.aufrance@gmail.com">Claire.aufrance@gmail.com</a> (800)490-1950 (336)430-9610	
Crider, Charles F. MAI,	Crider Taylor & Bouye, LLC 2 Ridgeway Avenue Greenville, SC 29607 <a href="mailto:crider@criderappraisals.com">crider@criderappraisals.com</a> (864) 232-1788 (864) 232-1890 – Fax	
Colorito, Lawrence J. MAI, MRICS	Axial Advisory Group, LLC 656 Independence Pkwy. Suite 220 Chesapeake, VA 23320 <a href="mailto:icolorito@axialadvisory.com">icolorito@axialadvisory.com</a> (757) 410-1222 (757) 410-2956	
Dew, Joel B. MAI	JBD & Associates of NC, LLC P. O. Box 8508 Asheville, North Carolina 28814 (828) 255-4964 Ex 114 (828) 255-0929 – Fax <a href="mailto:jdew@jbdassociates.com">jdew@jbdassociates.com</a>	
Dundon, Brian J. MAI Certified General	Brian J. Dundon & Associates 192 Ballard Court, Suite 104 Virginia Beach, Virginia 23462 (757) 456-1136 (757) 456-5278 - Fax <a href="mailto:dundon@dundonappraisals.com">dundon@dundonappraisals.com</a>	

**Attachment 3.2.9:  
Surety Letter**

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

January 20, 2015

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

RE: **The Lane Construction Corporation  
Request for Qualifications**

**DESIGN-BUILD PROJECT FOR Military Highway Continuous Flow Intersection From: 0.023 Miles South of Lowery Rd.  
To: 0.230 Miles North of Interstate 64, Norfolk, Virginia; State Project No.: 0165-122-V04; Federal Project No.: STP-5403  
Contract ID Number: C00001765DB81 - Estimated Value of Project: \$60,000,000.00**

To Whom It May Concern:

This letter will serve to confirm that The Lane Construction Corporation is a highly regarded and valued client of the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV) and Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the Commonwealth of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2014.

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

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

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

Sincerely,

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

  
Theresan E. Rowedder  
Attorney-in-Fact

Aon Risk Services  
One Federal Street  
20<sup>th</sup> Floor  
Boston, MA 02110  
860 830 1769

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

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

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 30th day of May, A.D. 2013.

**ATTEST:**

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



By: *Eric D. Barnes*  
*Assistant Secretary  
Eric D. Barnes*

*Thomas O. McClellan*  
*Vice President  
Thomas O. McClellan*

**State of Maryland**  
City of Baltimore

On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant 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, 2015

**EXTRACT FROM BY-LAWS OF THE COMPANIES**

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

**CERTIFICATE**

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 20th day of JANUARY, 2015.



*Geoffrey Delisio*

Geoffrey Delisio, Vice President

**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. 6146310

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Brian Driscoll; Bryan Huft; Jane Gilson; Jean Correia; Jeffrey Hendricks; 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 31st day of May, 2013.

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

By: *Gregory W. Davenport*  
Gregory W. Davenport, Assistant Secretary



STATE OF WASHINGTON ss  
COUNTY OF KING

On this 31st day of May, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, 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 Seattle, Washington, on the day and year first above written.



By: *KD Riley*  
KD Riley, Notary Public

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

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety 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 Gregory W. Davenport, 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, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, 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 20th day of JANUARY, 2015.



By: *David M. Carey*  
David M. Carey, 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.

**Attachment 3.2.10:  
SCC/DPOR Table**

## ATTACHMENT 3.2.10

### State Project No. 0165-122-V04

#### 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	2016-01-31
					Business Entity Registration	0407002174	2015-12-31
Parsons Brinckerhoff, Inc.	F0501603	Foreign Corporation	Active	277 Bendix Road Suite 300 Virginia Beach, VA 23452	Business Entity Branch Office Registration	0411000137	2016-02-29
Appraisal Review Specialists, LLC	T0490682	Foreign Limited Liability Company	Active	3058 Mount Vernon Rd. Suite 12 Hurricane, WV 25523	Appraisal Business Registration	4008001735	2016-04-30
Athavale, Lystad & Associates	F0605842	Foreign Corporation	Active	8180 Greensboro Drive Suite 550 McLean, VA 22102	Business Entity Registration	0407002804	2015-12-31
Cardno TBE	F1301474	Foreign Corporation	Active	211 Expressway Court Virginia Beach, VA 23462	Business Entity Branch Office Registration	0411001100	2016-02-29
Crider, Buoye, Elliot & Goodwin LLC	T0501512	Foreign Limited Liability Company	Active	2 Ridgeway Avenue Greenville, SC 29607	Appraisal Business Registration	4008001745	2016-06-30

## ATTACHMENT 3.2.10

### State Project No. 0165-122-V04

#### SCC and DPOR Information

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
EEE Consulting, Inc.	05049416	Corporation	Active	8525 Bell Creek Road Mechanicsville, VA 23116	Business Entity Registration	0407003798	2015-12-31
					Contractor	2705131506	2015-11-30
Engineering & Testing Services, Inc.	05571955	Corporation	Active	5226 Indian River Road Suite 103 Virginia Beach, VA 23464	Business Entity Registration	0407005064	2015-12-31
					Contractor	2705135376	2016-06-30
GET Solutions, Inc.	05418470	Corporation	Active	204 Grayson Road Virginia Beach, VA 23462	Business Entity Registration	0407004018	12/31/2015
NXL Construction Services, Inc.	03497427	Corporation	Active	114 E Cary Street Suite 200 Richmond, VA 23219	Business Entity Registration	0407003031	12/15/2015
O. R. Colan Associates	T0309270	Foreign Limited Liability Company	Active	11121 Carmel Commons Boulevard Suite 200 Charlotte, NC 28226	Appraisal Business Registration	4008001545	2015-07-31
Precision Measurements, Inc.	04504361	Corporation	Active	851 Seahawk Circle Suite 103 Virginia Beach, VA 23452	Business Entity Registration	0407003345	2015-12-31

## ATTACHMENT 3.2.10

### State Project No. 0165-122-V04

#### SCC and DPOR Information

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Property Title & Escrow, LLC	T0206492	Foreign Limited Liability Company	Active	7008 Security Boulevard Suite 220 Baltimore, MD 21244	N/A	N/A	N/A
Pulsar Advertising, Inc.	F1608555	Foreign Corporation	Active	707 E. Main St., Suite 1315 Richmond, VA 23219	N/A	N/A	N/A
Solstice Environmental, LLC	S2050849	Limited Liability Company	Active	800 Sandoval Drive Virginia Beach, VA 23454-6544	N/A	N/A	N/A

<b>DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)</b>						
<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
The Lane Construction Corporation	Kenneth K. Prince	14500 Avion Parkway Suite 200 Chantilly, VA 20151	Bristow, VA	Professional Engineer License	0402044906	01/31/2015
Parsons Brinckerhoff, Inc.	Derek J. Piper	277 Bendix Road Suite 300 Virginia Beach, VA 23452	Virginia Beach, VA	Professional Engineer License	0402046886	12/31/2015
Parsons Brinckerhoff, Inc.	Timothy R. Rayner	277 Bendix Road Suite 300 Virginia Beach, VA 23452	Virginia Beach, VA	Professional Engineer License	0402041012	06/30/2015

**ATTACHMENT 3.2.10**

**State Project No. 0165-122-V04**

**SCC and DPOR Information**

<b>DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)</b>						
<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Parsons Brinckerhoff, Inc.	Franklin G. Rutledge	277 Bendix Road Suite 300 Virginia Beach, VA 23452	Chesapeake, VA	Professional Engineer License	0402039616	06/30/2016
NXL Construction Services, Inc.	William D. McDowall II	114 E Cary Street Suite 200 Richmond, VA 23219	Hopewell, VA	Professional Engineer License	0402018236	10/31/2016

**Attachment 3.2.10.1:  
SCC Supporting Documentation**



Commonwealth of Virginia  
**State Corporation Commission**

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**Additional Services**

## THE LANE CONSTRUCTION CORPORATION

### General

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

### Principal Office

90 FIELDSTONE COURT  
CHESHIRE CT06410

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**General**

SCC ID: F0501603  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: NY  
 Date of Formation/Registration: 2/11/1986  
 Status: Active  
 Shares Authorized: 30000

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**Principal Office**

ONE PENN PLAZA  
 NEW YORK NY10119

**Registered Agent/Registered Office**

CT CORPORATION SYSTEM  
 4701 COX ROAD, SUITE 285  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/4/2013

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General

SCC ID: T0490682  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: WV  
 Date of Formation/Registration: 2/3/2012  
 Status: Active

Select an action

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Principal Office

3058 MOUNT VERNON RD  
 HURRICANE WV25526

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Registered Agent/Registered Office

INCORP SERVICES INC  
 7288 HANOVER GREEN DR  
 MECHANICSVILLE VA 23111  
 HANOVER COUNTY 142  
 Status: Active  
 Effective Date: 2/3/2012

Screen ID: e1000

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**General**

SCC ID: F0605842  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: MD  
 Date of Formation/Registration: 3/2/1989  
 Status: Active  
 Shares Authorized: 1000

- Select an action**
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**Principal Office**

8180 GREENSBORO DR STE 550  
 MCLEAN VA22102

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**Registered Agent/Registered Office**

REES BROOME, PC  
 1900 GALLOWS RD STE 700  
 TYSONS CORNER VA 22182  
 FAIRFAX COUNTY 129  
 Status: Active  
 Effective Date: 9/1/2012

Screen ID: e1000

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#### General

SCC ID: F1301474  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: FL  
 Date of Formation/Registration: 7/14/1997  
 Status: Active  
 Shares Authorized: 7500

#### Select an action

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#### Principal Office

380 PARK PLACE BLVD SUITE 300  
 CLEARWATER FL33759

#### Registered Agent/Registered Office

C T CORPORATION SYSTEM  
 4701 COX ROAD, SUITE 285  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
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**General**

SCC ID: T0501512  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: SC  
 Date of Formation/Registration: 5/22/2012  
 Status: Active

- Select an action**
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**Principal Office**

2 RIDGEWAY AVE  
 GREENVILLE SC29607

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**Registered Agent/Registered Office**

NATIONAL REGISTERED AGENTS INC  
 4701 COX ROAD, SUITE 285  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/4/2013

Screen ID: e1000

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#### EEE Consulting, Inc.

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##### Business Entities

##### UCC or Tax Liens

##### Court Services

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##### General

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

##### Select an action

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##### Principal Office

8525 BELL CREEK RD  
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##### Registered Agent/Registered Office

CT CORPORATION SYSTEM  
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General

SCC ID: 05571955  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 4/12/2001  
 Status: Active  
 Shares Authorized: 1000

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 STE 103  
 VA BEACH VA23464

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Registered Agent/Registered Office

COLLEEN PATRICE NABHAN  
 5226 INDIAN RIVER ROAD  
 SUITE 103  
 VIRGINIA BEACH VA 23464  
 VIRGINIA BEACH CITY 228  
 Status: Active  
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Geotechnical Environmental and Testing Solutions, Inc.

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**General**

SCC ID: 05418470  
Entity Type: Corporation  
Jurisdiction of Formation: VA  
Date of Formation/Registration: 6/16/2000  
Status: Active  
Shares Authorized: 5000

**Principal Office**

204 GRAYSON ROAD  
VIRGINIA BEACH VA23462

**Select an action**

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Commonwealth of Virginia  
**State Corporation Commission**

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**Business Entities**

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**NXL Construction Co., Inc.**

**General**

SCC ID: 03497427  
Entity Type: Corporation  
Jurisdiction of Formation: VA  
Date of Formation/Registration: 11/17/1989  
Status: Active  
Shares Authorized: 5000

**Principal Office**

114 E CARY STREET SUITE 200  
RICHMOND VA23219

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**General**

SCC ID: T0309270  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: FL  
 Date of Formation/Registration: 6/2/2006  
 Status: Active

- Select an action**
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**Principal Office**

439 NE 7TH AVE  
 FT LAUDERDALE FL33301

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**Registered Agent/Registered Office**

CORPORATION SERVICE COMPANY  
 BANK OF AMERICA CENTER, 16TH FLOOR  
 1111 EAST MAIN STREET  
 RICHMOND VA 23219  
 RICHMOND CITY 216  
 Status: Active  
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#### PRECISION MEASUREMENTS, INC.

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#### General

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

#### Select an action

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#### Principal Office

851 SEAHAWK CIRCLE  
 SUITE 103  
 VIRGINIA BEACH VA23452

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#### Registered Agent/Registered Office

DOUGLAS W DAVIS  
 WYNGATE BUSINESS PARK  
 516 BAYLOR CT  
 CHESAPEAKE VA 23320  
 CHESAPEAKE CITY 236  
 Status: Active  
 Effective Date: 6/4/2002

Screen ID: e1000

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##### Court Services

##### Additional Services

##### General

SCC ID: T0206492  
 Entity Type: Foreign Limited Liability Company  
 Jurisdiction of Formation: MD  
 Date of Formation/Registration: 5/24/2002  
 Status: Active

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File a principal office address change](#)
- [Pay annual registration fee](#)
- [Order a certificate of fact of registration in Virginia](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

2624 LORD BALTIMORE DR #E  
 BALTIMORE MD21244

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

NATIONAL REGISTERED AGENTS INC  
 4701 COX ROAD, SUITE 285  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/4/2013

Screen ID: e1000

Need additional information? Contact [scinfo@scc.virginia.gov](mailto:scinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

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- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



Commonwealth of Virginia  
**State Corporation Commission**

[SCC eFile](#) > [Entity Search](#) > Entity Details



**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**

## **Pulsar Advertising, Inc.**

### **General**

SCC ID: F1608555  
Entity Type: Foreign Corporation  
Jurisdiction of Formation: NY  
Date of Formation/Registration: 11/22/2004  
Status: Active  
Shares Authorized: 200

An ALERT to Virginia Corporations Regarding Solicitations from VIRGINIA COUNCIL FOR CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office website

Home | Site Map | About SCC | Contact SCC | Privacy Policy



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) Help

#### Solstice Environmental, LLC

- 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
- Court Services
- Additional Services

**General**

SCC ID: S2050849  
 Entity Type: Limited Liability Company  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 11/20/2006  
 Status: Active

- Select an action**
- [File a registered agent change](#)
  - [File a registered office address change](#)
  - [Resign as registered agent](#)
  - [File a principal office address change](#)
  - [Pay annual registration fee](#)
  - [Order a certificate of fact of existence](#)
  - [Submit a PDF for processing \(What can I submit?\)](#)
  - [View eFile transaction history](#)
  - [Manage email notifications](#)

**Principal Office**

800 SANDOVAL DR  
 VIRGINIA BEACH VA23454

[New Search](#) [Home](#)

**Registered Agent/Registered Office**

CLAUDETTE LAJOIE TWICHELL  
 800 SANDOVAL DRIVE  
 VIRGINIA BEACH VA 23454  
 VIRGINIA BEACH CITY 228  
 Status: Active  
 Effective Date: 11/6/2013

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

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Build #: 1.0.0.24456

**Attachment 3.2.10.2:  
DPOR Supporting Documentation for Each Office**



Department of Professional and Occupational Regulation

Home > License Lookup > License Lookup & Disciplinary Actions

- License Lookup
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- Professions & Occupations
- Forms & Applications
- Fair Housing Office
- Community Associations
- Report a Licensee
- Records & Documents

### Details of license number 2701011871

Name:	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
Doing Business As:	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number:	2701011871
License Description:	Contractor Class A
Class Definitions	
Business Type:	Corporation
Address:	90 FIELDSTONE COURT CHESHIRE, CT 06410
Specialties/Classifications:	Building (BLD)
Classification Definitions	Highway / Heavy (H/H)
Specialty Definitions	
Initial Certification Date:	1972-10-12
Expiration Date:	2016-01-31



