Statement of Qualifications

Design-Build Military Highway Continuous Flow Intersection
From: 0.023 Miles South of Lowery Road
To: 0.230 Miles North of Interstate 64
Norfolk, VA

Contract ID Number: C00001765DB81

January 29, 2015

Design Team Experience with CFI...

PCL Civil Constructors, Inc.
Section 3.2
Letter of Submittal

PCL Civil Constructors, Inc.
Dear Mr. Stevenson:

3.2.1 PCL Civil Constructors, Inc. (PCL) 801 Corporate Center Drive, Suite 130, Raleigh, NC 27607 is the legal entity who will execute the contract with VDOT.

We have examined the RFQ, acknowledge Questions and Answers dated January 13, 2015, attended the Project Information Meeting, and visited the project site. PCL appoints the following:

3.2.2 Kevin Ott, DBIA, Design-Build Project Manager, will serve as the point of contact for the Offeror.

Kevin Ott, DBIA
801 Corporate Center Dr., Suite 130
Raleigh, NC 27607
P: (919) 859-5210
F: (919) 859-5249
krott@pcl.com

3.2.3 Jim Schneiderman, PE, Area Manager & Authorized Signatory, will serve as the principal officer for the Offeror.

Jim Schneiderman, PE
801 Corporate Center Dr., Suite 130
Raleigh, NC 27607
P: (919) 859-5210
F: (919) 859-5249
jschneiderman@pcl.com

3.2.4 PCL is a corporation titled in Colorado and a wholly-owned subsidiary of PCL Construction Enterprises, Inc. and will be the sole major participant firm and responsible party to the Design-Build contract with VDOT. PCL will hold all financial responsibility for the contract.

3.2.5 Lead Contractor: PCL Civil Constructors, Inc. (PCL)/Lead Designer: Rummel, Klepper & Kahl, LLP (RK&K)

3.2.6 Affiliated and/or Subsidiary Companies Table (Attachment 3.2.6) is in the Appendix.

3.2.7 Certification Regarding Debarment Forms (Attachments 3.2.7 (a) and 3.2.7 (b) are in the Appendix.

3.2.8 VDOT Prequalification Certificate evidence is included in the Appendix.

3.2.9 A Surety Letter is included in the Appendix.

3.2.10 SCC and DPOR information are listed in Attachment 3.2.10 with supporting documentation in the Appendix.

3.2.11 PCL is committed to achieving a 12% DBE participation goal for the entire value of the contract.

We present to you a design-build team equipped with the experience, knowledge and resources to partner with VDOT in successfully delivering the Military Highway Continuous Flow Intersection project.

Sincerely,

PCL Civil Constructors, Inc

[Signature]

Jim Schneiderman, P.E.
Area Manager/Authorized Signatory
Section 3.3
Offeror's Team Structure

PCL Civil Constructors, Inc.
3.3 Offeror’s Team Structure

PCL Civil Constructors, Inc. (PCL) has an industry reputation for delivering outstanding quality to our clients. Over the last 15 years, we have successfully delivered over $3.5 billion in Design-Build projects in the United States – the vast majority of those contracts delivered ahead of schedule. Our team is founded on local, distinguishable designers and subcontractors with extensive VDOT Design-Build experience.

To complement our construction services, PCL has strategically selected Rummel, Klepper & Kahl, LLP (RK&K) as our Lead Designer along with the added depth of specialized subconsultants. Together these firms make up the PCL Design-Build (DB) team.

3.3.1 Qualifications and Functional Relationships of Key Personnel. PCL’s careful selection of the proposed team for the Military Highway CFI DB project will provide VDOT tremendous value in the delivery of this project. Our team members are familiar with each other and with VDOT. RK&K has a proven history for providing value-added solutions and innovation to the DB methodology. RK&K shares PCL’s philosophy of integrity and quality. PCL has an established working relationship with RK&K as evidenced by our collaboration on the pursuit of the Yadkin River Bridge DB project. RK&K exhibits an overall strength in managing multi-disciplined DB projects with a thorough understanding of VDOT’s design and DB requirements. We also consider VDOT management and staff true partners on this project; working shoulder-to-shoulder with the PCL team. This relationship will offer true accountability to safely complete the Military Highway CFI DB project within time and budgetary constraints.

The PCL team is directed by highly qualified and capable professionals with strong DB experience. All of the proposed key personnel have noteworthy experience on transportation projects similar to the roles they have been selected for on this project team. A ★ icon is shown next to the names of the personnel that offer previous Design-Build experience.

★ Leading the PCL team is Design-Build Project Manager – Kevin Ott, DBIA (PCL) who is responsible for the overall project, construction quality management, and contract administration. He will facilitate communication among team partners and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and designate resources to deliver the project on time. It will be his responsibility to work with RK&K to ensure that the design is on time and meet VDOT’s specifications. Mr. Ott’s interaction from design through construction will include weekly design and construction meetings to discuss how the PCL team will build the project. Should any issues arise, it is his responsibility to address project issues with the designer, construction team, and VDOT. Interaction with the Quality Assurance Manager (QAM) will be continuous to ensure that the project complies with the specifications. As demonstrated in the Organization Chart, the following Key Personnel will report directly to the Design-Build Project Manager, leading their respective groups.

★ Quality Assurance Manager – Thomas Druhot, PE (Quinn), reporting directly to the Design-Build Project Manager, will ensure that the construction quality of the Military Highway CFI DB project meets or exceeds the VDOT Minimum Quality Control and Quality Assurance Requirements for DB Projects and will ensure all construction activities are in compliance with contract documents. Although Mr. Druhot will report directly to the DB Project Manager, he will maintain independence for all Quality Assurance matters including QA testing. This independence is imperative throughout the entire construction process in order to guarantee that each phase of construction progresses with the highest standards of quality. Any concerns Mr. Druhot may have will immediately be brought to the attention of the DB Project Manager, but will be handled accordingly by Mr. Druhot himself with full authority to stop work should the necessity arise. He will have a multi-disciplined staff of professionals who have both a respect for established principles and a willingness to develop and utilize new and innovative techniques for this project.

★ Design Manager – Michael Merritt, PE (RK&K), reporting directly to the Design-Build Project Manager will be responsible for providing a quality product, meeting all design milestones and interfaces while exceeding all owner’s expectations and ensuring design quality control and assurance. He was chosen specifically for this project based on his strong DB experience on many different types of projects. Mr. Merritt is adept at managing the overall design process, including monitoring project schedules, assigning staff, reviewing work plans, and ensuring that project goals and budgets are met. The DB projects Mr. Merritt manages also include but is not limited to right-of-way acquisition, permitting, and utility relocations. Mike recently completed the 54.4M US 13/US 158 DB widening project that included many complex intersections and U-turn bulb movements.

★ Construction Manager – Charles Mash (PCL), reporting directly to the Design-Build Project Manager, is responsible for the day-to-day construction operations of the project. He will be responsible for the site safety, working with the Site Safety Manager, as well as the superintendents and project scheduling team. He will be on-site for the full duration of construction and he will coordinate with the design staff as needs arise as well as conduct constructability reviews and he will keep as-built records. Quality Control activities fall under his supervision and the entire QC team will report to him. Mr. Mash is a Superintendent with PCL and possesses over 34 years of construction experience.
**Traffic Operations Designer and Manager – Nick Dais, PE, PTOE (RK&K),** reporting directly to the Design Manager, will be responsible for providing the design and coordination of traffic control systems. Mr. Dais offers more than 16 years of experience managing complex traffic engineering projects that have included operational analyses of intersections, interchanges, urban roadway design, pedestrian improvement design, arterials and roundabouts, traffic analysis and design, traffic impact studies, traffic signal design, signing and pavement marking design, maintenance of traffic plans, and providing transportation support for environmental impact statements. His project experience also includes close coordination with local, state and federal agencies to develop new transportation policies and prepare or update a wide variety of technical manuals. He has effectively managed projects of various sizes and complexity involving traffic analysis and he has been responsible as task leader for several roadway design projects including Design-Build projects.

**Lead Utility Coordination Manager – Dave Plum, PE (RK&K),** reporting directly to the Design Manager, will provide the utility coordination and relocation efforts. As part of the utility coordination responsibilities, Mr. Plum will work directly with PCL and the public and private utility companies to mitigate utility conflicts using the guidelines established in the VDOT Utility Manual, Tenth Edition. Mr. Plum offers more than 34 years of engineering design experience with a specialty in public/private utility coordination and relocation. Mr. Plum has provided utility coordination and relocation services for many VDOT projects including serving as the Utility Relocation Manager for the ongoing DB Downtown Tunnel/Midtown Tunnel/Martin Luther King Freeway Extension Project in Norfolk/Portsmouth, Virginia.

### Additional Design and Construction Support

In addition to the key personnel, we have assembled a highly skilled team of professionals to lead design disciplines and construction management, selected because of their proven competencies in engineering, construction and Design-Build. Listed below you will find short biographies on each of these design and construction professionals. Each member was hand-selected based on their experience as it relates to this project’s scope of work and complexities, as well as their familiarity working together as a team.

**CFI Design Expert – John Hock (EDSI)** offers 29 years of experience in the civil engineering field and has completed more than 140 transportation projects. Design complexity of these projects varies from complex intersections to resurfacing and widening of residential streets and county roads, to construction of new interstate highways and interchanges. **His specific asset for this project is his experience with the design and construction of Continuous Flow Intersections (CFIs).** Mr. Hock served as the lead designer for the Route 30 at Summit Drive CFI in Missouri. This was only the fifth CFI in the United States and it won the Grand Award in the ACEC/MO 2010 Engineering Excellence Award Competition. Mr. Hock’s role on this project is as an advisor to the lead designer, RK&K, and he is not in an engineering role.

**Roadway Engineer/Deputy Design Manager (DDM) – John McDowell, PE (RK&K)** brings more than 34 years of experience in the design and management of complex roadway design projects and will focus on roadway and intersection design for this contract. He has been responsible for leading and directing geometric design and plans productions for roadway design, preparing Traffic Control Plans, as well as interfacing with the various elements of the roadway design including structures, drainage, signals and lighting design. Previous VDOT project experience includes multiple task orders under five of RK&K’s current VDOT On-Call Design Contracts, as well as previously serving as Deputy Project Manager for the Capital Beltway (I-495) Design-Build HOT Lanes project in Fairfax County, VA. For the I-495 HOT Lanes project, Mr. McDowell coordinated with the Washington Metropolitan Area Transit Authority (WMATA) for the road widening under the Washington Metro Orange Line crossing I-495 at I-66. He led assignments with Fairfax County DOT (FCDOT) in the Tysons Corner area, including State Street preliminary alignment just east of this project along Route 7 and Route 7 improvement from Route 123 to I-495 and the Jones Branch Connector Interchange Improvement with I-495. His experience brings a strong understanding of VDOT’s goals for transforming Military Highway into a free flowing roadway. Mr. McDowell will report to the DM.

**Signing, Striping and Traffic Signals Engineer – Stuart Samberg, EIT (RK&K)** has more than 9 years of experience and is responsible for all facets of transportation engineering from planning and analysis to design for roadways, highways, transit facilities, and bicycle and pedestrian access improvements. He will lead our traffic signal design and coordination efforts. Mr. Samberg is experienced in the traffic engineering field and his experience includes all aspects of transportation planning and traffic engineering including traffic studies, signal design, signal timing optimization, corridor studies, traffic signing and marking plans, maintenance of traffic plans, street lighting and intersection geometric improvements. He recently provided traffic analysis to VDOT for multiple alternatives along Route 7 from the Route 9 interchange to the West Market Street interchange in Loudoun County. This analysis included traffic forecasting, traffic modeling, roundabout analysis, signal warrant analysis, safety analysis, and access management analysis, with all results being summarized in a report submitted to and approved by VDOT and FHWA. Mr. Samberg will report to the DM.
 ★ **Drainage/Hydraulics Design Engineer – Mike Hogan, PE (RK&K)** has 16 years of advanced technical roadway and drainage training and experience on both rural and urban design projects. His intense hands-on training and experience provides him with the expertise to handle a wide variety of projects. His project experience includes various types of roadway design projects on new location, reconstruction, and widening, and major drainage improvement projects. Computer skills include MicroStation, IGrds, AutoCAD, and SoftDesk for roadway design and GEOPAK Drainage, HY-8, FLOWMASTER, ENSOFT, STORMCAD, HEC-2, HEC-RAS, and POND PACK for drainage design. Mr. Hogan also has extensive experience in the field of environmental permitting that includes development of permit applications for DEQ/USACE joint permits and also project SWPPP’s and associated VSMP permits. Mr. Hogan will report to the DM.

 ★ **Geotechnical Engineer – Mark Scholefield, PE (GET)** has over 19 years of experience in geotechnical engineering including subsurface investigations and geotechnical engineering analysis for roadways and bridge structures. Typical services include slope stability analysis and design, pavement design, utility installation design, dewatering, traffic signal pole design, retaining wall analysis and design, subgrade improvements and stabilization, BMP design, and foundation design for culverts. Mr. Scholefield’s Construction Materials Testing experience includes field and laboratory testing of soil and concrete, lime stabilization of subgrades, subgrade improvements, soil resistivity testing, permeability testing, inspection of tilt-up paneling, subgrade and foundation soil inspection, and monitoring of test pile installation (PDA certified) and load testing. Mr. Scholefield is familiar with the soils in the Military Highway project area.

 ★ **Utility Designation/Location – Mike Woods (CAR)**, has extensive experience in the areas of highway design; subsurface utility engineering; and utility coordination and relocation. Mr. Woods manages Cardno TBE’s Richmond, Virginia office, which provides subsurface utility engineering and utility coordination services to clients in Virginia and the Mid-Atlantic area. Mr. Woods’ prior experience also includes 12 years with the Virginia Department of Transportation (VDOT) working in both the Right-of-Way & Utilities and the Location & Design Divisions. Mr. Woods currently manages two Statewide Contracts for VDOT (Statewide Utility Field Inspection / Utility Coordination Consulting Services, and Statewide Subsurface Utility Designation and Location Term Contract). Mr. Woods will report to the DM.

 ★ **Environmental Permitting and Wetland Delineation Coordinator – Ricky Woody, II (RK&K)** has more than 27 years of experience providing project management leading and supporting the preparation of various NEPA documents, securing wetlands and water quality permits and promoting compliance with environmental clearances for both large and small transportation projects. He has a strong foundation in environmental resource studies required for successful document/permit approvals including; wetland delineation, Unified Stream Methodology, rare, threatened and endangered species studies, water quality monitoring, habitat assessments, and mitigation design. Mr. Woody has experience in performing project reviews and providing corrective action recommendations to remain compliant with project specific environmental commitments. He has been involved in numerous VDOT projects providing environmental engineering and services and has managed all environmental aspects of several major and minor infrastructure projects, including the I-64 Widening and Project 623 Interchange Improvements DB Project, Woodrow Wilson Bridge, Manassas Bypass, and Fairfax County Parkway. Mr. Woody will report to the DM.

 ★ **MOT & TMP Plans and Pedestrian Improvements – Ken Yarberry, PE (RK&K)** offers over 24 years of experience in the civil engineering industry, including leadership roles in construction administration and design project management. Mr. Yarberry has more than 12 years of experience in road and highway design, public utility relocation, and transportation planning primarily on VDOT projects. Transportation work included as lead geometric designer and project engineer on five urban principal arterial and interstate interchange projects, preparation of MOT/sequence of construction plans as part of transportation management plans, intersection design, design of bicycle and pedestrian facilities, and preparation of erosion and sediment control plans. Additionally, he has over 8 years of project management experience leading multi-discipline teams of roadway, traffic, structural, and hydraulic engineers. Prior to embarking on his engineering career Mr. Yarberry was an active duty army officer in the U.S. Army Corps of Engineers for ten years working in light horizontal construction. He is experienced with a many computer specialized software programs, including; MicroStation, IGrds, GEOPAK, Synchro, HCS, NETSIM, and Hydraflow. He will report to the DM.

 ★ **Public Outreach Manager – Emily Tuttle (PRR)** will serve as the Public Outreach Manager. Emily offers more than 5 years of experience in the development and implementation of strategic communication programs. She possesses a thorough knowledge of public and stakeholder activities supporting transportation planning and Design-Build projects. Working closely with RK&K and VDOT, Ms. Tuttle will prepare strategic communication plans, crafting the methodology necessary to successfully implement the project public participation program. She will represent the Project Team at community events and facilitate workshop discussions and manage the preparation of informational materials, websites, study documents, and project resource centers. Ms. Tuttle manages the Naval Station Norfolk Transit Extension Study (NSNTES) communications for HRT and the City, thereby ensuring seamless community engagement and guaranteeing that the project meets local goals and addresses any issues that
arise during the study process. She also provides communications and public outreach assistance to the Elizabeth River Tunnels transportation corridor improvements project. She will report to the DBPM.

★ Design QA/QC Manager – Owen Peery, PE (RK&K) will arrange for all design quality assurance and design quality control procedures in accordance with the quality control plan. He will verify that checks and reviews have been made prior to submissions, including review comment checking, contract conformance reviews, interdisciplinary reviews, and constructability reviews by PCL staff. Mr. Peery, with over 30 years of experience, will serve as a resource to the team in the manner of Design-Build delivery. He provides the hands-on efforts needed to ensure adequate resources are assigned, accelerated schedules are maintained, and the team is responsive to clients. He will build on his experience gained as the Design Manager of the current I-64 Widening and Route 623 Improvement Project. Mr. Peery will report to the DM.

★ Construction QC Manager (CQC) – Gary Dale (PCL) offers over 23 years of experience in civil and transportation projects. He has proven himself very capable on a variety of projects, big and small from roadways, bridges, drainage and paving, toll plazas, to parking garages; he is a very valuable asset to any project team. Starting out as a field engineer with PCL right out of college, Mr. Dale is currently the QC manager for the $97 million Flagler Memorial Bridge in West Palm Beach, Florida. He works tirelessly to engrain the fundamentals of quality management into the project team and subcontractors. Mr. Dale’s challenge is to build this quality culture and strengthen our operations. He knows to have a successful project and a satisfied Owner you must “Build it Right and Build it Once.” Mr. Dale will report to the CM.

★ Design-Build Coordinator (DBC) – Marty Grem, PE (PCL) has 25 years of experience and originally joined PCL in 1999 and was assigned to the Evans Crary Sr. Bridge project. After working for other firms on complex bridges, he rejoined PCL in September 2011 to support PCL’s Mid-Atlantic office operation. He has successfully completed many types of medium and long span bridges of concrete, steel, and plate girder sections. He has worked on projects with various foundations, including drilled shafts, concrete piling, and steel pipe piling in various soil conditions. His experience includes managing bridge and highway work and extensive experience in preparation of bridge design, post-tensioning system engineering, falsework and formwork design and complex scheduling. He has engineered and managed multiple projects that required both the engineering and construction of temporary trestle/workbridge and complex falsework and temporary support systems. Mr. Grem’s project pursuit experience includes planning, engineering, estimating, and bid preparation. Mr. Grem will report to the DBPM.

Scheduling/Project Controls/DBE Compliance – Meredith Kinkle (PCL) has eight years of experience in both bridge and roadway construction. Her experience encompasses a variety of responsibilities to include calculating take-offs, initiating subcontracts/purchase orders, submittal preparation and tracking, correspondence and communication with Owners, coordinating subcontractors and establishing/maintaining the project schedule. Ms. Kinkle will report to the CM.

★ Safety Manager – Chris Claggett, CSP, CHST (PCL) has 15 years of experience providing occupational safety, industrial hygiene, environmental protection, and risk management technical support to transportation projects to ensure adequate project delivery and continual advancement toward total safety, zero incident cultures. As the Transportation Infrastructure Group’s Mid-Atlantic Region’s District Health, Safety, & Environmental (HSE) Manager, Mr. Claggett capably transfers knowledge to and instills accountability with field safety staff, front line leadership, and craft labor to maintain and continually improve worksite HSE performance. In addition to his project experience (including the very unique and challenging Panama Canal Expansion), Mr. Claggett has served as Regional/District HSE Manager for multiple heavy civil contractors with proactive and progressive safety programs. He is passionate about enabling safety success and satisfaction through proactive, communicative, and team oriented efforts. Mr. Claggett will report to the CM.

★ Environmental Manager – Michael Shaw, MS (PCL) has 15 years of experience as an environmental professional. He has permitted large, complex, and high profile infrastructure improvement projects; and has also developed and managed environmental compliance programs for mega-class capital improvement projects. As an environmental professional, Mr. Shaw’s involvement and oversight on the key projects listed on the following pages has preserved and accelerated project schedules, resulted in reasonable and prudent best management practices, reduced permitting and compliance costs, and limited project impacts to those authorized through the regulatory process. Clients have been pleased to have an environmental professional on the team who is solution driven and understands the importance of delivering a quality project on schedule and within budget. Mr. Shaw will report to the CM.