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### Details of license number 0407002174

Name:	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
License Number:	0407002174
License Description:	Business Entity Registration
Business Type:	CORP
Address:	90 FIELDSTONE COURT CHESHIRE, CT 06410
Initial Certification Date:	1985-09-30
Expiration Date:	2015-12-31



Department of Professional and Occupational Regulation

Home > License Lookup > License Lookup & Disciplinary Actions

License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<a href="#">License Details</a> <a href="#">Related Licenses</a> 		
Boards	<b>Name</b> PARSONS BRINCKERHOFF INC <b>License Number</b> 0411000137 <b>License Description</b> Business Entity Branch Office Registration <b>Business Type</b> Corporation <b>Rank</b> Business Entity Branch Office <b>Address</b> 277 BENDIX ROAD SUITE 300, VIRGINIA BEACH, VA 23452 <b>Initial Certification Date</b> 1997-02-10 <b>Expiration Date</b> 2016-02-29		
Professions & Occupations			
Forms & Applications			
Fair Housing Office			
Community Associations			
Report a Licensee			
Records & Documents			



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License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<a href="#">License Details</a> 		
Boards	<b>Name</b> APPRAISAL REVIEW SPECIALISTS LLC <b>License Number</b> 4008001735 <b>License Description</b> Appraisal Business Registration <b>Firm Type</b> LLC - Limited Liability Company <b>Rank</b> Business Entity <b>Address</b> 3058 MOUNT VERNON ROAD SUITE 12, HURRICANE, WV 25523 <b>Initial Certification Date</b> 2012-04-05 <b>Expiration Date</b> 2016-04-30		
Professions & Occupations			
Forms & Applications			
Fair Housing Office			
Community Associations			
Report a Licensee			
Records & Documents			



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License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<b>License Details</b>	Related Licenses	
Boards	<p><b>Name</b> ATHAVALLE, LYSTAD AND ASSOCIATES INC</p> <p><b>License Number</b> 0407002804</p> <p><b>License Description</b> Business Entity Registration</p> <p><b>Rank</b> Business Entity</p> <p><b>Address</b> 8180 GREENSBORO DRIVE #550, MCLEAN, VA 22102</p> <p><b>Initial Certification Date</b> 1987-04-20</p> <p><b>Expiration Date</b> 2015-12-31</p>		
Professions & Occupations			
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Fair Housing Office			
Community Associations			
Report a Licensee			



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License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<b>License Details</b>	Related Licenses	
Boards	<p><b>Name</b> TBE GROUP, INC</p> <p><b>DBA Name</b> CARDNO TBE</p> <p><b>License Number</b> 0411001100</p> <p><b>License Description</b> Business Entity Branch Office Registration</p> <p><b>Business Type</b> Corporation</p> <p><b>Rank</b> Business Entity Branch Office</p> <p><b>Address</b> 211 EXPRESSWAY CT, VIRGINIA BEACH, VA 23462</p> <p><b>Initial Certification Date</b> 2014-03-18</p> <p><b>Expiration Date</b> 2016-02-29</p>		
Professions & Occupations			
Forms & Applications			
Fair Housing Office			
Community Associations			
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Records & Documents			



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	<a href="#">License Details</a>	
	<b>Name</b> CRIDER BOUYE & ELLIOTT LLC <b>License Number</b> 4008001745 <b>License Description</b> Appraisal Business Registration <b>Firm Type</b> LLC - Limited Liability Company <b>Rank</b> Business Entity <b>Address</b> 2 RIDGEWAY AVE, GREENVILLE, SC 29607 <b>Initial Certification Date</b> 2012-06-13 <b>Expiration Date</b> 2016-06-30	



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	<a href="#">License Details</a> <a href="#">Related Licenses</a>	
	<b>Name</b> EEE CONSULTING INC <b>License Number</b> 0407003798 <b>License Description</b> Business Entity Registration <b>Firm Type</b> Corporation <b>Rank</b> Business Entity <b>Address</b> 8525 BELL CREEK RD, MECHANICSVILLE, VA 23116 <b>Initial Certification Date</b> 1998-08-24 <b>Expiration Date</b> 2015-12-31	



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License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<a href="#">License Details</a>		
Boards			
Professions & Occupations	<b>Name</b>	EEE CONSULTING INC	
Forms & Applications	<b>License Number</b>	2705131506	
Fair Housing Office	<b>License Description</b>	Contractor	
Community Associations	<b>Firm Type</b>	Corporation	
Report a Licensee	<b>Rank</b>	Class A	
Records & Documents	<b>Address</b>	8525 BELL CREEK RD, MECHANICSVILLE, VA 23116	
News & Information	<b>Specialties</b>	Environ Mon Well (EMW) Environ Special (ENV)	
	<b>Initial Certification Date</b>	2009-11-16	
	<b>Expiration Date</b>	2015-11-30	



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License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	<a href="#">License Details</a>	<a href="#">Related Licenses</a>	
Boards	<b>Name</b>	ENGINEERING AND TESTING SERVICES INC	
Professions & Occupations	<b>License Number</b>	0407005064	
Forms & Applications	<b>License Description</b>	Business Entity Registration	
Fair Housing Office	<b>Firm Type</b>	Corporation	
Community Associations	<b>Rank</b>	Business Entity	
Report a Licensee	<b>Address</b>	5226 INDIAN RIVER RD STE 103, VIRGINIA BEACH, VA 23464	
Records & Documents	<b>Initial Certification Date</b>	2007-07-05	
	<b>Expiration Date</b>	2015-12-31	



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License Search    Advanced License Search    Disciplinary Action Search

License Details



**Name** ENGINEERING AND TESTING SERVICES INC  
**License Number** 2705135376  
**License Description** Contractor  
**Firm Type** Corporation  
**Rank** Class A  
**Address** 5226 INDIAN RIVER RD STE 103, VIRGINIA BEACH, VA 23464  
**Specialties** Commerc Improve (CIC)  
**Initial Certification Date** 2010-06-17  
**Expiration Date** 2016-06-30



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License Search    Advanced License Search    Disciplinary Action Search

License Details

Related Licenses



**Name** GEOTECHNICAL ENVIRONMENTAL & TESTING SOLUTIONS INC  
**License Number** 0407004018  
**License Description** Business Entity Registration  
**Firm Type** Corporation  
**Rank** Business Entity  
**Address** 204-B GRAYSON ROAD, VIRGINIA BEACH, VA 23462  
**Initial Certification Date** 2000-09-12  
**Expiration Date** 2015-12-31



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Home > License Lookup > License Lookup & Disciplinary Actions

License Lookup	License Search	Advanced License Search	Disciplinary Action Search																		
Online Renewal & Services	License Details		Related Licenses																		
Boards	<table border="0"> <tr><td><b>Name</b></td><td>NXL CONSTRUCTION CO INC</td></tr> <tr><td><b>DBA Name</b></td><td>NXL CONSTRUCTION SERVICES INC</td></tr> <tr><td><b>License Number</b></td><td>0407003031</td></tr> <tr><td><b>License Description</b></td><td>Business Entity Registration</td></tr> <tr><td><b>Firm Type</b></td><td>Corporation</td></tr> <tr><td><b>Rank</b></td><td>Business Entity</td></tr> <tr><td><b>Address</b></td><td>114 E CARY ST STE 200, RICHMOND, VA 23219</td></tr> <tr><td><b>Initial Certification Date</b></td><td>1991-11-08</td></tr> <tr><td><b>Expiration Date</b></td><td>2015-12-31</td></tr> </table>			<b>Name</b>	NXL CONSTRUCTION CO INC	<b>DBA Name</b>	NXL CONSTRUCTION SERVICES INC	<b>License Number</b>	0407003031	<b>License Description</b>	Business Entity Registration	<b>Firm Type</b>	Corporation	<b>Rank</b>	Business Entity	<b>Address</b>	114 E CARY ST STE 200, RICHMOND, VA 23219	<b>Initial Certification Date</b>	1991-11-08	<b>Expiration Date</b>	2015-12-31
<b>Name</b>	NXL CONSTRUCTION CO INC																				
<b>DBA Name</b>	NXL CONSTRUCTION SERVICES INC																				
<b>License Number</b>	0407003031																				
<b>License Description</b>	Business Entity Registration																				
<b>Firm Type</b>	Corporation																				
<b>Rank</b>	Business Entity																				
<b>Address</b>	114 E CARY ST STE 200, RICHMOND, VA 23219																				
<b>Initial Certification Date</b>	1991-11-08																				
<b>Expiration Date</b>	2015-12-31																				
Professions & Occupations																					
Forms & Applications																					
Fair Housing Office																					
Community Associations																					
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Department of Professional and Occupational Regulation

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License Lookup	License Search	Advanced License Search	Disciplinary Action Search																
Online Renewal & Services	License Details																		
Boards	<table border="0"> <tr><td><b>Name</b></td><td>O R COLAN ASSOCIATES OF FLORIDA LLC</td></tr> <tr><td><b>License Number</b></td><td>4008001545</td></tr> <tr><td><b>License Description</b></td><td>Appraisal Business Registration</td></tr> <tr><td><b>Firm Type</b></td><td>LLC - Limited Liability Company</td></tr> <tr><td><b>Rank</b></td><td>Business Entity</td></tr> <tr><td><b>Address</b></td><td>11121 CARMEL COMMONS BOULEVARD SUITE 200, CHARLOTTE, NC 28226</td></tr> <tr><td><b>Initial Certification Date</b></td><td>2009-07-22</td></tr> <tr><td><b>Expiration Date</b></td><td>2015-07-31</td></tr> </table>			<b>Name</b>	O R COLAN ASSOCIATES OF FLORIDA LLC	<b>License Number</b>	4008001545	<b>License Description</b>	Appraisal Business Registration	<b>Firm Type</b>	LLC - Limited Liability Company	<b>Rank</b>	Business Entity	<b>Address</b>	11121 CARMEL COMMONS BOULEVARD SUITE 200, CHARLOTTE, NC 28226	<b>Initial Certification Date</b>	2009-07-22	<b>Expiration Date</b>	2015-07-31
<b>Name</b>	O R COLAN ASSOCIATES OF FLORIDA LLC																		
<b>License Number</b>	4008001545																		
<b>License Description</b>	Appraisal Business Registration																		
<b>Firm Type</b>	LLC - Limited Liability Company																		
<b>Rank</b>	Business Entity																		
<b>Address</b>	11121 CARMEL COMMONS BOULEVARD SUITE 200, CHARLOTTE, NC 28226																		
<b>Initial Certification Date</b>	2009-07-22																		
<b>Expiration Date</b>	2015-07-31																		
Professions & Occupations																			
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Fair Housing Office																			
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License Search    Advanced License Search    Disciplinary Action Search

License Details    Related Licenses    Complaints



<b>Name</b>	PRECISION MEASUREMENTS INC
<b>License Number</b>	0407003345
<b>License Description</b>	Business Entity Registration
<b>Firm Type</b>	Corporation
<b>Rank</b>	Business Entity
<b>Address</b>	851 SEAHAWK CIR SUITE 103, VIRGINIA BEACH, VA 23452
<b>Initial Certification Date</b>	1995-10-24
<b>Expiration Date</b>	2015-12-31

**Attachment 3.2.10.3:  
DPOR Supporting Documentation for Key Personnel**



Department of Professional and Occupational Regulation

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	<a href="#">License Details</a>
	<b>Name</b> PRINCE, KENNETH KWAME <b>License Number</b> 0402044906 <b>License Description</b> Professional Engineer License <b>Rank</b> Professional Engineer <b>Address</b> BRISTOW, VA 20136-2675 <b>Initial Certification Date</b> 2009-01-05 <b>Expiration Date</b> 2015-01-31



Department of Professional and Occupational Regulation

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	<a href="#">License Details</a>	
	<b>Name</b> PIPER, DEREK JOHN <b>License Number</b> 0402046886 <b>License Description</b> Professional Engineer License <b>Rank</b> Professional Engineer <b>Address</b> VIRGINIA BEACH, VA 23452 <b>Initial Certification Date</b> 2009-12-02 <b>Expiration Date</b> 2015-12-31	



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License Search   Advanced License Search   Disciplinary Action Search

License Details



**Name** MCDOWALL, WILLIAM DOUGLAS II  
**License Number** 0402018236  
**License Description** Professional Engineer License  
**Rank** Professional Engineer  
**Address** HOPEWELL, VA 23860-7777  
**Initial Certification Date** 1988-02-23  
**Expiration Date** 2016-10-31



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- Forms & Applications
- Fair Housing Office
- Community Associations
- Report a Licensee

License Search   Advanced License Search   Disciplinary Action Search

License Details



**Name** RAYNER, TIMOTHY RAYMOND  
**License Number** 0402041012  
**License Description** Professional Engineer License  
**Rank** Professional Engineer  
**Address** VIRGINIA BEACH, VA 23451  
**Initial Certification Date** 2005-06-17  
**Expiration Date** 2015-06-30



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- Community Associations
- Report a Licensee

License Search   Advanced License Search   Disciplinary Action Search

License Details



**Name** RUTLEDGE, FRANKLIN GENE  
**License Number** 0402039616  
**License Description** Professional Engineer License  
**Rank** Professional Engineer  
**Address** CHESAPEAKE, VA 23322  
**Initial Certification Date** 2004-06-14  
**Expiration Date** 2016-06-30

**Attachment 3.3.1:  
Key Personnel Resume Forms**

**ATTACHMENT 3.3.1**  
**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <b>Name &amp; Title:</b> <b>KENNETH PRINCE, PE, District Manager</b>	
b. <b>Project Assignment:</b> <b>Design Build Project Manager</b>	
c. <b>Name of Firm with which you are now associated:</b> <b>The Lane Construction Corporation</b>	
d. <b>Years experience:</b> With this Firm <b>11</b> Years With Other Firms <b>7</b> Years Please list chronologically 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Prince will be available to VDOT throughout the project and possesses the necessary expertise and experience required to supervise and exercise control of the work. He will accept responsibility for the final work product. <b>The Lane Construction Corporation, 2011–Present.</b> Mr. Prince, a licensed PE in Virginia, serves as the Project Manager for LANE for various DB projects in the Mid-Atlantic region ranging from \$7M to \$726M. He is responsible for overall management of the design, construction, quality, and contract administration on these projects. He provides strategic planning and execution for projects, leads a team of project and construction managers, and works with design and construction teams on innovative techniques and means and methods to execute projects. He organizes and assigns equipment, personnel, and subcontractors to execute each project. He leads and implements safety initiatives, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place. <b>The Lane Construction Corporation, 2003–2010.</b> As Project Manager/Engineer, Mr. Prince was responsible for the operation of all transportation construction operations, safety, QA/QC programs for LANE’s Mid-Atlantic region. He supervised work crews and subcontractors on projects for interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls. <b>Washington Group International, 2001–2002.</b> As Construction Engineer/Superintendent, Mr. Prince was responsible for construction operations, scheduling of work crews and subcontractors, safety and quality programs and construction plans. <b>Dillingham Construction N.A., Inc., Pre–2000.</b> As Construction/Scheduling Engineer, Mr. Prince was responsible for CPM schedule (maintenance and updates), contract change orders (estimate and negotiate); and managed subcontractor activities.	
e. <b>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</b> University of Michigan, Ann Arbor, MI / B.S. / 1996 / Civil Engineering	
f. <b>Active Registration: Year First Registered/ Discipline/VA Registration #:</b> 2009/Professional Engineer/VA #0402044906	
g. <b>Document the extent and depth of experience and qualifications relevant to the Project.</b> 1. <b><i>Note your specific responsibilities and authorities for each project, not those of the firm.</i></b> 2. <b><i>Note whether experience is with current firm or with other firm.</i></b> 3. <b><i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></b> <b>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</b>	
<b>1. VDOT, I-64/I-264 PAVEMENT REHABILITATION DB, Norfolk, Virginia</b>	
<b>Name of Firm:</b> The Lane Construction Corporation	<b>Project Role:</b> Design-Build Project Manager
<b>Beginning Date:</b> June 2014	<b>End Date:</b> November 2015
<b>Specific Responsibilities:</b> Mr. Prince is responsible for the management of this DB project which includes the project design, construction, quality management, safety program, and contract administration. He facilitates communication among team partners, efficiently designates resources to ensure timely delivery, coordinates with personnel on adjacent projects, and procures and furnishes the materials, equipment, services and labor necessary for project completion. Mr. Prince's interactions from design through construction include leading project meetings to discuss all aspects of the project, verifying that VDOT specifications are followed in design through construction, and participating in constructability reviews. He addresses issues with the proper personnel and VDOT; and has continuous interaction with the QAM to ensure project compliance. Mr. Prince is also responsible for the coordination of the public outreach and public meetings. <b>Project Relevance:</b> This \$30.7M D-B project located in an urban/commercial area consists of the rehabilitation of approximately 10.2 miles of Interstates 64 and 264 in Norfolk. This project has many similar scope elements as the Military Highway CFI project such as: roadway; structures; environmental; hydraulics; traffic control devices; ITS devices/systems; TMP; public involvement/relations and management; QA/QC; construction engineering and inspection; and project management. The project also includes significant public relations including coordination with the City of Norfolk and development of work-plans that incorporates Third Party availability and schedule requirements. Similar to the goals of the Military Highway CFI project, this project significantly improves the safety of traveling motorists.	
<b>2. VDOT, I-95 EXPRESS LANES DB, Fairfax County to Stafford County, Virginia</b>	
<b>Name of Firm:</b> The Lane Construction Corporation	<b>Project Role:</b> Design-Build Project Manager
<b>Beginning Date:</b> June 2012	<b>End Date:</b> June 2014



**Specific Responsibilities:** Mr. Prince’s role as LANE’s DBPM for the Military Highway CFI project will be similar to his role on the I-95 Express Lanes DB project. Mr. Prince administered the contract, directed the project team, and oversaw quality on this \$726M DB. He coordinated all resources necessary to execute the successful, early delivery of the I-95 Express Lanes; monitored progress of the design/construction deliverables; supervised the procurement and furnishing of materials, equipment, services and labor; and ensured that safety and quality standards were upheld. He coordinated regularly with project partners, including the designer, VDOT, GEC, and key stakeholders, and negotiated and resolved contract terms. He was responsible for overall project design, quality, safety, and contract administration.

**Project Relevance:** This DB project created 29 miles of Express Lanes on I-95 from Alexandria to Stafford. This nine-mile reversible two-lane extension of the existing HOV lanes helps alleviate some of the worst traffic on one of the most heavily traveled and congested urban corridors in the United States. Similar scope of work items to the Military Highway CFI project include: roadway; interchanges; structures and bridges; significant environmental efforts; geotechnical explorations; hydraulics; traffic control devices; ITS devices/systems; TMP; noise walls; ROW; utilities; QA/QC; railroad coordination and development of work-plan and schedule (with Norfolk Southern and VRE); construction engineering and inspection; and project management. Like the Military Highway CFI project, the I-95 Express Lanes includes extensive MOT plans, utility relocation efforts (including past identification and data gathering), review of design concepts against existing utilities, determination of mitigation measures, and ongoing coordination with utility companies. The project involved comprehensive public relations with over 365 outreach meetings. **(See Lead Contractor Work History for full details.)**

<b>3. BUS RAPID TRANSIT DB, Alexandria, Virginia</b>		
<b>Name of Firm:</b> The Lane Construction Corporation	<b>Project Role:</b> Design-Build Project Manager	
<b>Beginning Date:</b> June 2011	<b>End Date:</b> June 2014	

**Specific Responsibilities:** Mr. Prince was responsible for directing and managing the project team, coordinated with and monitored contract progress with the Owner and subcontractors (including adherence to contractual requirements and specifications), and oversaw the overall safety and quality control programs. He ensured that project resources (manpower, materials, subcontractors, and equipment) were available and furnished in a timely manner to the project. He facilitated communication among team partners, efficiently designated resources to ensure timely delivery, coordinated with personnel on adjacent projects, and supervised the procurement and furnishings of materials, equipment, services and labor necessary for project completion.

**Project Relevance:** This \$13M DB project is the Washington, DC region’s very first constructed bus rapid transit (BRT) line. The project included construction of 0.8 miles of “bus only” dedicated travel lanes in the existing median of Jefferson Davis Highway (Route 1) which is a heavily traveled urban/commercial roadway. Similarities to the Military Highway CFI project include: roadway with innovative features; multiple intersections; structures; environmental; geotechnical explorations; hydraulics; ITS devices/systems; TMP; utilities; public involvement/relations and management; QA/QC; WMATA Metro coordination; development of work-plan and schedule with Third Parties; and construction engineering and inspection. Other important aspects of the project included excavation, hazardous materials identification and remediation, drainage system installation and retrofitting, landscaping with soil amendments, a new street lighting system, and traffic control devices, including reconfiguration of the traffic signal system to accommodate the BRT lanes. Challenges on this project included unknown utilities and changes to conditions, but the project team reacted quickly and efficiently which allowed for the project to be completed ahead of schedule. With the project taking place in a congested urban area in Alexandria, the team exercised caution with the existing vehicular and pedestrian traffic. LANE continually worked with on-site safety personnel to implement safety controls to prevent hazards on and near the site.

<b>4. DULLES CORRIDOR METRORAIL, PHASE 1 UTILITIES RELOCATION, Dulles, Virginia</b>		
<b>Name of Firm:</b> The Lane Construction Corporation	<b>Project Role:</b> Design-Build Project Manager	
<b>Beginning Date:</b> June 2008	<b>End Date:</b> June 2012	

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

**Project Relevance:** This \$139M contract included overall project management from commencement through execution and completion of over 17 miles of major utility relocation, support of excavation, environmental and erosion and sediment controls, MOT along Route 7 in Tysons Corner (heavy commercial/urban area) and the 11 mile Phase 1 alignment of the Dulles Metrorail Silver Line. The project included the construction and implementation of extensive MOT plans (over 300 plans), road construction and repairs on Routes 7, 123 and related side streets in Tysons Corner; erosion and sediment control measures; demolition; earthwork; utilities; contaminated soil and hazardous material coordination and mitigation; asphalt and concrete pavement; traffic signals; and roadway lighting. Utilities installed included electrical duct bank, waterlines, sanitary sewer, storm drain, traction power duct bank, and communication duct bank for more than eight different communication companies. Extensive public relations and involvement with the community was required. This project received LANE's "Safest Project of the Year" Award in 2010 and 2011 - an IRR of 0.00.

**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**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title: <b>BILL McDOWALL, PE, DBIA, Quality Assurance/Project Manager</b>	
b. Project Assignment: <b>Quality Assurance Manager</b>	
c. Name of Firm with which you are now associated: <b>NXL Construction Services, Inc.</b>	
d. Years experience: With this Firm <b>1</b> Years With Other Firms <b>33</b> Years Please list chronologically 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): <b><u>NXL Construction Company, Inc., 2014-Present.</u></b> As PM/QAM for NXL, Mr. McDowall assists with ongoing Design-Build projects to ensure performance and coordination of QA testing and inspection in accordance with VDOT's Design-Build guidelines throughout the project. Other responsibilities include the monitoring of contractor's QC program and ensuring all contract requirements & specifications are appropriately administered & applied, all required QC testing and independent QA is carried out in accordance with applicable requirements ensuring construction quality standards are met. <b><u>Volkert, Inc., 2002-2014.</u></b> As Vice President, Mr. McDowall managed construction engineering staff, contract management, quality control, and field inspection/review. He served as the QAM on VDOT DB projects as well as oversaw the QAM personnel for the company. In addition, he served in the role of QA/QC Manager on a number of VDOT bid-build projects under respective CEI contracts to VDOT. <b><u>Virginia Department of Transportation, 1996-2001.</u></b> As Assistant State Construction Engineer, he provided oversight of the VDOT construction program in Northern Virginia, Fredericksburg, and Culpeper districts.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: North Carolina State University, Raleigh, NC/B.S./1980/Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1988/Professional Engineer/VA #018236; 1990/Professional Engineer/MD #18113; 2014/Design Build Institute of America	
g. Document the extent and depth of experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities 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> <b>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</b>	
<b>1. MIDDLE GROUND BOULEVARD EXTENSION DB, Newport News, Virginia</b>	
Name of Firm: Volkert, Inc.	Project Role: Chief Construction Manager
Beginning Date: August 2012	End Date: June 2014
	
<i>Specific Responsibilities:</i> Mr. McDowall's role as Chief Construction Manager was similar to that required on the Military Highway CFI project as he ensured that contractor quality control was upheld in the field, confirmed compliance with VDOT's design-build procedures and requirements and satisfaction with Volkert's performance of QA management and testing. He reviewed piling for bearing capacity, length, and center of gravity. He also made recommendations for various adjustments, reviewed and verified QC for asphalt placement and reviewed CPM schedules for completeness. He managed on-site staff to ensure a quality project was built on schedule, within budget and safely. <i>Project Relevance:</i> This Hampton Roads Area DB project included a new 4-lane roadway, bridge construction over CSX Railroad, sidewalk and shared-use path construction, enhanced landscaping and lighting, additional turn lanes and signal modifications. It also involved construction and implementation of maintenance of traffic, environmental controls; demolition; earthwork; storm drainage, water, electrical, communication utilities; asphalt and concrete pavement; roadway bridges; retaining walls; traffic signals; and roadway lighting.	
<b>2. I-66 PAVEMENT REHABILITATION DB, Fairfax County, Virginia</b>	
Name of Firm: Volkert, Inc.	Project Role: QA Manager
Beginning Date: February 2011	End Date: June 2013
	
<i>Specific Responsibilities:</i> Mr. McDowall's role as QAM is identical to that required on the Military Highway CFI Project as he managed QA inspection and materials testing including preparation of the QA testing plan, review and approval of the QC testing plan, supervision of QA testing technicians, review of testing results, preparation reports, and confirmation of accurate maintenance of testing documentation including the materials notebook, etc. He led inspection meetings and prepared construction inspection checklists. In addition to coordinating with VDOT's OIA/OVST Inspectors, Mr. McDowall also worked with the contractor and QC team to anticipate and resolve field issues in the most efficient and cost-effective manner. Developed, monitored, and updated CPM construction schedule and conducted analysis. Prepared monthly summary reports. Involved with preparation and implementation of QA/QC plan and monitored compliance throughout design and construction. Conducted a	

constructability review during each of the four stages of design.

*Project Relevance:* This Northern Virginia Area DB project was an urban reconstruction project in a highly congested area, similar to the Military Highway project. The project involved full-depth patching of concrete pavement and asphalt overly of a 6.5-mile segment of I-66. Roadway geometric improvements, drainage, utility, ITS, and lighting upgrades, TMP development and public outreach were also major components of this \$43M DB project. A key challenge of this project was the coordination of concurrent design and construction through the development of an effective but complex sequencing plan and complex transportation management plan to maintain the high volumes of traffic on I-66. The project received a national pavement quality award from the National Asphalt Pavement Association.

**3. ROUTE 11/ROUTE 460 WIDENING, Roanoke County, Virginia**

<i>Name of Firm:</i> Volkert, Inc.	<i>Project Role:</i> QA/QC Manager
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<i>Beginning Date:</i> November 2010	<i>End Date:</i> May 2014
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*Specific Responsibilities:* As QA/QC Manager, Mr. McDowall’s role was similar to that required on the Military Highway CFI Project as he performed duties including constructability review, NOI analysis, and CPM schedule review and impact analysis. He also provided engineering support during construction. Mr. McDowall observed inspection activities and verified project documentation as well as testing reports for completeness and accuracy. Met with client and contractor representatives to discuss and evaluate construction issues and advised on potential cost effective resolutions. The original plans incorporated standard VDOT designs for the widening of a single-span bridge crossing a creek and 2 box culverts. Recommended using alternative designs to lower construction costs and increase construction productivity while still meeting VDOT requirements.

*Project Relevance:* This Western Virginia project included the widening of a 2.1-mile section of 3-lane road to five lanes. This \$30M project included a 40-foot long bridge with 36 drilled shaft foundations, triple and double-box culverts, a raised median, center and right-turn lanes at intersections and crossovers, and an extensive storm drainage system with stormwater management ponds and large jack and bore segments under the Norfolk Southern Railroad tracks into the Roanoke River.

**4. ROUTE 221 REALIGNMENT, Roanoke County, Virginia**

<i>Name of Firm:</i> Volkert, Inc.	<i>Project Role:</i> QA/QC Manager
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<i>Beginning Date:</i> September 2010	<i>End Date:</i> August 2013
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*Specific Responsibilities:* Mr. McDowall’s role as QA/QC Manager was similar to that required on the Military Highway CFI Project as he performed contract administration, design/construction coordination, project oversight, and construction quality control. He managed on-site staff to ensure a quality project was built on schedule, within budget and safely. He ensured Contractor quality control was upheld in the field, managed and coordinated with the various specialty subcontractors and suppliers. He observed inspectors work and checked project documentation for completeness and accuracy and to verify proper organization and maintenance. Reviewed testing reports for completeness and accuracy. Reviewed the blasting and surplus removal plans to confirm judicious use of explosives, proper blasting techniques, and safety. Evaluated and reviewed construction schedules for completeness and conducted schedule impact analysis. Planned upcoming work activities with the construction manager and inspection staff. Assisted with identification of potential issues and careful planning for avoidance / mitigation. Met with VDOT project manager to evaluate satisfaction with inspector performance and to discuss quality improvement processes.

*Project Relevance:* This \$20M project involved realignment of a 0.75-mile segment of Route 221 and widening from two to four lanes. It also included two new prestressed-concrete bulb-t beam bridges, a single-span steel replacement bridge, a new culvert, intersection improvements, a new drainage system and 2 SWM ponds. The existing 2-lane road was a major commuter route with an average daily traffic volume of 14,000. Challenges included blasting operations that were appropriate for the various types of rocks and geological conditions, prevention of slope failure, safety of motorists and construction workers, avoidance of environmental impacts, omission from the steel schedule, and finding a disposal site that complied with local ordinances and VDOT and the USACE requirements.