★ ROW Manager – Allen Dorin, Jr., MAI, SRA, RW-NAC (KDR) has 38 years of experience and is the owner and President of KDR Real Estate Services, Inc. Mr. Dorin’s primary experience has been as a real estate appraiser. He has appraised a wide variety of property types with a concentration in eminent domain assignments. He has qualified as an expert witness in most throughout the Commonwealth. He has testified in over 30 condemnation trials and has managed numerous right-of-way and acquisition projects including negotiations with property owners. KDR and Mr. Dorin are both PreQualified for VDOT Administered Contracts. Mr. Dorin will report to the DBPM.
3.3.2 Organizational Chart. The Organizational Chart on the following page depicts key personnel as identified in the RFQ, the major functions they will perform, and the designated reporting structure. The PCL team is structured to provide VDOT with a single point of contact that will be responsible for all design and construction activities. As demonstrated in the Organization Chart, the identified Key Personnel will report directly to the Design-Build Project Manager, leading their respective groups. The chart also shows the clear separation and independence that exists between the respective QC and QA programs for construction activities including the separation between QA and Construction QC Inspection and field/laboratory testing as defined in the VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, dated January 2012.
Section 3.4

Experience of Offeror's Team
3.4 Offeror’s Team Experience

PCL Civil Constructors, Inc. (PCL) will serve as the lead contractor of the Design-Build (DB) team for the Military Highway Continuous Flow Intersection (CFI) DB project. PCL’s successful project delivery methods consistently rank us among the top 10 transportation contractors in the nation. As a company, DB projects account for approximately 20% of PCL’s total volume. In the United States, PCL has successfully participated hundreds of projects ranging in scope from $5 million to $500 million and totaling over $3.5 billion. PCL’s role will include managing the entire project, supervising construction and performing major work elements. The project will be administered from PCL’s regional office in Raleigh, NC and staffed from a local project office in Hampton Roads. PCL has completed 748 highway/bridge projects including 27 design-build projects. From this experience, we have developed a successful team approach to design-build contracting. PCL’s overall approach can be expressed in one word: communication. We believe that communication is the largest determining factor for success in all projects, particularly Design-Build projects. Our project team, processes, and verification methods are all set up with the goal of creating clear, collaborative, open, honest and timely communication. Projects that fully buy in to this idea develop a strong partnering atmosphere, where all ideas can be brought to the table and challenges are solved by the team instead of individuals.

PCL is currently working with VDOT on three projects including repairs to the Benjamin Harrison Bridge and constructing the new Gilmerton Vertical Lift Bridge along Military Highway. Similar to the Military Highway CFI, these projects are complex, engineering intensive, and important to multiple stakeholders. PCL has strategically placed resources to nationally pursue and manage complex projects where we can be Solution Providers for our clients. Our success stems from hiring the industry’s brightest professionals and tradesmen to self-perform and execute any project, regardless of the technical challenges.

PCL & VDOT

PCL is fully committed to providing the highest quality services to the Commonwealth of Virginia and we recognize the transportation investment that VDOT is making with this DB project. Based on this investment, we believe risk management is a key element of all complex projects, especially design-build projects. On the Gilmerton Bridge project, PCL worked alongside VDOT and participated in a Full Stakeholder Risk Management Program. This Risk Management Plan considered construction risks, as well as all risks on the project to various stakeholders. With input from VDOT, PCL will develop a similar project-specific Full Stakeholder Risk Management Plan for the Military Highway CFI. For each risk identified, PCL and VDOT will collectively agree on a risk mitigation strategy to ensure that all parties are prepared to react in the event that something does not go as planned. In other words, we firmly believe in having a “Plan B” and “Plan C” in place and ready to go before “Plan A” is implemented. By doing so, we have found that this increases quality, safety and production, while minimizing potential impacts to third parties, such as the traveling public.

PCL has been the active leader on numerous high profile DB projects over the last 30 years. We have won multiple awards for design-build projects for engineering and construction excellence, quality, safety and superior achievement. For VDOT, this simply means PCL is passionate about building quality projects the entire team can be proud of when complete. PCL projects in Virginia have included:

- Chesapeake Bay Bridge and Tunnel Parallel Crossing ($198M)
- Smart Road Bridge over Wilson Creek ($15M)
- Gilmerton Bridge Replacement ($134M)
- Benjamin Harrison Bridge Auxiliary Drives Replacement ($1.5M)
- Benjamin Harrison Bridge Concrete Repairs ($2.7M)

The PCL team has worked on numerous projects where our inventive construction staging and sequencing played an integral part in maintaining public access during construction and for minimizing impacts to adjacent stakeholders including businesses, communities and other transportation users. We will complete a thorough constructability review early in the design process to identify and mitigate potential impacts to project stakeholders.
PCL holds the reputations achieved through these and other projects in high regard and takes pride in maintaining this reputation on every project we construct. The PCL Lead Contractor History Forms indicate the experience, capability and commitment that PCL brings as a firm and instills in each of our team members. These same characteristics are also found in our Lead Designer RK&K and our subconsultant team members - which further enhances the strength and productivity of this unified team.

PCL values the importance of selecting the right designer for each specific project that we undertake. Our Lead Designer Rummel, Klepper & Kahl, LLP (RK&K) brings great value to the PCL team and VDOT with their extensive D-B resume and reputation for oversight of the DB process for VDOT.

Rummel, Klepper & Kahl, LLP (RK&K), founded in 1923, is a multi-disciplinary consulting firm providing a wide range of planning and design services for infrastructure design and rehabilitation, including the design of roadways, bridges, transit, water/sewer and site design. RK&K services an array of federal, state, and local clients from four Virginia offices – Virginia Beach, Richmond, Newport News, and Fairfax, and 12 additional offices throughout the Mid-Atlantic and Southeast US.

RK&K provides complete transportation planning, highway design and traffic engineering services to all levels of public and private sector clients. RK&K’s services range from the transportation planning of major bridges, highways and intersections to traffic impact analyses, signal design, sidewalk design, and corridor and parking studies. Their transportation, planning and engineering team excels in resolving complex infrastructure and permitting challenges. RK&K’s experience in rural and urban areas, corridors, and central business districts dealing with highway, bridge, and railway projects have given them the experience necessary to become prequalified with multiple departments of transportation.

**RK&K & VDOT**

VDOT turns to RK&K for their DB expertise, specifically under the Design-Build P3 Staff Augmentation Services contract. Under this contract, RK&K develops the design and contract documents for VDOT to be advertised for DB procurement. This experience gives our Lead Designer extensive working knowledge of VDOT’s policies, procedures and preferences with respect to DB projects. Their extensive experience is further broadened by their current delivery of the ★ Design-Build I-64 Widening and Route 623 Interchange Project in Henrico and Goochland Counties. In addition, RK&K was recently presented with an award from the VTCA for their Main Street Improvements project in Blacksburg, VA. The project was chosen as the top submittal in the category of "Projects Smaller than $10 Million," which recognizes outstanding design work in the Transportation Industry in Virginia.

Additional relevant RK&K projects in Virginia include:
- ★ Middle Ground Boulevard, Newport News
- Prince William Parkway, Prince William County
- Onville Road / Garrisonville Road Widening, Stafford County
- 10th Street, City of Roanoke
- Mosby Boulevard / Route 7, Clark County
- Route 150 Widening, Chesterfield County
- Route 250 Bypass Interchange, City of Charlottesville
- I-95 Safety Improvements, Prince William County
- ★ I-81 Truck Climbing Lanes, Rockbridge County
- Route 58, Washington County
- Garrisonville Road (Route 610), Stafford County, VA

**Major Subconsultants / Subcontractors**

The PCL team was assembled based on the selection of the most qualified firms for their respective expertise. We first identified project tasks and critical risks by reviewing the RFQ scope of work, plan sets, VDOT studies and evaluations and conducting project site visits. We then selected the firms with the most qualified and reliable work histories, as well as experience in the Hampton Roads District.

<table>
<thead>
<tr>
<th>The PCL Team</th>
<th>Offeror, Lead Contractor, Design-Build Project Manager (DBPM), Construction Manager (CM), Construction Support Personnel</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K) ★</td>
<td>Quinn Consulting Services, Inc. (QUI) ★</td>
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<td>GET Solutions, Inc. (GET) ★</td>
<td>KDR Real Estate Services (KDR) ★</td>
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<td>Precision Measurements, Inc. (PMI) ★</td>
<td>PRR, Inc. (PRR) ★</td>
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<td>Rhodeside &amp; Harwell, Inc. (RHI) ★</td>
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<td>Utility Coordination Manager, Design Support Personnel</td>
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* Each of the team member firms and assigned personnel that have Design-Build (DB) experience are designated with this unique DB qualification logo.
Quinn Consulting Services, Inc. is a 100% woman owned DBE/WBE engineering consulting firm that provides quality control and/or quality assurance services on DB projects for contractors, design engineers, and owners. Quinn has supported clients from all perspectives on large and small DB projects, working as Owner QA representatives, Contractor QC inspectors, and Consultant Engineer Quality Assurance Managers where we have served as an integral part of project QA/QC teams delivering a quality product by working in partnership with owners, design engineers, and contractors.

EDSI Consulting, Inc. (EDSI) is a civil engineering and surveying firm with 30 professionals providing consulting services. EDSI staff includes 20% minorities and 30% women. Since their inception in 1995, EDSI has successfully completed more than 1,500 projects. EDSI has built a reputation of excellence by providing clients with superior engineering and design services, personal attention, and highly responsive staff to meet the specific needs of each complex project. EDSI has extensive experience with continuous flow intersections, highways/roadways, trails, pedestrian facilities, traffic studies, traffic signals, and site design. EDSI’s dedicated and diverse staff, detailed quality control plan and client satisfaction program ensures the successful completion of every project they undertake. For this project, EDSI will be an advisor to RK&K and will not be providing engineering services.

Cardno TBE is a specialized Subsurface Utility Engineering (SUE) firm with more than 400 multi-disciplined project professionals. Cardno TBE is currently ranked #27 on the Top 500 Design Firms by Engineering News Record’s (ENR) magazine. Cardno TBE currently provides statewide SUE services to more than 30 Departments of Transportation (DOTs), including VDOT. Cardno TBE has been providing SUE services for cities, counties, utility companies and a variety of other public and private sector clients since 1993. During this time, Cardno TBE has successfully completed thousands of individual underground utility locating projects ranging from one test hole upward to as many as 500 test holes. Annually, Cardno TBE successfully completes over 20,000 test holes and 15,000,000 feet of designating. When it comes to SUE – they wrote the book, literally! In 2002, the American Society of Civil Engineers developed the Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data (CI/ASCE 38-02), which has become the national standard for SUE data. Cardno TBE was only one of two SUE providers that had representation on the committee that created the standard and still has representation on the committee today.

GET Solutions, Inc. has over 15 years of experience and is a full service Geotechnical, Environmental and Testing firm with in-house drilling capabilities and certified soils and concrete testing laboratories. They are a small business enterprise (SBE) for federal work and SWaM certified (#656305) for state/municipal work. In addition, GET Solutions, Inc. is certified to perform Special Inspections testing services in accordance with the requirements of ASTM E-329. Their offices are located in Virginia Beach and Williamsburg, Virginia and Elizabeth City and Jacksonville, North Carolina. GET Solutions, Inc. currently holds an annual drilling contract with VDOT and is extremely familiar with VDOT’s codes, requirements, and standards.

KDR Real Estate Services is a full service right-of-way and easement acquisition company. Their services include ownership verification that can range from a current owner rundown to a 60-year title search, appraisal of property rights to be acquired, conveyance document preparation and compilation of related paperwork for the presentation of an offer to the affected landowners, negotiations with the landowners, clearance of title, closing and settlement procedures, and overall project administration to complete the transfer of title from the property owner to the acquiring authority. KDR is also a licensed title agency who can underwrite insurance policies through WFG National Title Insurance Company. KDR has personnel who have been trained and are experienced in using the VDOT RUMS software program that is required for state and federally funded projects.