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

**ATTACHMENT 3.3.1  
KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <b>Name &amp; Title:</b> <b>DEREK PIPER, PE, AICP, Senior Supervising Project Manager</b>	
b. <b>Project Assignment:</b> <b>Design Manager, Design QA/QC Manager</b>	
c. <b>Name of Firm with which you are now associated:</b> <b>Parsons Brinckerhoff, Inc.</b>	
d. <b>Years experience:</b> With this Firm <b>19 Years</b> With Other Firms <b>11 Years</b> Please list chronologically 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): <b>Parsons Brinckerhoff, 1999-Present.</b> Derek has 30 years of civil/roadway engineering experience, including 19 years managing complex highway/roadway improvement projects including several non-traditional intersections. Mr. Piper's technical specialties include program/project management, highway and intersection design, traffic data analysis; stormwater management plan development, wetlands and stream modification permitting, environmental documentation, utility coordination, and utility design. His responsibilities as a Design Manager have included coordinating the individual design disciplines and ensuring overall project design is in conformance with contract documents and delivered on time and within budget. He is responsible for conducting quality reviews for all deliverables and ensuring client satisfaction. He has established working relationships with permitting agency staff, utility company personnel, and regional rail entities in the Hampton Roads region.	
e. <b>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</b> University of Pittsburgh, Pittsburgh, PA / B.S. / 1985 / Civil Engineering	
f. <b>Active Registration: Year First Registered/ Discipline/VA Registration #:</b> 1990/Professional Engineer/SC #040220046; 2000/Professional Engineer/VA #0402046886; 2000/Certified Planner/017279	
g. <b>Document the extent and depth of experience and qualifications relevant to the Project.</b> 1. <i>Note your specific responsibilities and authorities 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> <b>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</b>	
<b>1. VDOT I-264 WIDENING/INTERCHANGE/MLK EXTENSION DB, Portsmouth, Virginia</b>	
<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> Design Manager
<b>Beginning Date:</b> May 2009	<b>End Date:</b> June 2013
	
<b>Specific Responsibilities:</b> Mr. Piper served as the Design Manager for over \$200 million worth of improvements to I-264 and the MLK Extension. Specific scope elements included: widening of I-264 to accommodate the new interchange at MLK Extension; the design of modifications to the MLK Extension and London Boulevard interchange and adjacent intersections, the design of the multi-lane MLK Extension over CSX's Portsmouth Yard required extensive railroad coordination efforts; 11 stormwater ponds/basins (including significant aesthetic treatments); three noise barriers; significant overhead guide signage; landscaping and aesthetic treatments; ITS system replacement/upgrades along I-264; and new ITS systems along the MLK Extension. Derek managed the design effort associated with delivering final roadway, structure and bridge design, and maintenance of traffic plans; managed environmental and stormwater permitting, preparation of the Noise Abatement Design Report (NADR), aesthetic treatments design, utility coordination and utility relocation design; and coordinated design and ROW issues with the DB Contractor and VDOT. Derek was responsible for ensuring the project design was in conformance with the contract documents. He established and oversaw a QA/QC program for the disciplines involved in the design of the project, including review of the design, working plans, shop drawings, specifications and constructability for the project. <b>The design for this project is complete.</b> Construction is over 50% complete and scheduled for completion in 2016. Parsons Brinckerhoff is currently providing design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation.	
<b>Project Relevance:</b> Mr. Piper served as the Design Manager for this specific component of the overall Elizabeth River Tunnels Project, the same role he is proposed for the Military Highway CFI project. The Project has several similarities to the Military Highway CFI Project including: roadway widening design; intersection design; a TMP with complex MOT phasing/staging; railroad coordination; design of stormwater ponds/basins; environmental permitting; preparation of the NADR, design of pavement markings, signage, and ITS elements; and utility coordination and relocation design. This is a DB project being delivered under a PPTA agreement for VDOT in Hampton Roads. Mr. Piper is experienced in delivering design projects in the flat terrain and problem soil conditions prevalent in Hampton Roads. Also, Mr. Piper has established working relationships with permitting agency staff and utility company representatives in the region.	
<b>2. INDIAN RIVER ROAD AND KEMPSVILLE ROAD CFI, Virginia Beach, Virginia</b>	
<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> Design QA/QC
<b>Beginning Date:</b> September 2010	<b>End Date:</b> August 2014
<b>Specific Responsibilities:</b> As part of the design management team, Mr. Piper oversaw and participated in peer reviews and	

Design QC Review for this project, a first of a kind CFI project in Virginia. Mr. Piper performed QC reviews and design input for this CFI intersection and roadway widening project. He also reviewed traffic analysis data, maintenance of traffic plans, and other alternative traffic configurations for consideration.

**Project Relevance:** Mr. Piper provided design QC for this CFI project including a detailed review of roadway plans, traffic analyses and MOT plans, drainage design plans, and pavement marking & signage plans. This project includes a CFI intersection, roadway improvements, intersection design, stormwater management, E&S, MOT plans for temporary traffic configurations, and pavement marking/ signage plans. PB, as prime consultant, is providing preliminary and final design, traffic analyses, TMP/MOT plans, environmental and geotechnical engineering for the implementation of a CFI for the intersection of Indian River Road and Kempsville Road. The design concept utilizes indirect and displaced left turns to improve the operation and flow of this major urban arterial. **Design of this project is 90% complete. This will be the first CFI project designed for construction in Virginia.**

**3. US 17 (DOMINION BOULEVARD) WIDENING, Chesapeake, Virginia**

<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> Design QA/QC
<b>Beginning Date:</b> July 2009	<b>End Date:</b> January 2014

**Specific Responsibilities:** Mr. Piper performed QA/QC of roadway plans for this \$188 million improvement to US 17. He provided formal review of the design plans, including roadway widening, intersections, stormwater management and drainage collection systems, MOT and utility relocations. Mr. Piper coordinated plan reviews with various discipline leads and provided constructability comments to improve traffic control and reduce property impacts. The project involved roadway widening under heavy traffic volumes, a non-traditional intersection and converted an existing two-lane suburban roadway into a four-lane facility. The project design included a phased TMP/MOT plan to construct grade separated interchanges while maintaining existing traffic flows at the major intersections with US 17. The project included six new stormwater management facilities; modifications to both lengthen and convert an existing twin-cell box culvert to a triple-cell box culvert; stream modifications; 120,000sf of MSE wall at 20 locations; noise barriers; and significant utility relocations. **The design for this project is complete.** Construction is over 50% complete with expected completion in 2017.

**Project Relevance:** Mr. Piper provided design QA/QC for the Roadway Plans package. Relevant scope items included: roadway widening; significant stormwater management ponds/basins and drainage collection system; traffic signal systems; MOT with staged construction; utility coordination; right-of-way acquisition; and, environmental permitting.

**4. SC 602 PLATT SPRINGS ROAD, Lexington County, South Carolina**

<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> Design Manager
<b>Beginning Date:</b> August 1999	<b>End Date:</b> October 2002

**Specific Responsibilities:** Mr. Piper served as the Design Manager overseeing development of right-of-way and construction plans for this \$30 million, 5.5-mile suburban widening project. The project involved widening an existing 2-lane roadway to 5-lanes and included: significant utility relocation coordination; railroad coordination for widening an existing at-grade crossing; nearly 200 property acquisitions, and numerous stormwater management ponds. Mr. Piper provided significant technical support throughout the right-of-way acquisition phase, include serving as a fact witness during condemnation trials. **Design and construction are both complete.** Mr. Piper provided design support throughout the duration of construction.

**Project Relevance:** Mr. Piper served as the Design Manager for this project, the same role as proposed for the Military Highway CFI project. The project has several similarities, including: significant roadway widening project with maintenance of traffic; design of stormwater ponds/basins; drainage collection system; MOT with staged construction; environmental permitting, right-of-way acquisition, railroad coordination, and utility coordination.

**5. SC 6 & SC 60 WIDENING, Lexington, South Carolina**

<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> Design Manager
<b>Beginning Date:</b> January 2001	<b>End Date:</b> October 2004

**Specific Responsibilities:** Mr. Piper served as the Design Manager overseeing development of right-of-way and construction plans for this \$60 million, 7.5-mile suburban widening project. The project involved widening an existing 2-lane roadway to a 5-lane curb & gutter section with sidewalks and included one widened bridge structure, one new 5-lane, 560-ft. bridge structure, and 1.5 miles of new northbound lanes constructed on an existing 200' high earthen dam. The project also included over 250 property acquisitions, significant utility relocations, numerous stormwater management ponds, and significant coordination with the owner of the earthen dam, South Carolina Electric & Gas Company. Additionally, the project included a shared use path crossing the dam as well as bicycle lanes and sidewalks within the project limits. Mr. Piper provided significant technical support throughout the right-of-way acquisition phase, include serving as a fact witness during condemnation trials. **Design and construction are both complete.** Mr. Piper provided design support throughout the duration of construction.

**Project Relevance:** Mr. Piper served as the Design Manager for this project, the same role as proposed for the Military Highway CFI project. The project has several similarities including: significant roadway widening project with MOT with staged construction; design of stormwater ponds/basins; design of drainage collection system; MOT with staged construction; environmental permitting, and extensive ROW and utility coordination.

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**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>BRIAN BASNIGHT, Construction Manager</b>	
b. <u>Project Assignment:</u> <b>Construction Manager</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>The Lane Construction Corporation</b>	
d. <u>Years experience: With this Firm 2 Years With Other Firms 22 Years</u> Please list chronologically 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Basnight has 20+ years of construction experience with projects ranging in size from \$15M to \$726M. Mr. Basnight will be the driving force of the Military Highway CFI Project, as exemplified in his work history, and will be on site for the duration of construction operations devoting 100% of his time and expertise. Mr. Basnight currently holds the Virginia DEQ RLD Certification and VDOT ESCCC. <b>The Lane Construction Corporation, 2010–Present.</b> Mr. Basnight, serves as a Construction Manager for LANE. He is responsible for managing the entire construction process. His experience includes: managing the D-B construction process; cost control tracking; field layouts; survey; and safety implementation. 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 specifications. Mr. Basnight leads and implements safety initiatives, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place. <b>Archer Western Contractors, 2007 – 2012.</b> As Construction Manager/Field Engineer, Mr. Basnight’s responsibilities included overseeing daily construction and ensuring all materials used and work performed were in compliance with contract and specifications. He was additionally responsible for project cost, staffing, quality control, and scheduling. He has served as Construction Manager and Field Engineer on projects in Georgia and Virginia. Mr. Basnight has extensive experience with bridge and other concrete structures, roadway, , retaining walls, utility relocations, drainage, MOT, environmental controls, asphalt and concrete paving, and other heavy civil construction elements. <b>E.V. Williams, Field Manager/Engineer, 2001 – 2007.</b> As a Field Manager/Engineer, Mr. Basnight’s responsibilities included overseeing daily construction activities and ensuring all materials used and work performed are in compliance with specifications. Also responsible for project cost, staffing, quality control, and scheduling. He has served as Field Manager and Field Engineer on projects throughout the Hampton Roads area.	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> University of North Carolina, Chapel Hill, NC / M.S. / 1992 / Civil Engineering; University of North Carolina, Chapel Hill, NC / B.S. / 1990 / Civil Engineering	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> VDOT Erosion & Sediment Control Contractor Certification, Cert # 6006C, Expires 11/18/2016 Virginia Department of Environmental Quality Responsible Land Disturber, Cert # 41032, Expires 12/20/2016	
g. <u>Document the extent and depth of experience and qualifications relevant to the Project.</u> 1. <u>Note your specific responsibilities and authorities for each project, not those of the firm.</u> 2. <u>Note whether experience is with current firm or with other firm.</u> 3. <u>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</u> <b>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</b>	
<b>1. VDOT, I-64/I-264 PAVEMENT REHABILITATION DB, Norfolk, Virginia</b>	
<u>Name of Firm:</u> The Lane Construction Corporation	<u>Project Role:</u> Construction Manager
<u>Beginning Date:</u> June 2014	<u>End Date:</u> November 2015
	
<u>Specific Responsibilities:</u> Mr. Basnight is responsible for planning, directing, and coordinating all construction activities, including quality control, project budget control and management of all subcontractors. He directs and manages project development and coordinates with the Lead Designer for all engineering and construction matters including constructability reviews. He reviews project status reports and ensures all designs adhere to contract specifications. He defines the safety plan, daily and job specific goals, deliverables and estimated resources (manpower, materials and subcontractors) needed to achieve project goals. As LANE’s CM, he is in charge of the overall project and weekly scheduling, means and methods of construction, public outreach (directs subcontractor Pulsar who is on our Military Highway Team) and the coordination with the City of Norfolk, VDOT, and adjacent projects. He has been full time/on-site during construction. Mr. Basnight’s current role is identical to the requirements for the CM for the Military Highway CFI project.	
<u>Project Relevance:</u> This \$30.7M DB project located in an urban/commercial area consists of the rehabilitation on approximately 10.2 miles of Interstates 64 and 264 in Norfolk. This project has many similar scope elements as the Military Highway CFI project: it is adjacent to the proposed project, heavy MOT in high traffic volumes, traffic control devices; ITS devices/systems; TMP, survey; structures; environmental; hydraulics; public involvement/relations and management; QA/QC; construction engineering and inspection; and project management. The project also includes significant public relations (Pulsar) including	

coordination with the City of Norfolk and development of work-plans that incorporates Third Party availability and schedule requirements. Similar to the goals of Military Highway CFI project, this project significantly improves the safety of traveling motorists.

**2. VDOT, I-95 EXPRESS LANES DB, Fairfax County to Stafford County, Virginia**

<i>Name of Firm:</i> The Lane Construction Corporation	<i>Project Role:</i> Construction Manager	
<i>Beginning Date:</i> June 2012	<i>End Date:</i> June 2014	

*Specific Responsibilities:* Mr. Basnight’s role as Construction Manager for the Military Highway CFI project is similar to the role he held on the I-95 Express Lanes DB project. Mr. Basnight was responsible for the management of the construction process which included the QC program, project schedules, cost control, subcontractor coordination, work plans, and specific means/methods for carrying out the work. He was responsible for ensuring the materials used and work performed met contract requirements and the “approved for construction” plans and specifications. Mr. Basnight had extensive involvement with the complex MOT plans and implementation, relocation, adjustments, and coordination of utilities, and helped address environmental concerns (this project has been lauded for its landscaping and environmental measures). He also oversaw coordination with VRE and Norfolk Southern railroads. Mr. Basnight’s was full time/on-site during construction.

*Project Relevance:* This \$726M DB project created 29 miles of Express Lanes on I-95 from Alexandria to Stafford. A nine-mile reversible two-lane extension of the existing HOV lanes helps alleviate some of the worst traffic on one of the most heavily travelled and congested urban corridors in the United States. Similar scope of work items to the Military Highway CFI project include; structures,, significant environmental efforts; geotechnical explorations; storm drain,; traffic control devices; ITS devices/systems; TMP; noise walls; survey, ROW; utilities; QA/QC; railroad coordination and development of work-plan and schedule (with Norfolk Southern and VRE); construction engineering and inspection; and project management. Like the Military Highway CFI project, the I-95 Express Lanes included extensive MOT plans, utility relocation efforts (including past identification and data gathering), review of design concepts against existing utilities, determination of mitigation measures, and ongoing coordination with utility companies. The project involved comprehensive public relations with over 365 outreach meetings held during the course of the project. **(See Lead Contractor Work History for full details.)**

**3. VDOT BATTLEFIELD BOULEVARD, Chesapeake, Virginia**

<i>Name of Firm:</i> EV Williams	<i>Project Role:</i> Construction Manager
<i>Beginning Date:</i> June 2003	<i>End Date:</i> June 2007

*Specific Responsibilities:* Mr. Basnight was the Construction Manager/Field Engineer for this \$220M project and supervised field construction and survey operations. He was responsible for ensuring the materials used and work performed met contract requirements and the “approved for construction” plans and specifications. Mr. Basnight supported all superintendents and foremen with the proper layout and understanding of construction drawings to ensure that all craft workers understood cost and production. He was also responsible for developing the 3-week schedule, updating the P3 schedule, and coordination of field engineers. Mr. Basnight was full time on-site during construction

*Project Relevance:* This urban/commercial roadway and interchange project was completed under budget and ahead of schedule. This project incorporated an innovative design processes for the Hampton Roads region. Similar to the Military Highway project, Battlefield Boulevard project was completed in heavy traffic with extensive MOT efforts. Other relevant project elements were utility relocations, detours, intersection work, traffic signals/ITS systems, environmental permitting and compliance, storm drainage, storm water management ponds, railroad coordination, TMP, challenging geotechnical conditions, p0ublic involvement/public outreach, QA/QC and third party/stakeholder coordination.

**4. I-95 BRIDGE RESTORATION DB, Richmond, Virginia**

<i>Name of Firm:</i> Archer Western Contractors	<i>Project Role:</i> Construction Manager	
<i>Beginning Date:</i> June 2010	<i>End Date:</i> June 2012	

*Specific Responsibilities:* As CM, Mr. Basnight was responsible for the management of the construction process which included the QA/QC program, project schedules, cost control, subcontractors, work plans, and specific means/methods for carrying out the work. He was responsible for ensuring the materials used and work performed met contract requirements and the “approved for construction” plans and specifications. He also supervised all billing, pay requests, change orders, contracts, pay estimates, submittals, schedule updates, cost report quantities, revenue, and forecasting costs. Mr. Basnight was responsible for the QC program for this project.

*Project Relevance:* This \$85 million project used the Accelerated Bridge Construction (ABC) technology to reduce impacts on I-95 travelers by moving the assembly of 234 pre-cast bridge units offsite. When the units were ready to be installed, the 50-120 ton concrete sections were transported to the project site by truck. Existing bridge decks and beams were removed and the pre-cast units were set in place and secured. The work usually took place overnight so traffic patterns were returned to normal by morning. Similarities in scope of work to the Military Highway project include: survey; structures and bridges; environmental; geotechnical explorations; hydraulics; traffic control devices; TMP; utilities; public involvement/relations and management; QA/QC; coordination and development of work-plan and with Third Parties; construction engineering and inspection; and project management.

**h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. Current Assignment:** I-64/I-264 Pavement Rehabilitation. **Role:** Construction Manager. **Duration of Assignment:** 11/2015 (project completion)

**ATTACHMENT 3.3.1  
KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <b>Name &amp; Title:</b> <b>TIM RAYNER, PE, PTOE, Lead Transportation Engineer; Non-Traditional Design Practice Lead</b>	
b. <b>Project Assignment:</b> <b>Traffic Operations Designer and Manager</b>	
c. <b>Name of Firm with which you are now associated:</b> <b>Parsons Brinckerhoff, Inc.</b>	
d. <b>Years experience:</b> With this Firm <b>7</b> Years With Other Firms <b>10</b> Years Please list chronologically 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): <b>Parsons Brinckerhoff, 2007-Present.</b> Mr. Rayner is a Lead Transportation Engineer and performs a range of traffic and transportation planning services, including: transportation system congestion analysis; system performance measurement; micro/macro-modeling; analysis of traffic impacts; travel demand forecasting; multimodal interactions; operational/safety analysis; neighborhood traffic; and project planning and funding. He is also experienced in developing context sensitive design solutions. Mr. Rayner is a recognized expert in the design of Non-Traditional Intersections and is responsible for the delivery of the Commonwealth's first Continuous Flow intersection designs (90% designed) which will be built in neighboring Virginia Beach. Mr. Rayner is also proficient with the following software: CORSIM (Traffic Software Integration System), Highway Capacity Software 2010, Synchro, VISSIM, and AutoCad. <b>City of Virginia Beach, July 2006 – August 2007.</b> Mr. Rayner led a newly created Transportation Planning group within the Department of Public Works for the City of Virginia Beach. He was tasked with developing and determining methodologies, data sources, and techniques to identify transportation problems; developing performance measures and analyzing system performance data; analyzing the development of projects for transportation facilities and/or service improvements (including traffic signal corridor timing, traffic engineering and safety improvements). <b>City of Virginia Beach, July 2004 – July 2006.</b> Mr. Rayner was a senior engineer in the City's Traffic Engineering Division, leading signal timing projects, conducting traffic studies at congested or high crash locations, reviewing traffic impact studies submitted by consultants, reviewing designs plans submitted by consultants on City Capital Improvement Program (CIP) projects, and other traffic engineering activities. <b>City of East Lansing, MI, July 2003 – June 2004.</b> As a traffic engineering administrator with the City of East Lansing, Mr. Rayner was responsible for all traffic engineering related activities (e.g., traffic studies, review of site related traffic studies, City Traffic Engineering representative at regional meetings and design of City CIP projects). <b>City of East Lansing, MI, February 2001 – July 2003.</b> Mr. Rayner was the senior engineer under the Traffic Engineering Administrator performing traffic data analysis, congestion analysis and transportation planning services.. <b>DLZ of Michigan, April 2000 – February 2001.</b> Mr. Rayner was a project engineer in the Public Works division of DLZ, including water mains, sanitary sewers, sanitary force mains, and other public works related projects.	
e. <b>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</b> University of Wisconsin, Madison, Wisconsin/M.S./2005/Engineering; Michigan State University, Michigan/ B.S./1997/Biosystems Engineering; Lansing Community College, Lansing, Michigan/A.S./1993/Applied Science, Civil Technology	
f. <b>Active Registration: Year First Registered/ Discipline/VA Registration #:</b> 2005 / Professional Engineer / VA #0402041012; 2008 / Professional Traffic Operations Engineer	
g. <b>Document the extent and depth of experience and qualifications relevant to the Project.</b> 1. <i>Note your specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)*On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
<b>1. INDIAN RIVER ROAD AND KEMPSVILLE ROAD CFI, Virginia Beach, Virginia</b>	
<b>Name of Firm:</b> Parsons Brinckerhoff	<b>Project Role:</b> PM & Traffic Operations Designer/Manager
<b>Beginning Date:</b> January 2009	<b>End Date:</b> June 2015 (design)
<b>Specific Responsibilities:</b> Mr. Rayner served as the Project Manager and Traffic Operations Designer and Manager for the preliminary and final design phases of this CFI project.	
<b>Project Relevance:</b> This City of Virginia Beach project utilizes indirect (median u-turns) and displaced left turns (CFI) to improve the operation and flow of this major urban arterial. The concept for the design was selected through the analysis of many potential improvements. The selected concept will provide 25% more traffic capacity with the least impact to adjacent properties, equaling the best cost to benefit ratio. The design of this multidiscipline project includes roadway improvements, stormwater management, E&S, private and public utility coordination, MOT, pavement marking & signage plans, lighting, traffic signal design, the Transportation Management Plan, and ITS. This is a City of Virginia Beach project utilizing VDOT and Virginia Beach standards. PB is the prime consultant from concept through final design and construction, including graphics and visuals to inform and educate the public. <b>The design is 90% complete.</b> Construction will begin in 2015; expected completion is 2017.	

<b>2. VDOT I-264 WIDENING/INTERCHANGE/MLK EXTENSION DB, Portsmouth, Virginia</b>		
<i>Name of Firm:</i> Parsons Brinckerhoff	<i>Project Role:</i> Traffic Operations Designer and Manager	
<i>Beginning Date:</i> March 2012	<i>End Date:</i> June 2013 (design)	
<p><i>Specific Responsibilities:</i> Mr. Rayner served as the Traffic Operations Designer and Manager for preparation of the TMP, MOT plans, traffic signal design, signing and pavement marking, as well as design and integration of the entire ITS system for this important connection through the existing and new Mid-Town tunnels and hurricane evacuation route. Mr. Rayner was engaged in this project from conceptual phase through final design, is the Engineer of Record for specific MOT Plans, traffic signals, and the ITS Plans, and remains involved throughout the construction period. Mr. Rayner is continuing to provide design support during the construction phase of the project.</p> <p><i>Project Relevance:</i> For this project Mr. Rayner was responsible for developing a living Transportation Management Plan (TMP) tailored to numerous design package submittals. Mr. Rayner oversaw the design and traffic aspects of any necessary revisions to the TMP to assist the Contractor in increasing efficiency of traffic flows, public safety and construction efficiency. The TMP covers multiple detour routes along urban arterials through Portsmouth, Norfolk and on VDOT facilities. Final Plans for signing and pavement marking, traffic signal design, and ITS were completed over a period of several months and designed concurrently with other disciplines not typical in a design/bid/build project, requiring consistent coordination to ensure that design package submittals were accurate and on schedule. <b>The design for this project is complete.</b> Construction is scheduled for completion in 2017.</p>		
<b>3. US 17 (DOMINION BOULEVARD) WIDENING, Chesapeake, Virginia</b>		
<i>Name of Firm:</i> Parsons Brinckerhoff	<i>Project Role:</i> Traffic Operations Designer and Manager	
<i>Beginning Date:</i> June 2009	<i>End Date:</i> December 2012 (design)	
<p><i>Specific Responsibilities:</i> Mr. Rayner served as the Traffic Operations Designer and Manager for the maintenance of traffic, traffic signal design, temporary traffic signal design, and signing and pavement marking for the design and construction of this project. Mr. Rayner is continuing to provide design support during the construction phase of the project.</p> <p><i>Project Relevance:</i> Mr. Rayner developed a phased TMP/MOT plan to construct grade separated interchanges while maintaining existing traffic flows at the major intersections with US 17 and several arterial City streets. Each phase of construction was analyzed to minimize impacts to traffic operations. Changes to existing overhead and arterial guide signs and were developed for each phase, including through the complex adjacent interchange with Rte 17, I-64, and Chesapeake Expressway to avoid driver confusion due to changing traffic patterns during construction. Plans included the design of temporary signals for each phase of use. Permanent signals were also designed for arterials adjacent to the project. <b>The design for this project is complete.</b> Construction is scheduled for completion in 2017.</p>		
<b>4. CITYWIDE INTERSECTION SAFETY IMPROVEMENTS GROUP TWO, Norfolk, Virginia</b>		
<i>Name of Firm:</i> Parsons Brinckerhoff	<i>Project Role:</i> Project Manager and Design Manager	
<i>Beginning Date:</i> July 2012	<i>End Date:</i> June 2014 (design)	
<p><i>Specific Responsibilities:</i> Mr. Rayner served as the Project Manager for the Norfolk Advanced Traffic Management System On-call Contract and Task Manager for this specific task under that contract. He was Design Manager and Engineer of Record for the maintenance of traffic, traffic signal design, and signing and pavement marking for the design and construction of this project. Mr. Rayner is continuing to provide design support during the construction phase of the project.</p> <p><i>Project Relevance:</i> This City of Norfolk project includes the design and construction of new traffic signals (replacing existing traffic signals) at five intersections. Each intersection was funded through the HSIP program and designed to VDOT and City of Norfolk standards. Mr. Rayner is very familiar with not only the personnel at the City's Traffic Department but also the methodologies, city specifications, and goals of Norfolk. Designs include new medians, signal pole foundation design for pedestrian signals, fiber optic interconnect, CCTV, video and loop detection, battery backup system, opticom pre-empt, and signal timing development utilizing VDOT standard clearance intervals. <b>The design is complete.</b> Construction will be completed in 2015.</p>		
<b>5. PRINCESS ANNE ROAD/NIMMO PARKWAY, Virginia Beach, Virginia</b>		
<i>Name of Firm:</i> Parsons Brinckerhoff	<i>Project Role:</i> Traffic Operations Designer and Manager	
<i>Beginning Date:</i> January 2007	<i>End Date:</i> January 2014	
<p><i>Specific Responsibilities:</i> Mr. Rayner served Traffic Operations Designer and Manager and Engineer of Record for the MOT, TMP, and traffic signal design of Princess Anne and the traffic signal design for Nimmo; it also included LED street lighting design and construction on both Princess Anne and Nimmo.</p> <p><i>Project Relevance:</i> This VDOT project included new traffic signals (replacing existing traffic signals and adding new traffic signals) and MOT/Sequence of Construction (SOC) design. The MOT/SOC for Princess Anne Road was designed on an accelerated schedule prepared by another consultant. The MOT/SOC plans were developed in coordination with the road designer and the designer of a public utility relocation, to meet an aggressive design development schedule. The TMP was also developed on an accelerated schedule and featured an innovative advanced warning system to advise drivers in the work zone of slow moving loaded trucks entering the roadway, to increase work zone safety. In addition, traffic signal plans and fiber optic interconnect plans were developed to Virginia Beach standards. <b>Design and construction are both complete.</b></p>		
<p><b>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.</b> N/A</p>		

**ATTACHMENT 3.3.1**  
**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title: <b>GENE RUTLEDGE, PE, Lead Civil Engineer</b>	
b. Project Assignment: <b>Lead Utility Coordination Manager</b>	
c. Name of Firm with which you are now associated: <b>Parsons Brinckerhoff, Inc.</b>	
d. Years experience: With this Firm <u>3</u> Years With Other Firms <u>14</u> Years (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): <b>Parsons Brinckerhoff, 2012-Present.</b> Mr. Rutledge currently serves as a Lead Civil Engineer assigned to the Civil/Roadway design group in the Virginia Beach office. Mr. Rutledge has extensive experience in many technical aspects of project development including: utility coordination, programming and implementation, both wet and dry utility system design (water & sewer, joint use duct banks, etc.), project management, stormwater management plan development and design, construction services, and operations and maintenance. <b>Hampton Roads Sanitation District (HRSD), 2009-2012.</b> As Interceptor Engineer/System Manager for HRSD's Condition Assessment Program, Mr. Rutledge was responsible for review of development plans for compliance with Consent Decree requirements and HRSD connection standards; review and coordination of Capital Improvement Projects; hydraulic modeling and analysis; trouble shooting metering issues; analyzing pump station operational issues and providing recommendations for modifications; designing pump station by-passes for repair work; and design, coordination and implementation of emergency repairs of sanitary force mains, gravity collectors, and pump stations resulting from the Condition Assessment Program. <b>The Vision Group, 2006-2009.</b> As a Project Manager and designer, Mr. Rutledge worked with developers, municipalities, and other design professionals to obtain approval for construction plans for various commercial sites and subdivisions in Virginia and North Carolina. Mr. Rutledge provided interdisciplinary and utility coordination on large multi-discipline development projects in urban areas. <b>Engineering Services, Inc., 2005-2006.</b> Provided professional design and permitting services for developers, municipalities, and other design professionals with a focus on commercial sites and subdivisions within the Hampton Roads area including all utility permitting and design and provided review services for municipal code creation. <b>Midgette and Associates, 2004-2005.</b> Design of public and private utility and stormwater infrastructure for private development clients. <b>City of Chesapeake, Public Works, 2002-2004.</b> Review of public and private site and subdivision plans for compliance with municipal requirements including grading, drainage, and erosion and sediment control. <b>TAF Group, 2000-2002.</b> Assisted contractors, developers, municipalities, and other design professionals to obtain approval for construction plans for commercial sites and subdivisions in Hampton Roads; provided construction services for utility related projects.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Tidewater Community College, Virginia Beach, VA/A.S./1996/Engineering; Old Dominion University, Norfolk, VA/B.S./1998/Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2004 / Professional Engineer / VA #0402039616	
g. Document the extent and depth of experience and qualifications relevant to the Project. 1. <u>Note your specific responsibilities and authorities for each project, not those of the firm.</u> 2. <u>Note whether experience is with current firm or with other firm.</u> 3. <u>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</u> <b>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</b>	
<b>1. VDOT I-264 WIDENING/INTERCHANGE/MLK EXTENSION DB, Portsmouth, Virginia</b>	
<i>Name of Firm:</i> Parsons Brinckerhoff	<i>Project Role:</i> Utilities Project Engineer
<i>Beginning Date:</i> May 2009	<i>End Date:</i> June 2013 (design)
<i>Specific Responsibilities:</i> Mr. Rutledge served as Utility Design & Coordination Project Engineer for this project, including responsibility for management and oversight of the SUE Level A test hole program (including over 200 test holes) as well as specific water & sewer relocation design tasks meeting the City of Norfolk and/or City of Portsmouth requirements. Mr. Rutledge was instrumental in delivering the early action utility relocation design packages on schedule. <b>The design for this project is complete. Construction is estimated to be completed in 2016.</b> Mr. Rutledge and PB are currently providing design support during construction, including utility conflict resolution, shop drawing reviews, preparing responses to RFIs, and As-Built documentation.	