Precision Measurements, Inc., a certified DBE/WBE firm, is a full-service land surveying firm with offices in Virginia Beach, Newport News and Richmond. PMI offers a wide-range of surveying services including, topographic surveys, 3-D scanning (dimensional control), geodetic surveys, boundary surveys, aerial photo control, acquisition plating, construction field engineering, route surveys, infrastructure surveys, deformation monitoring surveys, antenna alignment surveys, utility location services and NGS “blue booking”. Having provided survey services for VDOT and other local municipalities within Hampton Roads for many years, PMI’s knowledge of applicable federal, state, VDOT, HRPDC and City specifications, standards and design criteria will be an asset for the PCL team.

PRR, Inc. is nationally recognized for the ability to generate consensus around challenging public issues. PRR, Inc. facilitates partnerships between communities and public agencies to develop and implement solutions that work for the real world. Founded in 1981, the firm offers a full range of communication capabilities and technical expertise in public opinion research, public policy, and facilitation to ensure effective and on-going communications with the public. PRR’s 65-person, award-winning staff has directed hundreds of public involvement, community relations, social marketing, research, and media relations programs. PRR specializes in projects encompassing a wide variety of environmental, transportation, and land use issues. PRR
is certified by the Virginia Department of Minority Business Enterprise as a Disadvantaged Business Enterprise (DBE) and a Small, Women and Minority (SWaM) business.

Rhodeside & Harwell, Inc. is a certified DBE/WBE firm established 1986 which offers comprehensive services in planning, urban design, and landscape architecture. Rhodeside & Harwell has provided landscape architectural services for projects from New York to California. Their design philosophy and processes encourage creativity, contextual sensitivity, and a disciplined sense of respect for environmental considerations, cost parameters, and most of all, client objectives. Their portfolio reflects decades of experience working within both the public and private sectors. Rhodeside & Harwell offers a diverse set of skills—from feasibility studies and site analysis through community outreach and final design and construction administration. Their projects have frequently earned awards for design excellence and have been published in many prominent magazines and other publications. Rhodeside & Harwell understands the complexities of sustainability, security, maintenance, and high-visitor traffic. Their work ranges from small public parks to large-scale civic places, including many historic sites.

Stakeholder Trust. Another key component in PCL’s approach to DB contracting is strong relationships among all stakeholders. We firmly believe that all successful DB projects have one thing in common: trust among the Owner, the Contractor and the Designer. We understand that trust is something that must be earned over time, yet we strongly believe that without it, the success of any project is always in jeopardy. VDOT can be assured that the PCL team will always be open, honest, fair and transparent in all dealings. Stakeholder communication will be focused by the Design-Build Project Manager (DBPM), Kevin Ott, DBIA, and our Public Outreach Manager, Emily Tuttle. They will work with VDOT to develop the appropriate messages tailored to the individual stakeholders, as needed.

The PCL team brings to the Department a highly-skilled team with knowledge of the DB process and of the scope of work included in the Military Highway CFI DB project, as well as a commitment to quality and value. Previous applicable experience, established relationships among partners, and most importantly, reputations in the industry were the key criteria used to select this team.

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

Lessons Learned

Every member of our team possesses extensive D-B experience in their respective designated area of expertise. PCL took great care in the selection of the particular designer and subconsultants that we know are the best-qualified to perform their respective functions on this project. In addition, the PCL team continues to draw upon our experience with a “lessons learned” review in order to refine, stream-line, and continuously improve the D-B process for future projects. We have a stockpile of valuable methods and practices that we have learned while working on projects for VDOT and other public clients. These lessons learned will enable us to mitigate the risks that we have elaborated on in the following section.

Our team members’ strong communication skills and relationships with VDOT staff, third parties and other stakeholders, along with our keen understanding of local concerns, helps ensure that coordination with the local community, public officials, utilities, facilities owners, and other stakeholders will be organized, thorough, and successful. We are very confident in our ability to provide VDOT with the expertise required to meet your goals and objectives for an early project completion.
Section 3.5

Project Risks

PCL Civil Constructors, Inc.
3.5 Project Risks.

PCL has extensive experience in identifying, managing, and controlling risk on transportation projects in Virginia and around the United States. Every construction project success is due to proper identification and mitigation of risk. Beginning with the construction documents through build-out, there are many steps in identifying and managing the risks of any given design-build project. The PCL team is comprised of construction specialists that are experts at recognizing problems, then applying their unique perspective to mitigate/alleviate those risks, and in turn, protect the Department’s investment.

Furthermore, the PCL team’s Designer is RK&K, who has worked with VDOT either conducting or participating in a number of VDOT risk evaluation and mitigation meetings, including the following DB projects:

- Waxpool Road Interchange
- Middle Ground Boulevard
- Route 27/Route 244 Interchange
- I-66 ATM Project
- Route 460 Connector
- Route 7 Truck Climbing Lane
- Seminary Road Bridge
- Vienna Metro Ramp

The PCL team’s strong tradition of self-performing a high percentage of our work, extensive first-hand experience, coupled with our successful past history of working with VDOT, enables our team to better position ourselves to control and manage risk items specific to the Military Highway CFI DB project. Additionally, the PCL team members understand the best practices of Design-Build project delivery. Please find three risks below that we identify as most critical to this project.

Risk No. 1 – MOT During Construction

Risk Identification: Military Highway is a heavily congested roadway, which connects commercial and retail areas to the south to I-64, the Norfolk International Airport and residential and commercial areas to the north. Traffic flow is of particular concern during the summer tourist season and during the holiday periods between Thanksgiving and the end of the year, since major holiday shopping venues such as Military Circle Mall, Janaf Shopping Center and several big box stores are nearby to the south.

While the new Continuous Flow Intersection (CFI) will flow smoothly in its final condition, getting to that point will be a challenge and therefore constitutes a Risk to the project. In addition to the volume of traffic and time-of-year concerns, the reconfiguration of the intersection will require complicated phasing, carefully sequenced traffic shifts and an intense public information campaign to address the unique transitions of traffic flow through the intersection.

Why this Risk is Critical: All of the roadway rights-of-way are owned by VDOT. Both Military Highway and E. Princess Anne Road/Northampton Boulevard are major thoroughfares. The City of Norfolk is responsible for managing access to the right-of-way through its Right of Management Division. Military Highway is a major detour for commuters along eastbound I-64 that routinely backs up from the I-264/I-64 interchange all the way north to the Route 13 interchange at Northampton Boulevard; a frequent congestion area at any time of day but particularly for regular commuters in the evening hours. Military Highway is the last interchange exit upstream of this congestion point and a major alternative around this routinely congested area. Any incident occurring on I-64 eastbound from Northampton to the I-264 interchange will quickly backup and generate detour demand onto southbound Military Highway. The left turn movement from southbound Military Highway to eastbound Northampton can back up and interfere with through traffic movements south on Military Highway. Incidents on I-64 and Military Highway routinely affect operational performance on the other roadways. The Design-Builder will need to maintain constant coordination with traffic operations staff at both the City and the VDOT Hampton Roads Traffic Operations Center, and be responsive to their directions which could require limiting construction activities while incidents are resolved.

The entire project lies within the city limits of the City of Norfolk. In addition to VDOT’s restrictions, Norfolk will likely not allow any lane closures from the week before Thanksgiving to New Year’s Day due to the significant amount of traffic that will be accessing adjacent shopping venues along the Military Highway corridor. At other times of the year, we anticipate the City of Norfolk will restrict lane closures to non-peak hours; therefore, the ability to progress construction will be challenging. Even without lane closures, narrowed lanes, the presence of workers, equipment and traffic control devices will have a tendency to slow traffic along the routes. Alternate commuter routes in this region are limited and already congested, and will not be an adequate alternative in mitigating the impacts on traffic during construction.

Safety and traffic progression will be key elements of the very detailed MOT plan for this project. Considering the high volume of traffic along the roads, the unique aspect of transitioning traffic over several phases into the new CFI configuration and time-of-day, day-of-week and seasonal lane closure restrictions will be very complicated. Careful planning of traffic shifts along with a regional informational program to educate drivers to the changing traffic patterns will be essential. There are a number of important considerations that make this Risk critical:

Section 3.5 Project Risks
• High traffic volumes along all of the roadways will need to be accommodated safely with minimal delays to the traveling public. Smooth traffic flow is critically important to this area due to the volume of traffic; Traffic coming from the I-64 ramps along the north leg of Military Highway and the east leg of Northampton Boulevard will need to be considered to ensure that the MOT schemes do not cause traffic to back up along these ramps and spill back on to the I-64 mainline.

• There is a railroad crossing of Military Highway north of the intersection. This is a low volume rail line, accommodating only a few trains a week; however, the operation of this line could still significantly impact MOT and vehicle operations.

Risk Impact to the Project & Mitigation Strategies:
The risk impact to this job will be excessive delays to the traveling public, a negative public perception of the project, and the potential for compromised safety. We will therefore undertake a comprehensive strategy to ensure that the work progresses with the least impact to the community. Among our strategies are the following:

Minimization of phases: The traveling public is being introduced to a new type of intersection in the final CFI design. Reducing the number of traffic shifts and MOT phases required during construction will help with both safety and public opinion/perception.

Limitation of road closures: Our team will comply with the area lane closure restrictions and will further investigate means to limit lane closures during other hours of the day. We will undertake additional traffic analyses to ensure that we do not create periods during “non-peak” hours where congestion will unduly burden the traveling public. As construction progresses and different phases require changes to the temporary traffic control devices and the traffic patterns will be changed at night or on weekends to reduce impact to the regional traffic network.

Construction staging and access: The intersection area will provide opportunities for staging and access adjacent to the site. Appropriate measures for ingress and egress to the work zone will be required to minimize driver confusion and risks associated with unexpected traffic and construction vehicle movements.

Incident management plan: A solid MOT plan will make accommodations for unexpected incidents, such as disabled vehicles, collisions, weather or special events, in both the project area and on I-64. We will implement a plan that makes provisions for handling with disabled vehicles/collisions, possibly by engaging a local wrecker service during critical periods to be on-call to quickly respond to a road blockage. For issues such as weather or special events, we will implement a plan to ensure that construction activities are appropriately curtailed or limited to maintain safe passage of traffic. We will coordinate our plan with the Hampton Roads Transportation Operations Center (HRTOC) incident management plan.

Public Awareness / Outreach: We will collaborate with VDOT, as well as local jurisdictions and other public agency stakeholders, particularly the City of Norfolk, local business associations, and the Norfolk International Airport, to develop a communications plan that will effectively engage a broad spectrum of public and private stakeholders for the duration of the project. We have established relationships and extensive experience working with these entities. We will coordinate with VDOT to ensure local TV, radio stations, and other media outlets are provided with real-time traveler information to help keep the public apprised of construction work and related incidents that affect the interstate or surface roadway network system.

The community and traveling public will need to receive timely, clear and accurate information regarding the project, including the work schedule and traffic impacts. As such, the PCL team will utilize a multilayered approach to inform the public and minimize traveling inconveniences. The communications plan will incorporate a variety of proven and innovative strategies and tools, including the following:

• Dynamic message signs will be deployed and updated regularly to reflect current work zone conditions.

• Social media will be employed to provide up-to-date information on the work progress, work zone changes affecting travelers, and incident reports to help travelers make informed decisions about traveling through the work zone or to consider alternative transportation options.

• The team will work closely with Hampton Roads Transit and Norfolk Public and Private schools to encourage travelers to consider using alternative modes or routes of travel during construction.

The above strategies are just some of the tools that our team will utilize to mitigate the MOT risks for this job. Even with these strategies, the best tool will be a well-planned and executed MOT plan that optimizes safety and reduces delay and stress to the traveling public.

Role of VDOT and other Agencies: VDOT’s role in this risk will be limited to coordinating with the PCL team to display appropriate messages on the various Dynamic Message Signs approaching the work zone and to provide timely and accurate feeds to the 511 system, as well as update the VDOT website with information provided by the PCL team.
Risk No. 2 – CFI Design and Construction

Risk Identification: Continuous Flow Intersections (CFIs) are a relatively new approach to addressing traffic flow through congested at-grade intersections. To date, only a handful of these intersections have been designed and constructed around the country. For this reason, there is limited experience both on the side of the designer and the agencies that review, approve and ultimately need to operate the intersections. While this new intersection configuration may be an excellent solution to improving traffic flow through a congested intersection, care must be taken to ensure that unexpected results for the traveling public are not derived. The Risk is an inexperienced designer will not efficiently design the interchange and VDOT will be left with a substandard product.

Why this Risk is Critical: While CFIs are proven to be an effective configuration at selected congested intersections, there are a number of design features that must be carefully designed to optimize the operations of the intersection and to minimize unintended conditions for the configuration. Inappropriate design elements may lead to such problems as unintended driver behavior, problematic operational characteristics of the intersection, and the potential for unexpected congestion along the corridors approaching the intersection, all of which could lead to driver confusion, frustration and the potential for hazardous driving conditions within and approaching the intersection. The design and construction of the intersection improvements must be carefully undertaken to minimize potential adverse impacts to the health, safety and welfare of the traveling public and the community. Further, an incorrectly designed intersection may lead to further rework and reconstruction of the intersection shortly after the intersection is placed in service to resolve any of these unintended consequences. This could result in a financial burden and reputation damage to VDOT, the contractor and the consultants who were involved in the project.

Risk Impact to the Project & Mitigation Strategies: In order to minimize the risks associated with this project, the PCL team has included a nationally recognized and awarded CFI designer on the team. EDSI Consulting, Inc. (EDSI) is a Midwestern civil engineering and surveying firm that has become distinguished in the design of CFI intersections and will direct the geometric design of the improvements. EDSI will serve in an advisory capacity to our Design team. We have reviewed the RFQ plans and have the following observations:

Cross-overs: The south cross-over angle appears to be about 27 degrees, and the north about 30 degrees. As the cross-over angle is reduced, the traffic flow tends to be smoother, but the result is a longer crossing and possibly higher speeds. For safety reasons, consideration may be given to increasing the cross-over angle, up to 40 degrees as was done on a recent project. The northbound left-turn bay is approximately 500’ feet in length, and southbound 400’ feet. Typically, this length is around 300’ feet, therefore the extra length needs to be carefully considered, as it will stretch out the intersection. The north cross-over is located right at Elizabeth Avenue East. This should receive a close analysis in terms of both traffic and geometrics.

Signing: Advance signing will be critical so that motorists will have plenty of time to move into the correct lane. Extensive signing, including overhead lane use signs, will be needed at the intersection and cross-overs, mostly to avoid wrong-way traffic.

Turning Movements: AutoTurn will be run on all movements. Larger radii or wider lane may be required to accommodate the turning movements. We have found in some instances that, instead of striping out the additional width required for the trucks, which might be difficult to see in inclement weather, the use of low-profile islands with a brick texture (similar to roundabout aprons) helped facilitate and guide traffic flow.

Pedestrians: Pedestrian safety is generally improved with the CFI design. Pedestrians cross at times when there are no conflicts with turning vehicles. However, pedestrians do require two sequential signal phases to complete a street crossing. It could complicate the signalization, and may reduce the “continuous” portion of the continuous flow intersection, if required walk times exceed the traffic green times.

Entrances: There are several streets and entrances in the vicinity of the CFI. Strategies to control and guide traffic will be important to accommodate these side streets and entrances into the CFI design.

Risk Mitigation Strategy: Understanding the issues stated above and judiciously applying our team expertise to addressing these issues will allow the PCL team to develop a comprehensive design solution that satisfies the goals and needs of the project. Each of the risk areas will undergo scrutiny by our CFI expert advisors to ensure that a practical solution will be accomplished for this project.

Role of VDOT and other Agencies: VDOT’s role in this risk will be to ensure that appropriate reviews are conducted on the plans to ensure conformity with VDOT and local standards for the project. Ultimately, VDOT and the City of Norfolk will be responsible for operating the intersection in a safe and efficient manner, so they must be comfortable that the design solution meets their needs for this project.
Risk No. 3 – Delays Resulting from Utility Relocations

Risk Identification: Several underground and overhead private and public utilities are located within the project limits. The project will require utility design and relocation by private utility owners, such as Dominion Virginia Power, Verizon, Cox Communications, Adelphia Business Solutions and Virginia Natural Gas. Public utilities within the project limits belong to VDOT, Norfolk Department of Public Works, and Norfolk Department of Utilities. These utility relocations will be performed by the Design Builder and this can be a Risk.

Why this Risk is Critical: VDOT and Design-Build teams have experienced issues with responses and delivery times for both public and private utility coordination / relocations on recent projects. This often results in a direct impact to the DB team’s schedule, costing time and money.

Risk Impact to the Project: Delays resulting from utilities could affect the design and construction schedules. Delays in private utility relocations have a direct bearing on when certain construction activities can commence. Design review/approval by public utility providers can also affect the schedule during the design phase. Major anticipated impacts include:

- Potential conflicts with 30” and 48” water mains along Military Highway and a 42” water main along Northampton Boulevard and Princess Anne Road;
- An existing 48” steel raw water transmission main under the SBL of Military Highway, from the southern project limit up to Lake Herbert Drive;
- Numerous 6”-12” water distribution mains parallel and cross Military Highway. Domestic service and fire protection to properties must be maintained;
- A 16” gas main parallel to Military Highway from the southern project limit to the Baycoast Railroad (leased from Norfolk Southern Railway) crossing and 8” and 12” gas mains under the pavement of the SBL of Military Highway. Even though the 16” gas main was installed using Horizontal Directional Drilling technology and Bore and Jack crossings, there are areas that may still cause a conflict. (RK&K was the designer of the 16” gas main for VNG);
- Overhead electrical power and data lines along Military Highway, Northampton Boulevard and Princess Anne Road will all require coordination and relocation. Underground service lines connect the numerous street lights and traffic signals throughout the limits of the project;
- The existence of substantial telecom/communication ducts, conduits and fiber under the pavement and outside the curbs along all the major roads.

Delays associated with utility company designs and construction/relocations are also often a critical factor on project schedules. Even though the Design Builder may be paying for their engineering and relocation services, our team is at the mercy of the utility companies for timely design and completed relocations if the utility process is not conducted properly.

Risk Mitigation Strategies: We assessed the potential impact of each component of this risk and determined steps for mitigation. Our team consists of experienced individuals that know how to navigate utility provider procedures and work proactively to resolve issues in a timely manner. We have ongoing design experience with Norfolk Departments of Utilities and Public Works, and Virginia Natural Gas and can self-perform all design on those impacted utilities. To further mitigate this risk, our team will utilize the following approach:

- Place high emphasis on close coordination with VDOT utility staff for preparation, submittal, and review of the necessary utility relocations to insure compliance with VDOT policies and procedures. Utilize DB team members’ experience with similar situations/utility owners and “lessons learned” from past projects. Between RK&K and Cardno TBE, we have established working relationships with all the private franchise utility owners and understand the inner workings of the utilities and how to obtain and supply information to them in the format and detail they desire. Obtain Quality Level “A” Subsurface Utility information early in the design process.
- Partner with reviewing agencies and all utility owners during design by scheduling regular bi-weekly utility task force meetings. This provides the DB team constant awareness of utility company/reviewer schedules, potential issues that could result in project delays and the need for additional information/clarification to complete their designs/reviews and remain on schedule.
- Initiate coordination with all utility owners as early in the design schedule as possible to allow sufficient design and review time for utility providers in the project schedule. Proactively partner with utility owners to answer questions and facilitate their reviews where possible.
• Identify which utilities will most likely be impacted during the preliminary design phase of the project. Include time frames for coordination and utility designs/reviews in the baseline schedule. Show each potential utility relocation as a separate task in the work breakdown structure (WBS).

• Identify utility test holes that will be required and perform this task as early as possible in the schedule. Coordinate these test hole locations with the drainage design team members and the traffic signal designers to avoid delays later in the schedule.

• Coordinate internally with our drainage design team members to develop solutions to avoid utility relocations if possible, by rerouting alignments of proposed storm sewers and locations of storm water treatment features.

• Develop mitigation strategies after project award to minimize/eliminate utility relocations. Engage utility owners early. Work closely with the providers and offer recommendations/solutions where appropriate. Set milestones in the schedule where utility relocation decisions must be made.

• Utilize PCL DB staff for utility relocation designs or construction activities should the utility companies not have the adequate resources to perform the work per the proposed project schedule.

• Plan to have franchise utility relocations commence before DB contractor mobilization if at all possible.

**Role of VDOT and other Agencies:** Active participation in partnering efforts

**Risk Summary**

The PCL team understands that risks are inherent in design-build projects and proposes on this design-build project with eyes wide open. We fully take on the risk of this project as required in the RFQ and subsequent RFP.
Attachment 3.1.2

SOQ Checklist and Contents

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

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<td>Key Personnel Resume – Quality Assurance Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.2</td>
<td>no</td>
<td>Appendix 3.3.1</td>
</tr>
<tr>
<td>Key Personnel Resume – Design Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.3</td>
<td>no</td>
<td>Appendix 3.3.1</td>
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<tr>
<td>Key Personnel Resume – Construction Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.4</td>
<td>no</td>
<td>Appendix 3.3.1</td>
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<tr>
<td>Key Personnel Resume – Traffic Operations Designer and Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.6</td>
<td>no</td>
<td>Appendix 3.3.1</td>
</tr>
</tbody>
</table>
## ATTACHMENT 3.1.2

**Project: 0165-122-V04**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<tbody>
<tr>
<td>Key Personnel Resume – Lead Utility Coordination Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.7</td>
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<td>Appendix 3.3.1</td>
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<td>Organizational chart</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>Page 6</td>
</tr>
<tr>
<td>Organizational chart narrative</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>Pages 2-6</td>
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<tr>
<td><strong>Experience of Offeror’s Team</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Lead Contractor Work History Form</td>
<td>Attachment 3.4.1(a)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix 3.4.1 (a)</td>
</tr>
<tr>
<td>Lead Designer Work History Form</td>
<td>Attachment 3.4.1(b)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix 3.4.1 (b)</td>
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<td><strong>Project Risk</strong></td>
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<tr>
<td>Identify and discuss three critical risks for the Project</td>
<td>NA</td>
<td>Section 3.5.1</td>
<td>yes</td>
<td>Pages 11-15</td>
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</table>
Attachment 2.10

Form C-78 RFQ Acknowledgement of RFQ, Revision and/or Addenda

PCL Civil Constructors, Inc.
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00001765DB81
PROJECT NO.: 0165-122-V04

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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

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

1. Cover letter of RFQ 12/12/2014 (Date)
2. Cover letter of (Date)
3. Cover letter of (Date)

__________________________
SIGNATURE
__________________________
PRINTED NAME

__________________________
DATE

__________________________
Area Manager
TITLE
Attachment 3.2.6

Affiliated and Subsidiary Companies of the Offeror

PCL Civil Constructors, Inc.
**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.