<p><i>Project Relevance:</i> Mr. Rutledge has established working relationships with City of Norfolk public utilities staff as well as all of the private utilities developed in his role as utilities project engineer. Many of these same utility representatives with the City of Norfolk utilities staff will be involved with the Military Highway CFI. Mr. Rutledge is not only familiar with the City of Norfolk's utility staff but also with City requirements/specifications when working on designing utility relocations, protections and adjustments.</p>	
<p><b>2. INDIAN RIVER ROAD AND KEMPSVILLE ROAD CFI, Virginia Beach, Virginia</b></p>	
<p><i>Name of Firm:</i> Parsons Brinckerhoff</p>	<p><i>Project Role:</i> Lead Utility Coordination Manager</p>
<p><i>Beginning Date:</i> August 2014</p>	<p><i>End Date:</i> June 2015 (design)</p>
<p><i>Specific Responsibilities:</i> As Utilities Project Engineer, Mr. Rutledge is responsible for identifying, coordinating and cataloging public and private utilities on this project. Mr. Rutledge also provides constructability guidance and oversight for relocation of existing utilities and construction of new utilities which also includes coordinating with the TMP/MOT Plans to avoid impacts to existing facilities and proposed stormwater conveyance systems.</p> <p><i>Project Relevance:</i> Mr. Rutledge has established valuable working relationships with both public and private utilities while serving as the Utilities Project Engineer. Many of the same utility representatives will be involved with the Military Highway CFI project.</p>	
<p><b>3. US 17 (DOMINION BOULEVARD) WIDENING, Chesapeake, Virginia</b></p>	
<p><i>Name of Firm:</i> Parsons Brinckerhoff</p>	<p><i>Project Role:</i> Utilities Project Engineer</p>
<p><i>Beginning Date:</i> August 2013</p>	<p><i>End Date:</i> December 2012 (design)</p>
<p><i>Specific Responsibilities:</i> Mr. Rutledge was responsible for public utility design associated with this project including construction support and mitigation of construction related issues associated with public utility relocations. The project included an extensive stormwater collection system, six new stormwater management facilities, modifications to both lengthen and convert an existing twin-cell box culvert to a triple-cell box culvert, stream modifications, and, significant utility relocations. Mr. Rutledge designed utility relocations in collaboration with drainage collection system design staff. <b>The design for this project is complete.</b> Construction is currently underway with expected completion in 2017.</p> <p><i>Project Relevance:</i> Relevant scope items include: roadway widening; significant stormwater management ponds/basins; MOT with staged construction; utility coordination; right-of-way acquisition; and, environmental permitting. Mr. Rutledge was directly involved in utility relocation coordination and public utilities design during project design development.</p>	
<p><b>4. PACIFIC AVENUE WIDENING, Virginia Beach, Virginia</b></p>	
<p><i>Name of Firm:</i> Parsons Brinckerhoff</p>	<p><i>Project Role:</i> Lead Utility Coordination Manager</p>
<p><i>Beginning Date:</i> August 2013</p>	<p><i>End Date:</i> September 2014 (design)</p>
<p><i>Specific Responsibilities:</i> Mr. Rutledge was the Lead Utility Coordination Manager for this accelerated design/bid/build project involving streetscape improvements (including undergrounding of existing overhead utilities) for an 8-block section of Pacific Avenue near the Virginia Beach ocean front. Mr. Rutledge was responsible for managing utility coordination and designing a joint use duct bank for electric/telecommunications. Mr. Rutledge is currently providing design support during construction for the project. <b>The design for this project is complete.</b> Expected construction completion is April 2015. Mr. Rutledge continues to provide design support during the construction phase of design development.</p> <p><i>Project Relevance:</i> PB provided final design for improvements to the section of Pacific Avenue between 15th and 23rd streets to enhance the corridor aesthetics, revitalize the area, and support future development. The project includes: widening the existing roadway and relocating overhead utilities to underground facilities. Through this project, Mr. Rutledge continued his professional relationship with private utility providers in the area, many of the same providers and staff that will be involved with the Military Highway CFI project.</p>	
<p><b>5. MILITARY HIGHWAY CULVERT CONDITION ASSESSMENT/IMPROVEMENTS, Chesapeake, Virginia</b></p>	
<p><i>Name of Firm:</i> Parsons Brinckerhoff</p>	<p><i>Project Role:</i> Project Engineer, Utility Coordination Mgr.</p>
<p><i>Beginning Date:</i> August 2013</p>	<p><i>End Date:</i> April 2014</p>
<p><i>Specific Responsibilities:</i> This project was under a Civil Task Order Contract for the City. As Project Engineer and Lead Utility Coordination Manager, Mr. Rutledge was responsible for utility coordination and management, stream bank stabilization design, and coordination with structures design staff. The project included design and construction of a box culvert rehabilitation including a bulkhead and stream bank stabilization. Mr. Rutledge coordinated with existing utilities that were exposed as a result of erosion. Affected utilities included buried communication facilities, overhead power lines restricting pile driving operations, and an exposed gas line. <b>Design and construction are both complete.</b></p> <p><i>Project Relevance:</i> Mr. Rutledge gained valuable experience in addressing temporary and permanent stream bank erosion issues affecting utilities as well as the coordination of modifications to existing utilities as result of stream bank erosion.</p>	
<p>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</p>	

# **Attachment 3.4.1: 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: <b>Alexandria Bus Rapid Transit DB</b> Location: <i>Alexandria, VA</i>	Name: STV Incorporated	Name of Client: <i>City of Alexandria</i> Phone: (703) 746-4146 Project Manager: <i>Suzanne Lee Farmer</i> Phone: (703) 746-4146 Email: <i>lee.farmer@alexandria.gov</i>	December 2013	June 27, 2014 (Due to added scope of work from Client/ Owner)	\$7,442	\$12,782 (Due to added scope of work from Client/ Owner)	\$12,782

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.

**SIMILAR SCOPE ELEMENTS:**

- ✓ design-build
- ✓ work performed in urban/commercial area
- ✓ roadway widening
- ✓ ROW
- ✓ signalization
- ✓ public involvement/relations
- ✓ MOT/phasing
- ✓ constrained site conditions
- ✓ coordination with multiple stakeholders

**VERIFIABLE EVIDENCE OF PERFORMANCE:**

This project was recently awarded the **2014 Engineering Excellence Award** from the Washington Metro chapter of the American Council of Engineering Companies.

*"I am pleased to provide this letter of reference to the Lane Construction Corporation for its work on the Route 1 Corridor Bus Rapid Transit Lanes Design-Build. This project originally involved the design and construction of 0.8 miles of concrete roadway dedicated to use by buses only. Later a change order was issued to include seven (7) custom shelters. The total duration of the project for both the design and construction phases was two and one-half (2 1/2) years at a cost of \$12,926,131. Substantial completion was achieved on 6/27/2014. The Lane Construction Corporation worked diligently and efficiently to achieve the milestones described above. I would be pleased to work with them again."*

-Lucy Stokes, P.E.- Division Chief, Construction, Department of Implementation, City of Alexandria Virginia

**PROPOSED PERSONNEL INVOLVED:**

★ **Ken Prince, PE: District Manager**

LANE led a best-value design-build team that successfully constructed Northern Virginia's very first bus rapid transit (BRT) line. Jointly conceived by the City of Alexandria and Arlington County and operated by Washington Metropolitan Area Transit Authority (WMATA) Metro, the BRT line runs along the busy, urban Route 1 corridor between the Braddock Road and Crystal City Metro stations. The new service, called the Metroway, features higher capacity buses running more frequently, including late at night and on weekends, in the newly constructed dedicated lanes separated from other traffic by medians or striping. This project included construction of 0.8 miles of "bus only" travel lanes in the existing median of Route 1 from Potomac Avenue to East Glebe Road in Alexandria, VA and the construction of seven bus shelters, which were added by owner driven change order. Construction of this project consisted of working in a highly traveled urban corridor very similar to Military Highway with low/deficient LOS in peak hours, many commercial businesses and a high level of stakeholder coordination. Specific scopes of work included placement of asphalt and concrete pavement, extensive MOT efforts, heavy focus on safety, drainage, traffic signalization/timing, utility relocations, and curb and gutter. Other important aspects of the project included excavation, hazardous materials identification and remediation, landscaping with soil amendments, a new street lighting system, and reconfiguration of the traffic signal system to accommodate the future BRT lanes. LANE also placed specialty colored concrete in specific geometric designs to indicate the different bus stops along the route, as well as stamped asphalt crosswalks for pedestrians. The construction of the Bus Rapid Transit (BRT) lanes also involved excavation of the existing shoulders (4,550 CY), construction of a new concrete transit-way exclusively for buses and emergency vehicles (8,580 SY), installation of Filterra bio-filtration systems (7 EA), removal of existing buried asphalt and concrete in median (4,800 SY), identification and removal of hazardous materials within excavation (2,700 CY), installation of storm drain structures and piping (39 structures/183 LF of pipe), retrofitting of existing storm structures (9 EA), remediation of green areas and design and building BRT shelters (7 EA). Challenges on this project included encountering numerous unknown utilities and changed conditions (e.g., different sized existing storm drain facilities); however, our project team reacted quickly and efficiently and were able to stay on schedule and within budget. With the project taking place in a congested area in Alexandria, the team was constantly vigilant of existing vehicular and pedestrian traffic. To remain safe throughout this project LANE continually worked with its on-site safety personnel to implement safety controls to prevent hazards to vehicles, workforce and pedestrians on the site.



**RELEVANT PROJECT ELEMENTS**

**Urban Roadway Widening:** Route 1 within the project footprint is very similar to the Military Highway CFI project footprint as it is heavily relied upon during both AM and PM peak travel times for commuters, schools, government and first responders as a main thoroughfare, is heavily populated with commercial businesses, and operates at low and/or deficient Levels of Service during these peak travel times. LANE excels at working in challenging and spatially constrained work environments such as this where every activity from material deliveries to daily worker ingress/egress routes require detailed planning and protocols. Our leadership down to our crews are experienced in working in such difficult corridors as this; LANE will staff the Military Highway CFI project accordingly.

**Public Involvement:** LANE understands from our extensive similar experience and lessons learned that in order for these types of projects to be a success, a great deal of public outreach and community involvement must be done. On the BRT project LANE proactively managed the public outreach effort with local businesses, daily commuters, local municipalities and first responders so there were no surprises when traversing the work zone and that construction phase transitions occurred seamlessly and were "painless" for all stakeholders.

**Maintenance of Traffic:** Working in such a corridor as Route 1 and Military Highway requires immeasurable communication between the contractor and designer when it comes to developing the traffic management plans, project phasing, and the actual MOT means and methods and devices to be used. LANE has an extensive history coordinating with our lead designer Parsons Brinkerhoff and are committed to open and effective communication channels not only within our design build team but also with VDOT, City of Norfolk, and the public as we were with the City of Alexandria, VDOT and the local community. Similar to the requirements of the Military Highway CFI project, LANE had to do an extensive amount of reconfiguration to the traffic patterns through existing intersections while minimizing impacts and confusion to vehicular traffic. Through careful planning, community outreach efforts and strategically placed driver-oriented signage, LANE successfully launched a phased opening of the BRT lanes. The opening of the BRT lanes was without incident and has been very effective since its inception.

**Traffic Signals:** This project included double the number of signal heads and audible pedestrian pushbuttons at each intersection to account for the additional roadway and vehicular movements. Implementation of these signals again required careful planning and community outreach to ensure a smooth transition when the new signals went live. Activating the new signals also required a complete signal communication system overhaul. LANE had to update the signalization system to include video detection and wireless communication making the system state of the art.

**Safety:** Relevant to the proposed project, this project took place in a congested area in Alexandria. The team was particularly cautiously working alongside existing vehicular and pedestrian traffic. LANE's on-site safety personnel worked directly with leadership, crews and subcontractors to implement safety controls and site specific safety plans to prevent hazards to vehicles, workforce and pedestrians on and near the site. This project is also notable for the team working more than **800 days without a single lost-time or OSHA-recordable incident.**

**Environmental:** Similar to the proposed project, this project was located in an environmentally sensitive area. LANE was responsible for removing, hauling and disposing of contaminated ground soil as part of the excavation for this project. Additionally, the project team started the 1,000 Trees in 1,000 Days program in order to give back to the communities surrounding the project at the northern terminus.

\*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.

**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: <b>I-495 Express Lanes DB</b> Location: <i>Fairfax County, VA</i>	Name: HNTB	Name of Client: <b>VDOT</b> Phone: (540) 829-7500 Project Manager: <b>John Lynch, PE</b> Phone: (540) 829-7512 Email: john.lynch@vdot.virginia.gov	December 2012	November 2012 (Early Delivery)	\$1,346,560	\$1,481,670 (Owner directed change of scope)	\$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.

SIMILAR SCOPE ELEMENTS:	
<ul style="list-style-type: none"> <li>✓ design-build</li> <li>✓ work performed in urban/commercial area</li> <li>✓ roadway widening</li> <li>✓ complex intersection</li> <li>✓ extensive utility relocation</li> </ul>	<ul style="list-style-type: none"> <li>✓ public involvement/relations</li> <li>✓ MOT/phasing</li> <li>✓ coordination with VDOT and multiple stakeholders</li> <li>✓ railroad coordination</li> </ul>
VERIFIABLE EVIDENCE OF PERFORMANCE:	
<p><i>"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</p> <p><i>"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,"</i> wrote Tim Steinhilber (General Manager, Capital Beltway Express, LLC) in an October 27, 2010 letter of recommendation for LANE.</p> <p>Fast track design started in March 2012 and measurable construction commenced August 2012, approximately four months following start of the design. The entire project was delivered two weeks early.</p>	
PROPOSED PERSONNEL INVOLVED:	
<p><b>Wayne Lindsay: Utility Coordinator</b>  <b>Mike Leitch: Assistant MOT Manager</b>  <b>Bernie Leitch: MOT Manager</b>  <b>Michelle Teets: Safety Supervisor</b></p>	

This project involved the construction of four new managed/HOV traffic lanes (two in each direction) inside of the existing lanes on the Capital Beltway (I-495). Work included the reconstruction of ramps, interchanges, frontage roads, bridge over and underpasses, and pedestrian crossings. The project encompassed the replacement of more than \$260M of aging infrastructure, including 58 bridges. Construction of the project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Although only a 35% CJV member, LANE provided nearly all of the project supervision and workforce. As a Fluor-LANE LLC CJV member, LANE provided nearly all of the project supervision and workforce, plus all asphalt paving.

**RELEVANT INTERSECTIONS AND ROADWAY WIDENINGS: ROUTE 7 AND ROUTE 123**

**Route 7:** Of particular relevance to the proposed Military Highway CFI project was the Route 7 widening. Route 7 around 495/Tysons Corner is a heavily congested urban and commercial Route which Lane widened in various degrees (4 and 6 lanes) in 3 construction phases while meeting the requirement to maintain all traffic lanes and movements. Meeting this requirement demanded innovative MOT schemes, a high level of public outreach and an emphasis on safety. The original plans consisted of building a temporary Rt. 7 bridge over the I-495 Beltway to maintain traffic; however, our team decided that phased construction of the permanent bridge and an improved Traffic Management Plan was more cost-effective while also reducing the schedule. Shoppers, employers, and residents now have access to Tysons and the Tysons Corner malls without ever traveling on Route 123 or Route 7 - alleviating local traffic to/from McLean and Vienna. **Route 123:** The Route 123 interchange allowed for construction of a new northbound Beltway bridge overtop Route 123 in Tysons Corner. While this bridge was not originally slated to be rebuilt as part of the project, the flexibility of the DB approach allowed for this logical improvement to be added to the design and construction plan, providing more thorough improvements to this highly traveled interchange. In an effort to find efficiencies, a faster demolition period was implemented at the busy Route 123 Interchange in Tysons Corner, shortening the duration of disruptive work for the traveling and neighboring public. Route 123 in Tysons Corner is the area where the I-495 Capital Beltway Express Lanes and Dulles Metrorail projects meet. In addition to the massive amount of construction occurring in this area, Route 123 is a heavily traveled route that provides access in and out of the Tysons Corner urban/commercial area. Obtaining support from the surrounding business community and key stakeholders was critical to the success of shortening the bridge demolition schedule into one weekend. Ensuring that all local drivers were informed in advance of the weekend closure and encouraged to stay away was critical to its success and was achieved through a robust and multi-faceted media outreach and grassroots campaign.

**RELEVANT PROJECT ELEMENTS**

**Roadway:** The I-495 Express Lanes project is one of the largest roadway projects constructed in the Commonwealth. Similar to the Military Highway CFI project, the I-495 Express Lanes project widened the existing roadway by constructing two new lanes in each direction on a 14-mile stretch from the Springfield Interchange to just north of the Dulles Toll Road (approximately 56 lane miles). Likewise, the Express Lanes included the major construction of intersections, roadway widening, and major bridge/ramp construction. The team constructed three new access points and upgraded 12 key interchanges (many in highly congested urban/commercial areas) that increased capacity and mobility, improved driver safety and removed operational deficiencies, with minimal impact to the traveling public, residences, and businesses. The project relieves traffic congestion for one of the busiest regions in the nation. **MOT:** Similar to the Military Highway CFI project, a key challenge on the I-495 Express Lanes project was accommodating extreme volumes of commuter, residential, and commercial vehicular traffic. 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 on heavily traveled roadways. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted, so new replacement bridges were built on the same footprint as the old structures. To reduce the impacts on the public, much of the work was performed at night. An aggressive five day work schedule was implemented with Saturday make-up days incorporated in case of inclement weather. The only overnight lane closures that occurred were for structural steel erection and demolition of the existing bridge. **Utilities:** 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 urban/commercial 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. **Community Relations:** Our team conducted more than 600 public outreach meetings and, in coordination with VDOT, kept the public involved through various media methods: project website, routine newsletters, and brochure mailings to residents and business. One example of the success of this approach was the closure of Southbound I-495 Bridge at Chain Bridge Road, Route 123, Tysons Corner. The planned demolition and reconstruction of the new bridge had the potential to disrupt traffic for more than 100,000 residents, businesses, and commuters in the area. The team devised a demolition plan that completely removed the old bridge in one weekend with a total closure of Route 123. We blanketed the area with early notification of the weekend closure/detour options using the project website, media announcements, email, telephone calls, postcards, and door-to-door outreach. When the work was completed as planned and promised, not a single complaint was received from businesses, motorists, or area residents. **Innovations:** Construction of Idylwood Road Bridge, which had an existing ADT of more than 15,000 vehicles, was scheduled to take two years to rebuild. After the nearby Oak Street bridge was rebuilt and opened for motorists, the original construction plan entailed closing one lane of the Idylwood Road Bridge and installing temporary traffic signals to alternate one-way traffic across the bridge while the other side was reconstructed. Each side of the bridge would have taken a year to complete for a total duration of two years. A new plan was developed to rebuild it in six months. While the Oak Street bridge (the detour route for Idylwood Road bridge) was under construction, we developed an alternate construction plan for the \$20M Idylwood Road Bridge. After the new Oak Street bridge opened to motorists, the alternate plan would close Idylwood Road Bridge completely for six months to allow construction crews to rebuild the entire bridge simultaneously to shorten the construction duration. Our team held a public information session on the two plans for the bridge and sent out 5,000 direct mail invitations with the plan(s) information; 91% of the comments submitted by nearby residents were in support of the alternate six month plan. LANE worked with VDOT, elected officials, and community leaders to improve detours and signage for construction of the new bridge. The construction was completed on time as promised to the satisfaction of all affected. **Urban Corridor:** Similar to the Military Highway, yet on a larger scale, numerous shopping malls, residential communities and corporate employment centers are located adjacent to the Beltway, and these added greatly to the traffic. The Express Lanes cross 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.

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**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: <b>Route 1 North Improvements DB</b> Location: <i>Prince William County, VA</i>	Name: Stantec	Name of Client: <i>Prince William County Department of Transportation</i> Phone: (703) 792-8161 Project Manager: <i>Sherif Bialy</i> Phone: (703) 986-8720 Email: <i>sbialy@pwcgov.org</i>	January 2016	June 2016	\$42,000	\$43,258	\$43,258

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.

SIMILAR SCOPE ELEMENTS:	
<ul style="list-style-type: none"> <li>✓ design-build</li> <li>✓ environmental mitigation</li> <li>✓ geotechnical</li> <li>✓ QA/QC</li> <li>✓ survey</li> <li>✓ coordination with multiple stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>✓ TMP/ significant MOT</li> <li>✓ hydraulics</li> <li>✓ ROW</li> <li>✓ utility relocation</li> <li>✓ construction engineering &amp; inspection</li> </ul>
PROPOSED PERSONNEL INVOLVED:	
<ul style="list-style-type: none"> <li>★ <b>Ken Prince, PE: District Manager</b></li> <li><b>Jesse Edwards: Project Manager</b></li> <li><b>Ryan Stayer: Project Engineer</b></li> </ul>	

LANE is the Lead Contractor for this DB project (PB completed 90% of the design for PWC prior to the DB contract award) which consists of 2.06 miles of roadway improvements along Route 1 in Prince William County, VA. This \$43M project widens Route 1 in a dense urban commercial corridor from four lanes of undivided highway to six lanes of divided highway with a raised median, turn lanes, and intersection improvements. Major components include: roadway widening, urban intersection work under heavy traffic counts, utility relocations, reconstruct box culvert under roadway, heavy MOT implementations within deficient LOS conditions, permitting, right of way acquisition, , design, earthwork, asphalt paving, retaining walls, traffic signals, and environmental mitigation with the reconstruction. The project limits extend from the intersection of Route 1 and Neabsco Mills Road to the intersection of Route 1 and Featherstone Road. Additional elements include: a ten foot wide shared-use path adjacent to the southbound lanes of Route 1 and a six foot sidewalk adjacent to the northbound lanes, a closed drainage system with stormwater management ponds, a quad 8' by 10' and 3' by 3' box culvert, upgraded traffic signals at the intersection of Route 1 and Neabsco Mills Road, new traffic signals at Route 1 and Dale Boulevard, Delaware Drive, Maryland Avenue, Opitz Boulevard, and Featherstone Road, and triple left hand turn lanes at Dale Blvd., and waterline and sewer line relocations. Additional components of this project include easement acquisitions and permitting for the installation of two underground duct banks along Route 1. The duct bank construction limits are the same as the project limits, the entire 2.06 miles.

**RELEVANT PROJECT ELEMENTS**

**Roadway Widening:** The objective of this roadway widening & reconstruction is to improve safety and reduce traffic congestion so that travel times can also be reduced and more predictable. This project was selected on a priority basis by Prince William County as a means to improve these objectives. The project is similar to the Military Highway CFI project in several ways, notably: the Route 1 corridor is operating at deficient levels of service, ADT counts are extremely high, and this corridor is a major corridor between destinations. This urban roadway widening/reconstruction project from four to six lanes under heavy traffic has required a major MOT effort. There is a high level of commercial/



retail businesses along the Route 1 corridor and therefore an important regional economic "engine." As such, both projects have and will require a proactive public outreach campaign to keep the public informed and their interests addressed. Due to the similarities in location and pressing need for improvements of these roadways/intersections - both projects take place at highly traveled intersections and are designed to be at grade - the Route 1 project directly relates to the scope of Military Highway CFI project.

**LANE/PB Partnering:** PB was responsible for 90% of the design for PWC for this project. They have also continued to provide construction support and participate in collaboration meetings with LANE. The success of this project can largely be attributed to the partnering between LANE, Stantec, Parsons Brinkerhoff, and Prince William County.

**Maintenance of Traffic (MOT):** The project involves MOT phasing to include: travel lane partial shifts/realignment to allow room for pavement widening, full lane shifts/detours for total pavement reconstruction, temporary pavement/detours for phased utility and drainage installations, lane width adjustments and intersection reconfigurations, both temporary and permanent, flagging operations, daily lane closures, and night work operations. It is the responsibility of the Contractor to maintain unrestricted travel lanes to the public; the LANE team's MOT program utilized on Route 1 accommodates this requirement without fail. Our extensive MOT experience will enhance the success of the Military Highway CFI contract.

**Utilities:** LANE is providing close coordination with the impacted utility companies to relocate their existing overhead facilities into underground duct banks along the project ROW. Major utilities along the corridor include Verizon, Comcast and Dominion Virginia Power. Other utilities requiring relocation include: Washington Gas and Prince William County Service Authority water and sanitary sewer lines. All of LANE's relocation plans are designed to and have not left any customers without utility service; LANE will strive to achieve the same on the Military Highway CFI project.

**Right-of-Way (ROW):** Major challenges on the project involve utility relocations and ROW property acquisitions. Similar to the proposed project, LANE is responsible for acquiring required ROW which includes numerous commercial properties: car dealerships (5), gas stations, and strip mall facilities. ROW property acquisitions have also involved the acquisition of apartment and condominium complexes along the Route 1 corridor.

**Environmental:** As with the Military Highway CFI project, there is an environmentally sensitive area on this project where a box culvert is running through a stream. LANE purchased wetland credits and worked with an environmental firm to recreate nine wetland areas away from the project right-of-way.

\*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.

**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 Completion Date (Original)	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: <b>Bangerter/3100 South Continuous Flow Intersection</b> Location: <i>West Valley, UT</i>	Name: B. Jackson Construction and Engineering, Inc.	Name of Client: <b>Utah Department of Transportation (UDOT)</b> Phone: (801) 975-4819 Project Manager: <b>Oanh Le-Spradlin</b> Phone: (801) 975-4819 Email: <b>oanhle@utah.gov</b>	December 2011	December 2011	\$3,400	\$2,800 (Owner directed change of scope)	\$860

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. **PB served as the PRIME DESIGNER. This project was managed and executed primarily from PB's SALT LAKE CITY, UT OFFICE. Specific PB Salt Lake City staff will be assigned to the Military Highway CFI project as noted below.**

<b>SIMILAR SCOPE ELEMENTS:</b>	
<ul style="list-style-type: none"> <li>✓ CFI analysis and design</li> <li>✓ project management</li> <li>✓ roadway design</li> <li>✓ traffic control/TMP</li> <li>✓ hydraulics/SWM</li> <li>✓ utilities</li> </ul>	<ul style="list-style-type: none"> <li>✓ right-of-way</li> <li>✓ environmental</li> <li>✓ geotechnical</li> <li>✓ noise walls</li> <li>✓ public involvement</li> </ul>
<b>UNIQUE FEATURES:</b>	
<ul style="list-style-type: none"> <li>• PB applied practical design techniques and broad experience that minimized ROW acquisition, avoided commercial property impacts, and avoided JVWCD 60" water main conflicts with the drainage collection system in Bangerter Highway.</li> <li>• The design used reduced acceleration lane lengths and tapers to reduce ROW impacts.</li> <li>• The team designed channelizing devices to force pedestrians to cross at the designated areas, including an existing pedestrian bridge across 3100 South. Channelizing devices included fencing and landscaping.</li> <li>• A "No Right Turn" blankout side was designed to turn on during a phase of the signal where right turns and pedestrians conflict.</li> <li>• The existing 10-foot box culvert remained in place, but the top of the box was replaced and used as the roadway surface, eliminating the need to reconstruct the entire box culvert.</li> </ul>	
<b>PROPOSED PERSONNEL INVOLVED:</b>	
<p><b>John Gilchrist:</b> Project Manager  <b>Diego Carroll:</b> Traffic Lead</p>	

As the Prime Designer, PB performed the major components of this new CFI including: CFI/roadway design, traffic analysis, utility design and coordination, MOT design, structural design, ROW acquisition, and public involvement.

The project was designed for UDOT within West Valley City and involved the roadway design for ½ mile of Bangerter Highway, including the intersection of 3100 South. Bangerter Highway is a congested arterial corridor surrounded by dense commercial development. PB designed a 2-leg CFI intersection for the Bangerter Highway approaches. Similar to the Military Highway CFI Project, this unique intersection design required a significant traffic analysis effort and included commercial ROW acquisition to accommodate the displaced left turn lanes for the CFI. ROW acquisition services were provided by PB.

**RELEVANT PROJECT ELEMENTS**

**CFI Analysis and Design:** Like most design-build projects, this project included an assessment of innovative design alternatives and conceptual designs for the Bangerter Highway and 3100 South intersection. The traffic assessment included modeling of various intersection improvement alternatives including several CFI options. Prior to this project, all UDOT CFIs used dual lanes for the displaced left turn movements. Traffic analysis completed for the project determined that using a single displaced left turn lane for northbound and southbound directions would accommodate existing and future traffic demands while minimizing ROW impacts, reducing the amount of additional impervious area, and reducing both ROW and construction cost.

Because the use of a single displaced left turn lane was a new concept, the project team defined new parameters for the placement of the displaced left turn lane which could be applied to all types of CFIs. These efforts resulted in a Transportation Research Board paper published by PB staff in 2013 defining a model that determines the optimal placement of the displaced left turns (*Operational Effects of Continuous Flow Intersection Geometrics, TRB Accession Number 01473828, dated February 5, 2013*). This placement is critical because it can limit the operational flexibility of the CFI and allow traffic to flow continuously without requiring traffic to stop at a CFI's multiple signals (displaced left turn signals and main intersection signals). **For the Military Highway CFI Project, PB intends to perform this same analysis during design development to optimize operational flexibility.** Further, PB has included Mr. Diego Carroll (Lead Traffic Engineer and primary author of the aforementioned TRB publication) on the Military Highway CFI project team **to perform this analysis.** PB has also included Mr. John Gilchrist (Project Manager) on the Military Highway CFI Project team to perform QC of roadway, traffic signal, and signage & pavement marking plans.

The CFI concept excluded the use of a right turn bypass lanes and thus further reduced ROW impacts and construction costs. These right turn bypass lanes allow right turn traffic to avoid conflicts with the displaced left turn lane traffic. The displaced left turn lanes shift left turn traffic to the far left side of the street adjacent to side street traffic. Without the right turn bypass lanes, the design needed to ensure drivers turning right from the side street (3100 South) did not turn into the displaced left turn lanes for the major street (Bangerter Highway). This was accomplished through design features such as curb return radii that were too small for a right turning vehicle to enter into the opposing travel of the left turn lanes. The exclusion of bypass lanes also required the use of signal treatments and LED No-Right-Turn-On-Red signs that prohibit red turns when conflicting displaced left turn phases are active.

**Box Culvert Modifications:** The Project included an evaluation of potential to an existing drainage conveyance box culvert crossing through the intersection area. The roadway widening was originally designed to impact the box culvert. During final design, PB performed a detailed evaluation of the box culvert and designed modifications to minimize impacts to the box culvert and avoid the need for replacement. Specifically, the top of the box culvert was modified and set to the final roadway pavement grade, so that widening traffic is running directly on the roof of the culvert.