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

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliate</td>
<td>PCL Construction Enterprises</td>
<td>2000 S. Colorado Boulevard, Suite 2-500, Denver, CO 80222</td>
</tr>
</tbody>
</table>
Attachment 3.2.7 (a) and (b)

Certification Regarding Debarment

PCL Civil Constructors, Inc.
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.

[Signature] 01/16/15  [Authorized Signer/Area Manager]

[Date]  [Title]

PCL Civil Constructors, 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] January 26, 2015 [Date]

[Signature] [Date]

Partner

Signature

Date

Title

Name of Firm

Rummel, Klepper & Kahl, LLP (RKK)
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.

\[Signature\] \[1-22-15\] \[Asst. Vice President / Principal\]  
\[Date\] \[Title\]  

TBE Group, Inc. d/b/a Cardno TBE  
\[Name of Firm\]
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: 1/27/15

President / CEO________________________ Title __________________________

EDSI Consulting, Inc. (Used in VA by: Engineering Design Source, Inc.)

Name of Firm
ATTACHMENT NO. 3.2.7(h)

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: 1/29/15

Principal: __________________________ Title: __________________________

D. Mark Scholefield, P.E.

GET Solutions, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0165-122-V04

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

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

[Signature]  January 15, 2015  President

Signature  Date  Title

KDR Real Estate Services, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0165-122-V04

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

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

\[Signature\] 1/29/2015 \[President\] \[Title\]

Precision Measurements, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0165-122-V04

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

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

[Signature] 1/20/15  [Co-President]
[Date]  [Title]

[PRR, 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] Elliot Rhodeside 1/23/15 [Date]
Director
Title

Rhodeside & Harwell, Incorporated
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 20, 2015 President

[Signature] Date Title

Quinn Consulting Services, Inc.
Name of Firm
COMMONWEALTH OF VIRGINIA

CERTIFICATE OF QUALIFICATION

PCL CIVIL CONSTRUCTORS, INC.

Vendor Number: P433

Your firm specializes in the noted Classification(s):

PREQUALIFIED

MAJOR STRUCTURES

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

This Rating and Classification will Expire: August 31, 2015

Issue Date: August 31, 2014

Suzanne F. Lucas, State Prequalification Officer

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

Don E. Sipes, Director of Contracts

[Signature]
January 19, 2015

Attn: Brian W. Stevenson, P.E
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: PCL Civil Constructors, Inc. Surety Prequalification
RFQ - A Design-Build Project, Military Highway Continuous Flow Intersection
From: 0.023 Miles South of Lowery Rd., To: 0.230 Miles North of Interstate 64
State Project No.: 0165-122-V04, Federal Project No.: STP-5403, Contract ID Number: C00001765DB81
Estimated Contract Value: $60,000,000 +/-

Fidelity and Deposit Company of Maryland (F&D) and Zurich American Insurance Company - jointly as lead surety, along with Travelers Casualty and Surety Company of America and Federal Insurance Company wish to advise that we collectively act as co-sureties, joint and severally, on behalf of the PCL family of companies, which includes PCL Civil Constructors, Inc. PCL enjoys the well-deserved reputation of being one of the foremost Civil Constructors entities in North America with a record of excellence, virtually unparalleled.

As sureties, we are among the major providers of surety contract bonds across the U.S. and Canada, are each licensed to transact business in all U.S. States, including the Commonwealth of Virginia, and are each listed in the Federal Register (Circular 570) as acceptable sureties. Fidelity and Deposit Company of Maryland and Zurich American Insurance Company currently have an AM Best Rating of A++ XV. Travelers Casualty and Surety Company of America currently has an AM Best Rating of A+++ XV. Federal Insurance Company currently has an AM Best Rating of A++ XV.

At present, we as co-sureties, provide surety capacity to the PCL family of companies based upon a total co-surety program of $6 Billion dollars in bonded backlog, and have provided single job support in the range of $1 Billion. Due to PCL's financial strength and their outstanding history of performance and professionalism, they are in the enviable position of benefiting from one of the highest levels of surety support of any general contractor operating in North America. We value our association with this fine organization and have no reservation about giving any company in the PCL family our highest recommendation.

The above information is offered for your consideration in your review of PCL Civil Constructors, Inc., as we understand that our valued client is being considered as a qualified Offeror for the upcoming RFP Stage of the captioned design-build project. We confirm that PCL has more than sufficient bonding capacity to include this project, as their current available bonding capacity is approximately 50% of the above listed co-surety program. If awarded, we anticipate issuance of a 100% Performance Bond and 100% Payment Bond to guarantee the design-build construction contract subject to both PCL's and our review and acceptance of all the relevant design-build construction contract documents' terms and conditions, bond forms, and full project financing being in place at the time the bonds are requested.

FIDELITY AND DEPOSIT COMPANY OF MARYLAND
ZURICH AMERICAN INSURANCE COMPANY
TRAVELER'S CASUALTY AND SURETY COMPANY OF AMERICA
FEDERAL INSURANCE COMPANY

By: [Signature]
Sandra M. Winstead, Attorney-in-Fact
ACKNOWLEDGEMENT BY SURETY

STATE OF ILLINOIS
COUNTY OF COOK

On this 19th day of January, 2015 before me, Samantha Chierici, a Notary Public, within and for said County and State, personally appeared Sandra M. Winsted to me personally known to be the Attorney-in-Fact of and for Fidelity and Deposit Company of Maryland, Zurich American Insurance Company, Travelers Casualty and Surety Company of America, Federal Insurance Company and acknowledged that she executed the said instrument as the free act and deed of said Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and year in this certificate first above written.

Samantha Chierici
Notary Public in the State of Illinois
County of Cook
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 Sandra M. WINSTED, Susan A. WELSH, Judith A. LUCKY-EFTIMOV, James B. MCTAGGART, Debra J. DOYLE, Sandra M. NOWAK, Melissa L. FORTIER and Jessica B. YATES, all of Chicago, Illinois, 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 24th day of April, A.D. 2014.

ATTEST:

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

By: Gerald F. Haley
Assistant Secretary

By: Thomas O. McClellan
Vice President

State of Maryland
City of Baltimore

On this 24th day of April, A.D. 2014, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, THOMAS O. MCCLELLAN, Vice President, and GERALD F. HALEY, 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, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

By:

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2015

POA-F 036-0055
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 21st day of January, 2015.

James M. Carroll, Vice President
POWER OF ATTORNEY

Farmington Casualty Company  
Fidelity and Guaranty Insurance Company  
Fidelity and Guaranty Insurance Underwriters, Inc.  
St. Paul Fire and Marine Insurance Company  
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
Travelers Casualty and Surety Company  
Travelers Casualty and Surety Company of America  
United States Fidelity and Guaranty Company

Attorney-In-Fact No. 227874

Certificate No. 006163046

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Debra J. Doyle, Diane M. O'Leary, James B. McTaggart, Jennifer L. Jakulits, Judith A. Lucky-Effimov, Sandra M. Winsted, Sandra M. Nowak, Susan A. Welsh, and Melissa L. Fortier

of the City of Chicago, State of Illinois, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 20th day of November, 2014.

State of Connecticut
City of Hartford ss.

By:  

Robert L. Raney, Senior Vice President

On this the 20th day of November, 2014, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2016.

Marie C. Tetreauult, Notary Public

58440-8-12 Printed in U.S.A._WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER
This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

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

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

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

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

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 19 day of January, 2015.

Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.
Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do hereby constituted and appoint Marcella K. Cesaftsky, Debra J. Doyle, Robert E. Duncan, Melissa L. Fortier, Jennifer L. Jakaitis, James B. McCaggart, Linda M. Napolillo, Sandra M. Nowak, Diane M. O'Leary, Christopher P. Troha, Susan A. Welsh and Sandra M. Winsted of Chicago, Illinois ——

each as their true and lawful Attorney-In-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligation in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 29th day of July, 2014.

Dawn M. Chloros, Assistant Secretary

David B. Norris, Jr., Vice President

STATE OF NEW JERSEY

County of Somerset

On this 28th day of July, 2014 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereeto affixed by authority of the By-Laws of said Companies; and that she signed said Power of Attorney as Assistant Secretary of said Companies by authority; and that she is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereeto subscribed by authority of said By-Laws and in defendant's presence.

Notarial Seal

KATHERINE J. ADELAAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2315855
Commission Expires July 16, 2019

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or President or by a Vice President or an Assistant Vice President, joint with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or typographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-In-Fact. For purposes only of executing and attesting bonds and undertakings and other writings obligation in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that:

(i) the foregoing extract of the By-Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department, further, Federal and Vignant are licensed in the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, Puerto Rico, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this 1/9/115

Dawn M. Chloros, Assistant Secretary
Attachment 3.2.10

SCC and DPOR Information

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

<table>
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<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>DPOR Registered Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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<td>Rummel, Klepper &amp; Kahl, LLP</td>
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<td>Eric Joseph Chavez</td>
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<td>Thomas Edward Mohler</td>
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<td>Michael Timothy Merritt</td>
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<td>Nikolas V Dais</td>
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<tr>
<td>John Michael McDowell</td>
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<td>Gary Sebastian Johnson</td>
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<td>Richard, VA</td>
<td>14009 Mill Flume Court, Richard, VA 23245</td>
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<td>Barry L Brandt</td>
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<td>Michael John Hogan, Jr.</td>
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## ATTACHMENT 3.2.10
### State Project No. 0165-122-V04
#### SCC and DPOR Information

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<tr>
<th>Name</th>
<th>Company</th>
<th>Address</th>
<th>City, State</th>
<th>Contact Information</th>
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<td>Owen Lee Peery</td>
<td>2100 East Cary Street, Suite 309</td>
<td>Richmond, VA</td>
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<td>Lee Castleton Yowell</td>
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<td>Geotechnical Environmental and Testing Solutions, Inc. (aka GET Solutions, Inc.)</td>
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<td>Christopher Michael Caton</td>
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<td>Allen G Dorin, Jr.</td>
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<td>Ivan Rick Lineberry</td>
<td>1907 Eastborne Drive</td>
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<td>Alexandria, VA</td>
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Please note: The SCC website will be unavailable Thursday, January 22, from 6 p.m. until 10 p.m., for system maintenance. We apologize for the inconvenience and appreciate your patience.