**Stakeholder Coordination and Public Involvement:** Similar to the Military Highway CFI Project, this CFI project required a high level of public outreach to commuters and coordination with other third party stakeholders. For example, a nearby West Valley City street had to be closed and a cul-de-sac constructed, to accommodate this unique design. This required close coordination with West Valley City as a stakeholder. Coordination with West Valley City also included public involvement efforts and presentations to City Planning Commission and Council. PB was also responsible for utility coordination for the project, which included a 60" water transmission line owned by Jordan Valley Water Conservancy District (JVWCD), another third party stakeholder. Structural design performed for the project included retaining barrier wall and special signal/lighting foundations.



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**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 Completion Date (Original)	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: <b>I-264 Widening/Interchange and MLK Extension Design-Build</b> Location: <i>Portsmouth, VA</i>	Name: SKW Constructors, Inc. (an incorporated Joint Venture of Skanska Civil Southeast, Inc., Kiewit Construction, and Weeks Marine, Inc.	Name of Client: <i>SKW Constructors</i> Phone: (757) 673-9487 Project Manager: Wade Watson Phone: (757) 673-9487 Email: wade.watson@skanska.com	December 2016 (Design is complete)	Estimated October 2016 (Design is complete)	\$205,000	\$205,000	\$12,000

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. **PB served as the PRIME DESIGNER. This project was managed and executed primarily from PB's VIRGINIA BEACH OFFICE. Other offices within the region provided design support. LANE's Division, Virginia Paving Company supplied asphalt material for this project.**

SIMILAR SCOPE ELEMENTS:	
<ul style="list-style-type: none"> <li>✓ project management</li> <li>✓ roadway widening</li> <li>✓ traffic control/TMPs</li> <li>✓ noise walls</li> <li>✓ right-of-way</li> <li>✓ utilities</li> <li>✓ public involvement</li> </ul>	<ul style="list-style-type: none"> <li>✓ hydraulics/SWM</li> <li>✓ survey</li> <li>✓ structures</li> <li>✓ environmental</li> <li>✓ geotechnical</li> <li>✓ ITS</li> <li>✓ railroad coordination</li> </ul>
UNIQUE FEATURES:	
<ul style="list-style-type: none"> <li>• The TMP developed for this project served as a "living document" because it was developed over time and submitted concurrently with each new Released For Construction Plans package.</li> <li>• The project includes an elevated roadway over a railroad facility and their lease-holder, requiring extensive coordination during design development with both the railroad and their lease-holder.</li> <li>• The project included a detailed investigation of potential ground improvements to address poor subsurface conditions. Ultimately, geofoam embankments and light weight aggregate were used in significant fill areas.</li> </ul>	
PROPOSED PERSONNEL INVOLVED:	
<ul style="list-style-type: none"> <li>★ <b>Derek Piper:</b> Design Manager</li> <li>★ <b>Tim Rayner:</b> Lead Traffic Engineer</li> <li>★ <b>Gene Rutledge:</b> Utility Coord./Relocation Engineer</li> <li><b>Robin Huelsbeck:</b> Signing &amp; Pavement Marking</li> <li><b>Ray Magsanoc:</b> Noise Analysis</li> <li><b>Michelle Martin:</b> Roadway Engineer</li> <li><b>Melissa Pritchard:</b> Lead Hydraulics Engineer</li> </ul> <p><i>Precision Measurements, Inc.</i>  <i>EEE Consulting, Inc.</i></p>	

PB delivered final construction plans for the widening of and modifications to I-264 required to construct the MLK Extension (one mile of new location elevated freeway) across several arterial City streets in Portsmouth. Major project components include: a new interchange; the elimination of existing interchange ramps; modification of existing interchange ramps from London Blvd; reconfiguring arterial intersections; and the construction of new arterial intersections along High St and Frederick Blvd as part of the Elizabeth River Tunnels project. Specific scope elements included: widening of two interstate bridges; the elevated MLK Extension (a controlled access facility) over CSX's Portsmouth Yard; 11 stormwater ponds/basins (including significant aesthetic treatments to two); three noise barriers; eight new/widened bridges; 18 retaining walls; significant overhead highway signage; landscaping; a traffic signal on Frederick Blvd (City of Portsmouth arterial); relocation of City cross streets; MOT; ITS system replacement/upgrades along I-264; and new ITS systems along the MLK Extension. PB is currently providing design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation.

As the Prime Designer, PB performed major components of the design effort including: widening of I-264; Ramp EN geometrics; new Ramp EN structure over US 17; preparation of the TMP and multi-jurisdictional detours; traffic signal design; utility coordination and relocation; stormwater system modeling and stormwater basin design for all 11 basins; coordination with CSX and N&PBL Railroad; and preparation of the Noise Abatement Design Report (NADR) for three new noise walls. NADR approval included the required public survey and detailed reviews by VDOT.

**RELEVANT PROJECT ELEMENTS**

**MOT:** Parsons Brinckerhoff performed extensive traffic analysis and modeling in order to design optimal traffic management plans as well as permanent interchange and intersection configurations. PB also conducted community outreach activities and met with City of Portsmouth traffic department officials continuously from the onset of the project to make certain that their concerns were accommodated. As PB will do on the Military Highway CFI project, local engineering staff that are familiar with local City/Community and VDOT staff were used to analyze current as well as phased construction traffic to develop an effective and safe TMP plan. This same local team has many years working in the uniqueness of Hampton Roads traffic patterns and how sensitive they can be to disruptions, whether planned or not. PB understands that early and frequent communications with the approving agencies will not only accelerate plan submittal approvals but also provide for a more seamless construction phase; we will carry this out on the new Military Highway CFI project.

**Stakeholder Coordination:** The project traverses a developed area of Portsmouth, necessitating close coordination with utility owners as well as with both VDOT and the City of Portsmouth to relocate local utilities, close and relocate local streets, maintain access to properties along the project route, and install stormwater basins. Coordination also included resolution of aesthetic treatments, lighting, stormwater pond aesthetics and plantings, and permanent street closures. During construction, MOT and detours were analyzed and also closely coordinated with the City of Portsmouth and VDOT to minimize impacts.

**Utility Coordination/Relocations:** Similar to the Military Highway CFI project, the MLK project involved multiple utility conflicts. These were identified through a proactive underground (and overhead) location and identification effort led by Gene Rutledge who maintains valuable relationships with key local utility decision makers. Where possible, PB was able to design around many of these but some conflicts resulted in the utility ultimately having to be relocated. The majority of these relocations were with the same owners that will be affected on the Military Hwy CFI project. PB will have the same team on this job that was on MLK.

**Drainage/Hydraulics and Stormwater Management:** Similar to the Military Highway CFI project, the geology on the MLK project consisted of poor wet soils at low elevations primarily in flat terrain that can make for challenging hydraulic analysis, determining locations for SWM facilities as well as outfall locations/elevations. With the permanent closing of several city streets and associated storm drainage systems, the project had to be carefully designed to minimize impacts to off-site properties to prevent flooding or other impacts to upstream properties.

**Railroad Coordination:** The project required significant coordination with railroad stakeholders including CSX and the N&PBL railroads. Similar to the Military Highway CFI project, the MLK project included coordination with a railroad company leasing rails from another railroad company - CSX leasing rails to Vulcan Materials. This added to the complexity of coordination. This MLK project was designed to minimize impacts to the railroads during construction; e.g., relocating conveyor equipment for Vulcan Materials; negotiating air rights; documenting time of day restrictions, flagger needs, etc. By minimizing impacts, the coordination and permitting, while still complex, were achieved within the required schedule. The project also impacted two crossings of N&PBL where we were required to relocate a City 20" waterline under N&PBL and install a new 16" waterline at a second crossing of N&PBL.



**Geotechnical:** The project also includes significant geotechnical investigations and alternatives analysis for poor soil conditions, resulting in the use of Geofoam embankment, the use of light weight fill, pile supported embankment, and surcharging.

**Noise Barriers:** The project included preparation of the Final Noise Abatement Design Report (NADR) and public surveys for three (3) new noise barriers along the I-264 corridor. PB prepared the Final NADR and coordinated the review and approval by VDOT.

\*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.

**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 Completion Date (Original)	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: <b>US 17 (Dominion Boulevard) Widening</b> Location: <i>Chesapeake, VA</i>	Name: Dominion Boulevard Constructors, Joint Venture (a Joint Venture of McLean Construction, R.R. Dawson, E.V. Williams, and Bryant Construction)	Name of Client: <i>City of Chesapeake</i> Phone: (757) 382-6101 Project Manager: Kevin Lundgren Phone: (757) 382-6383 Email: klundgren@cityofchesapeake.net	April 2017 (Design is complete)	Estimated February 2017 (Design is complete)	\$188,000	\$194,400 (Owner directed change of scope)	\$12,604

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. **PB served as the PRIME DESIGNER. This project was managed and executed primarily from PB's VIRGINIA BEACH OFFICE. Other offices within the region provided design support. LANE's Division, Virginia Paving Company supplied asphalt material for this project.**

SIMILAR SCOPE ELEMENTS:	
<ul style="list-style-type: none"> <li>✓ project management</li> <li>✓ roadway widening</li> <li>✓ traffic control/TMPs</li> <li>✓ noise walls</li> <li>✓ right-of-way</li> <li>✓ utilities</li> <li>✓ public involvement</li> </ul>	<ul style="list-style-type: none"> <li>✓ hydraulics/SWM</li> <li>✓ survey</li> <li>✓ structures</li> <li>✓ environmental</li> <li>✓ geotechnical</li> <li>✓ ITS</li> </ul>
UNIQUE FEATURES:	
<p>For this project, the team developed a TMP that evaluated the impacts to traffic during each phase of construction. In addition, we prepared a Contract Time Determination Report (CTDR) to establish the time needed to complete construction. Through this process, the team determined that the additional cost of upgrading a parallel route (which would serve as a detour for a portion of the construction) was more than offset by the savings that were realized by shortening construction. The detour route allowed for a major portion of the project to be constructed with traffic diverted and provided a safe, reliable route for the traveling public.</p>	
PROPOSED PERSONNEL INVOLVED:	
<ul style="list-style-type: none"> <li>★ <b>Derek Piper:</b> Design Manager</li> <li>★ <b>Tim Rayner:</b> Lead Traffic Engineer</li> <li>★ <b>Gene Rutledge:</b> Utility Coord./Relocation Engineer</li> <li><b>Robin Huelsbeck:</b> Signing &amp; Pavement Marking</li> <li><b>Ray Magsanoc:</b> Noise Analysis</li> <li><b>Michelle Martin:</b> Roadway Engineer</li> <li><b>Melissa Pritchard:</b> Lead Hydraulics Engineer</li> </ul>	

PB delivered final construction plans for the widening and improvements to US 17 (Dominion Boulevard) using VDOT's Concurrent Engineering Process and meeting VDOT/FHWA standards. The firm is currently providing design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation.

As the Prime Designer, PB performed major components of the design effort including: roadway widening and bridge design which included the design of a Single Point Urban Interchange (SPUI), a non-traditional intersection at Cedar Road; TMP/MOT plans; stormwater management design; utility coordination and relocation design; preparation of the Noise Abatement Design Report (NADR); ITS design; signing & pavement marking plans; and environmental permitting (including wetlands impacts and mitigation, and stream modifications).

**RELEVANT PROJECT ELEMENTS**

**Roadway Widening:** The project involved roadway widening under heavy traffic volumes to convert an existing two-lane suburban roadway into a four-lane facility, including grade separated interchanges with existing City arterial roadways. Similar to the Military Highway CFI project, the design includes the widening of heavily traveled City arterials and the construction of major signal controlled intersections within the new interchanges and along the arterials approaching US 17. At Cedar Road, a non-traditional intersection (SPUI) was designed and is now being constructed. The project also includes the design of six new stormwater management facilities; modifications to both lengthen and convert an existing twin-cell box culvert to a triple-cell box culvert and stream modifications, much like what is required for Military Hwy CFI; 120,000 sf of MSE wall at 20 locations; noise barriers; landscaping; and significant utility relocations. PB also conducted Community Information Meetings and the Location & Design Public Hearing to present the proposed design, including the new non-traditional SPUI intersection, and receive public comments.

**Traffic Control/TMP:** The project design involved development of the roadway plans package to include a detailed and specific construction sequence and maintenance of traffic plans for the project in order to maintain traffic on existing US 17 and the City arterial roadways crossing US 17 during construction. The northbound lanes are being constructed as an initial phase and will carry mainline US 17 traffic while the new southbound lanes are constructed. Like the Military Hwy CFI project, this approach requires temporary roads as well as the use of existing alignments to manage traffic during construction. The plan includes coordination with marine traffic on the Atlantic Intercoastal Waterway (AIW) as well. The AIW is an important third party stakeholder that must be properly managed and requires special instructions for inclusion in the TMP similar to the accommodations required for the railroads in the Military Highway CFI project. Maintenance of traffic design included temporary traffic control devices as well as the coordination of permanent traffic devices as early as possible during construction to facilitate the most effective traffic flow. Traffic devices include: all temporary and permanent signal equipment, variable message signs, overhead sign structures, ground mounted signs, and pavement markings, all elements that exist for Military Hwy CFI. Installation of a new wireless signal interconnect system on both Great Bridge Boulevard and Cedar Road, designed to meet VDOT and City of Chesapeake requirements, were also required. Each phase of construction was modeled using Synchro software in order to assess the effects of each phase of construction and document such.

**Environmental Documentation and Permitting:** PB prepared an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the entire project corridor from I-64 to Route 17, a distance of nearly six miles. The EA included identification of and mitigation strategies for impacted elements along the corridor, including wetlands, natural and cultural resources, ROW, endangered species, etc. The EA identified the range of permits that would be required for the project, which led to preparation of several permit applications for construction of the project. Similar to Military Highway, the project included identification and quantification of tidal and non-tidal wetland impacts. Mitigation strategies developed for the project included payments to wetland banks within the watershed, on-site mitigation and construction of a wetland mitigation site adjacent to the project. PB managed the wetlands and stream modifications permitting as well as the developed the appropriate mitigation strategies necessary for implementation.

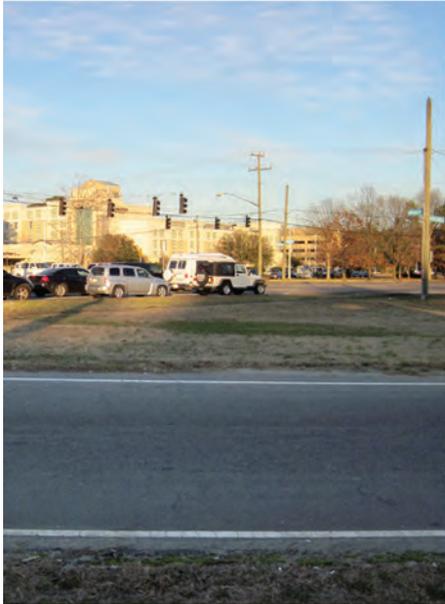


**Noise Barriers:** PB completed the Final NADR which included requirements for relocating / modifying one existing noise barrier and constructing one new noise barrier. PB also participated in the public meeting process required for NADR approval, just as will be required on the Military Highway CFI project.

**Geotechnical:** The project included significant areas with poor subsurface soils as are frequently encountered throughout the entire Hampton Roads region. The geotechnical investigation included detailed alternatives analysis resulting in a significant wick drain and surcharge program that was implemented to pre-consolidate the poor soils. This resulted in significant project cost savings and eliminated adverse post-construction settlements.

**Drainage and Stormwater Management:** PB designed six new stormwater management facilities each with unique design requirements due to respective existing conditions, e.g., oversizing basins for future development, rerouting existing drainage patterns to compensate for undersized existing systems, utilizing an existing borrow pit as a basin in the new system. Like the Military Hwy CFI project, an existing box culvert was relocated and upsized and the adjacent stream modified to accommodate the new location on Dominion Boulevard.

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## The Lane Construction Corporation

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# LANE