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.

PCL Civil Constructors, Inc.

General

SCC ID: F1772468
Entity Type: Foreign Corporation
Jurisdiction of Formation: CO
Date of Formation/Registration: 11/5/2008
Status: Active
Shares Authorized: 100000

Principal Office

801 CORPORATE CENTER DRIVE
STE 130
RALEIGH NC27607

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: sccinfo@scc.virginia.gov Website questions? Contact: webmaster@scc.virginia.gov

We provide external links throughout our site.  

https://sccfile.scc.virginia.gov/Business/F177246

1/22/2015
Commonwealth of Virginia
State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That PCL Civil Constructors, Inc., a corporation incorporated under the law of Colorado, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on November 5, 2008; and

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
January 14, 2015

[Signature]

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1501145752
BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
*CLASSIFICATIONS* H/H

PCL CIVIL CONSTRUCTORS, INC
801 CORPORATE CENTER DRIVE
STE 130
RALEIGH, NC 27607

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPRESSES ON 12-31-2015

NUMBER 0407005569

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

PROFESSIONS: ENG

PCL CIVIL CONSTRUCTORS, INC
801 CORPORATE CENTER DRIVE
STE 130
RALEIGH, NC 27607

Gordon N. Dixon, Director

COMMOMWEALTH OF VIRGINIA
BOARD FOR APESICLDA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407005569 EXPIRES: 12-31-2015
PROFESSIONS: ENG
PCL CIVIL CONSTRUCTORS, INC
801 CORPORATE CENTER DRIVE
STE 130
RALEIGH, NC 27607

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

10010 (7/11) 107028-3
ERIC JOSEPH CHAVEZ
820 HANDSWORTH LN APT 208
RALEIGH, NC 27607
June 23, 2014

CT CORPORATION SYSTEM
4701 COX ROAD SUITE 285
GLEN ALLEN, VA 23060

RECEIPT

RE: RUMMEL, KLEPPER & KAHL, LLP

ID: K000417 - 8
DCN: 14-06-23-0501

Dear Customer:

This is your receipt for $50.00 to cover the fee for filing the annual continuation report for the above-referenced registered limited liability partnership.

The annual continuation report was filed on June 23, 2014.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

[Signature]
Joel H. Peck
Clerk of the Commission

GPACCEPT
CIS0313
CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

On September 25, 2001, a statement of registration as a foreign registered limited liability partnership was filed in this office by Rummel, Klepper & Kahl, LLP, a Maryland limited liability partnership.

This certificate of registration is in effect as of this date.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
January 24, 2013

Joel H. Peck, Clerk of the Commission
STATE CORPORATION COMMISSION

Richmond, March 24, 2006

This is to Certify that the statement of registration of

Rummel, Klepper & Kahl, LLP
(Date of registration - September 25, 2001)

a partnership registered as a limited liability partnership under the
laws of MARYLAND, was admitted to record in this office and
that the partnership is registered to transact business in Virginia
as a foreign Registered Limited Liability Partnership, subject to
all laws applicable to the partnership and its business.

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 357-8500

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
81 MOSHER ST
Baltimore, MD 21217

SIGNATURE OF DIRECTOR OR MANAGER

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

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCLDA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407002860 EXPIRES: 12-31-2015
PROFESSIONS: ENG
RUMMEL KLEPPER & KAHL LLP
81 MOSHER ST
Baltimore, MD 21217

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR PROHIBITED OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
2901 S. LYNNHAVEN RD
SUITE 300
VIRGINIA BEACH, VA 23452

Nick A. Christos
Nick A. Christos, Interim Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
2100 EAST CARY ST
SUITE 309
RICHMOND, VA 23223

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

COMMONWEALTH OF VIRGINIA
BOARD FOR APPLIED OCCUPATIONAL REGULATION
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000271 EXPIRES: 02-29-2016
PROFESSIONS: ENG
RUMMEL KLEPPER & KAHL LLP
RK&K
2100 EAST CARY ST
SUITE 309
RICHMOND, VA 23223

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

NUMBER
0411000577

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

PROFessions: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
10306 EATON PL STE 240
FAIRFAX, VA 22030

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)

COMMONWEALTH OF VIRGINIA

BOARD FOR APETSCLUDA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000577 EXPIRES: 02-29-2016
PROFessions: ENG
RUMMEL KLEPPER & KAHL LLP
RK&K
10306 EATON PL STE 240
FAIRFAX, VA 22030

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
900 RIDGEFIELD DR STE 350
RALEIGH, NC 27609

Nick A. Christner
Interim Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

MICHAEL TIMOTHY MERRITT
1005 SETTLERS LANDING CT
WAKE FOREST, NC 27587

EXPIRES ON
10-31-2016

NUMBER
0402048200

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

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

NIKOLAOS V DAIS
6230 LES DORSON LANE
ALEXANDRIA, VA 22315

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402042329 EXPIRES: 01-31-2015

NIKOLAOS V DAIS
6230 LES DORSON LANE
ALEXANDRIA, VA 22315
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

JOHN MICHAEL MCDOWELL
10306 EATON PLACE
SUITE 240
FAIRFAX, VA 22030

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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

BARRY L BRANDT
554 CHARINGTON DR
SEVERNA PARK, MD 21146

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
01-31-2016

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

MICHAEL JOHN HOGAN JR
14906 MILL FLUME CT
MIDLOTHIAN, VA 23112

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
License Details

Name: LEACH, EARL HOWARD
License Number: 0402048162
License Description: Professional Engineer License
Rank: Professional Engineer
Address: BWIE, MD 20721
Initial Certification Date: 2010-10-26
Expiration Date: 2016-10-31

The license information in this application was last updated at Tue Jan 27 02:50:17 EST 2015.

http://dporweb.dpor.virginia.gov/LicenseLookup/LicenseDetail/?l=0402048162

1/27/2015
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

EARL HOWARD LEACH
14401 DANUBE LN
BOWIE, MD 20721

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

DAVID W PLUM
4201 WAKEFIELD CT
VIRGINIA BEACH, VA 23455

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2016

NUMBER
0402050953

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

KENNETH JON YARBERRY
4825 ADMIRATION DR
VIRGINIA BEACH, VA 23464

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402050953 EXPIRES: 12-31-2016

KENNETH JON YARBERRY
4825 ADMIRATION DR
VIRGINIA BEACH, VA 23464

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

LEE CASTLETON YOWELL
906 ORCHARD ROAD
RICHMOND, VA 23226

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

COMMONWEALTH OF VIRGINIA
BOARD FOR APPLIED PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402035601 EXPIRES: 06-30-2016

LEE CASTLETON YOWELL
906 ORCHARD ROAD
RICHMOND, VA 23226

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TBE GROUP, INC.

General

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

Principal Office

380 PARK PLACE BLVD SUITE 300
CLEARWATER FL 33759

Registered Agent/Registered Office

C T CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 343
Status: Active
Effective Date: 10/4/2013

Screen ID: e1000

Need additional information? Contact service@scc.virginia.gov. Website questions? Contact: webmaster@scc.virginia.gov.
We provide external links throughout our site.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

PROFessions: ENG

TBE GROUP, INC
CARDNO TBE
211 EXPRESSWAY CT
VIRGINIA BEACH, VA 23462

Nick A. Christner
Interim Director
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.

EDSI CONSULTING, INC. (USED IN VA BY: ENGINEERINGDESIGN SOURCE, INC.)

**General**
- SCC ID: F1985821
- Entity Type: Foreign Corporation
- Jurisdiction of Formation: MO
- Date of Formation/Registration: 1/26/2015
- Status: Active
- Shares Authorized: 1000

**Principal Office**
- REGISTERED AGENTS INC
- 4445 CORPORATION LANE STE 264
- VIRGINIA BEACH VA 23462
- VIRGINIA BEACH CITY 228
- Status: Active
- Effective Date: 1/26/2015
Richmond, January 26, 2015

This is to certify that a certificate of authority to transact business in Virginia was this day issued and admitted to record in this office for

EDSI CONSULTING, INC. (USED IN VA BY: ENGINEERING DESIGN SOURCE, INC.)

a corporation organized under the laws of MISSOURI and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission
Attest:

Joel H. Reck
Clerk of the Commission
COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

January 26, 2015

ARIEL KOEWING
16141 SWINGLEY RIDGE ROAD
CHESTERFIELD, MO 63017

RECEIPT

RE: EDSI CONSULTING, INC. (USED IN VA BY: ENGINEERING DESIGN SOURCE, INC.)

ID: F198582 - 1

DCN: 15-01-26-1102

Dear Customer:

This is your receipt for $75.00, to cover the fees for filing an application for a certificate of authority to transact business in Virginia with this office.

This is also your receipt for $200.00 to cover the fee(s) for expedited service(s).

The effective date of the certificate is January 26, 2015.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

Joel H. Peck
Clerk of the Commission

CORFACEPT
CIS0368
Please note: The SCC website will be unavailable Thursday, January 22, from 6 p.m. until 10 p.m., for system maintenance. We apologize for the inconvenience and appreciate your patience.

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.

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**Geotechnical Environmental and Testing Solutions, Inc.**

**General**

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

**Select an action**

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- Submit a PDF for processing (What can I submit?)
- View eFile transaction history
- Manage email notifications

**Principal Office**

- 204 GRAYSON ROAD
  - VIRGINIA BEACH VA 23462

**Registered Agent/Registered Office**

- TERENCE MURPHY
  - KAUFMAN & CANOLES PC
  - 150 W MAIN ST STE 2100
  - NORFOLK VA 23510
  - NORFOLK CITY 212
  - Status: Active
  - Effective Date: 7/17/2002

---

Screen ID: e1000

Need additional information? Contact: sccefile@scc.virginia.gov

Website questions? Contact: webmaster@scc.virginia.gov

We provide external links throughout our site.

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- Excel (.xls) Viewer
- PowerPoint (.ppt) Viewer
- Word (.doc) Viewer

Build v. 1.10.0.24406

https://sccefile.scc.virginia.gov/Business/05418470

1/22/2015
Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Geotechnical Environmental and Testing Solutions, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is June 16, 2000;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 7, 2013

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1306075878
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: ENG

GEOTECHNICAL ENVIRONMENTAL & TESTING SOLUTIONS INC
204-B GRAYSON ROAD
VIRGINIA BEACH, VA 23462

Gordon N. Dixon, Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCI\DLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407004018 EXPIRES: 12-31-2015
PROFESSIONS: ENG
GEOTECHNICAL ENVIRONMENTAL & TESTING SOLUTIONS INC
204-B GRAYSON ROAD
VIRGINIA BEACH, VA 23462

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

CHRISTOPHER MICHAEL CATON
204 GRAYSON RD
VIRGINIA BEACH, VA 23462

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
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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.

KDR Real Estate Services, Inc.

General

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

Principal Office

- 2500 GRENOBLE RD
- RICHMOND VA 23294

Registered Agent/Registered Office

- ALLEN G DORIN JR
- 2500 GRENOBLE RD
- RICHMOND VA 23294
- HENRICO COUNTY 143
- Status: Active
- Effective Date: 7/9/2003

Screen ID: e1000

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Website questions? Contact: webmaster@sccefile.scc.virginia.gov

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Build #: 1.5.0.24436

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, January 30, 2002

This is to Certify that the certificate of incorporation of

KDR Real Estate Services, Inc.

was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all Virginia laws applicable to the corporation and its business. Effective date: January 30, 2002

State Corporation Commission
Attest:

[Signature]

[Name]

Clerk of the Commission
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Maryland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

REAL ESTATE BOARD - PRINCIPAL BROKER LICENSE
POST IN A CONSPICUOUS PLACE
THIS LICENSE TO BE IN CUSTODY AND CONTROL OF PRINCIPAL BROKER

ALLEN GUNN DORIN JR
KDR REAL ESTATE SERVICES INC
2500 GRENOBLE RD
RICHMOND, VA 23294

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
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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.

PRECISION MEASUREMENTS, INC.

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

Principal Office
BS1 SEAHAWK CIRCLE
SUITE 103
VIRGINIA BEACH VA 23452

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

Screen ID: e1000

Need additional information? Contact sccefile@scc.virginia.gov Website questions? Contact: webmaster@scc.virginia.gov
We provide external links throughout our site. 

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That PRECISION MEASUREMENTS, INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is July 24, 1995;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
May 23, 2014

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1405235693
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

PROFESSIONS: LS

PRECISION MEASUREMENTS INC
851 SEAHAWK CIR
SUITE 103
VIRGINIA BEACH, VA 23452

Gordon N. Dixon, Director
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
05-31-2015

NUMBER
0403003230

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

IVAN RICK LINEBERRY
1907 EASTBORNE DRIVE
VIRGINIA BEACH, VA 23454

Gordon N. Dixon, Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
LAND SURVEYOR LICENSE
NUMBER: 0403003230 EXPIRES: 05-31-2015

IVAN RICK LINEBERRY
1907 EASTBORNE DRIVE
VIRGINIA BEACH, VA 23454

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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

PPR Capital Region, Inc. (USED IN VA BY: PRR,Inc.)

General
- SCC ID: F1841594
- Entity Type: Foreign Corporation
- Jurisdiction of Formation: WA
- Date of Formation/Registration: 11/9/2010
- Status: Active
- Shares Authorized: 50000

Principal Office
- 1501 FOURTH AVENUE
  SUITE 550
  SEATTLE WA98101

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

Screen ID: e1000

Need additional information? Contact sccinfo@sc.virginia.gov
Website questions? Contact: webmaster@sc.virginia.gov

PDF: pdfReader
Excel: Excel Viewer
PowerPoint: PowerPoint Viewer
Word: Word Viewer

Suite 9, 1100 E. 24th St.
STATE CORPORATION COMMISSION

Richmond, November 9, 2010

This is to certify that a certificate of authority to transact business in Virginia was this day issued and admitted to record in this office for

PRR Capital Region, Inc. (USED IN VA BY: PRR, Inc.)

a corporation organized under the laws of WASHINGTON and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission
Attest:

Joel H. Rock
Clerk of the Commission
COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

November 9, 2010

CT CORPORATION SYSTEM
KATIE BUSH
4701 COX RD STE 301
GLEN ALLEN, VA 23060-6802

RECEIPT

RE:       PRR Capital Region, Inc. (USED IN VA BY: PRR, Inc.)
ID:       F184159 - 4
DCN:      10-11-08-1230

Dear Customer:

This is your receipt for $125.00, to cover the fees for filing an application for a certificate of authority to transact business in Virginia with this office.

This is also your receipt for $100.00 to cover the fee(s) for expedited service(s).

The effective date of the certificate is November 9, 2010.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551

Sincerely,

Joel H. Peck
Clerk of the Commission

CORFACPT
CIS0368

P.O. Box 1197, Richmond, VA 23218-1197
Tyler Building, First Floor, 1300 East Main Street, Richmond, VA 23219-3630
Clerk's Office (804) 371-9733 or (866) 722-2551 (toll-free in Virginia) www.acc.virginia.gov/clk
Telecommunications Device for the Deaf-TDD/Voice: (804) 371-9286
November 10, 2010

Rick Griggs
PRR, Inc.
1109 First Ave., Ste. 300
Seattle WA 98101

Re: Order #: 7987816 SO
Customer Reference 1: Annual rep 10/10-9/11
Customer Reference 2: None Given

Dear Rick Griggs:

In response to your request regarding the above referenced order, your filing(s) has been completed as indicated below:

PRR, Inc. (WA)
Qualification
Virginia
Filing Date: November 9, 2010
Filing Number: NA

If you have any questions concerning this order, please contact:
Renee Johnson
Seattle Corporate Team 1
Phone: (206) 622-4511
Email: renee.johnson@wolterskluwer.com

Thank you for this opportunity to be of service.
Sincerely,

Katie Bush  
Richmond Fulfillment Team 1  
katie.bush@wolterskluwer.com
Please note: The SCC website will be unavailable Thursday, January 22, from 6 p.m. until 10 p.m., for system maintenance. We apologize for the inconvenience and appreciate your patience.

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.
DEANA D. RHODESIDE
320 KING ST., STE. 202
ALEXANDRIA, VA 22314

RE: RHODESIDE & HARWELL, INCORPORATED
ID: 0278356 - 1
DCN: 96-05-02-1050

This is your acknowledgement for filing a statement of change of registered office / registered agent (SCC635/834) with this office.

The effective date of the change is May 2, 1996.

Sincerely yours,

[Signature]

William J. Bridge
Clerk of the Commission

RAACCEPT
CIS20431
I, Nancy W. McCoy, Assistant Clerk of the State Corporation Commission, do hereby certify that

the foregoing is a true copy of all documents constituting as of this date the charter of RHODESIDE & HARWELL, INCORPORATED.

Nothing more is hereby certified.

In Testimony Whereof, I hereunto set my hand and affix the Official Seal of the State Corporation Commission, at Richmond, this 14th day of November, A. D. 1985.

Nancy W. McCoy
Assistant Clerk of the Commission
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, November 14, 1985

This is to Certify that the certificate of incorporation of RHODESIDE & HARWELL, INCORPORATED was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all the laws of the State applicable to the corporation and its business.

State Corporation Commission

[Signature]
Clerk of the Commission
Quinn Consulting Services Incorporated

General

SCC ID: 04925517
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 10/24/1997
Status: Active
Shares Authorized: 5000

Principal Office

14160 Newbrook Drive
Suite 220
Chantilly VA 20151

Registered Agent/Registered Office

John H Quinn Jr
2208 S Knoll St
Arlington VA 22202
Arlington County 106
Status: Active
Effective Date: 10/24/1997
CERTIFICATE OF GOOD STANDING

I, CERTIFY the following from the Records of the Commission:

That QUINN CONSULTING SERVICES INCORPORATED is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is October 24, 1997;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date
August 4, 2014

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1408045740
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

PROFESSIONS: ENG

QUINN CONSULTING SERVICES INC
1801 PLEASURE HOUSE RD
STE 101 & 102
VIRGINIA BEACH, VA 23455

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)

COMMONWEALTH OF VIRGINIA
BOARD FOR APHELISIDA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001133 EXPIRES: 02-29-2016
PROFESSIONS: ENG
QUINN CONSULTING SERVICES INC
1801 PLEASURE HOUSE RD
STE 101 & 102
VIRGINIA BEACH, VA 23455

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

10010 (7/11) 107289-3
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS PROFESSIONAL ENGINEER LICENSE

THOMAS ALAN DRUHOT
VDOT
1801 PLEASUREHOUSE RD
SUITE 101
VIRGINIA BEACH, VA 23455

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

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
Attachment 3.3.1

Key Personnel Resume Forms

PCL Civil Constructors, Inc.
### Brief Resume of Key Personnel anticipated for the Project.

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Kevin Ott, DBIA – Senior Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Design-Build Project Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>PCL Civil Constructors, Inc. (PCL)</td>
</tr>
<tr>
<td>d. Years experience:</td>
<td>With this Firm ≤ 1 Years With Other Firms 20 Years</td>
</tr>
</tbody>
</table>
  - Please list chronologically (most recent experience first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): |
  - **PCL Civil Constructors, Inc., 2014-Present** |
    - **Senior Project Manager:** Oversight of multiple transportation infrastructure projects through all phases of development, design, and construction generating revenue from $10M to $20M per month. Required to understand the stakeholder’s expectations and assemble & lead all necessary resources in order to achieve the mutually desired goals of the Project. Effectively manage resources to ensure success of the Company in accordance with the company policies and communicate results to executive leadership. |
  - **American Infrastructure, 2011-2014** |
    - **Project Executive/Construction Manager:** Oversight of multiple transportation and civil projects generating $8M to $10M of revenue per month. Responsible for ensuring the expectations of each project stakeholder are met in conjunction with the managing of day-to-day operations to meet the company goals. Assisted development of policies and procedures to ensure success of the Company at the project level. |
  - **Granite Construction Company, 2007-2011** |
    - **Construction Manager:** Senior Manager on individual heavy-civil mega-projects generating $10M to $20M per month of revenue. Responsible for leading several managers in multiple disciplinary areas of the project. Coordinated with the project stakeholders to identify & resolve issues, and ensure the project met their expectations. |
  - **Granite Construction Company, 2001-2006** |
    - **Project Engineer:** Responsible for leading multiple field engineers at the project level. Managed engineering and planning of the work including the CPM Schedule, Submittals, Change Orders, and Quality. Coordinated closely with the Owner’s field inspection staff. |
  - **Angelo Iafrate Construction, LLC, 1999-2000** |
    - **Field Engineer:** Managed specific areas of transportation infrastructure projects in coordination with others on the project team including the owner’s representatives. |
  - **Granite Construction Company, 1997-1999** |
    - **Field Engineer:** Managed specific areas of transportation infrastructure projects in coordination with others on the project team including the owner’s representatives. |
| e. Education: | Iowa State University (Ames, IA) BS/1997/Construction Engineering |
| f. Active Registration: | 2013/Design Build Institute of America Certified (DBIA) |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. |
  1. **Note your specific responsibilities and authorities for each project, not those of the firm.** |
  2. **Note whether experience is with current firm or with other firm.** |
  3. **Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.** |

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

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>BWI Runway 15R-33L RSA, Pavement Rehabilitation and Standards Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Glen Burnie, MD</td>
</tr>
<tr>
<td>Dates:</td>
<td>October 2013-May 2014</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Project Executive/Construction Manager</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>No, American Infrastructure</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>Maryland Aviation Administration</td>
</tr>
</tbody>
</table>
Project Executive/Construction Manager for the rehabilitation of the main runway at Thurgood Marshall Airport to meet new FAA regulations shifting the centerline of the runway by 3 ft. The scope of work included taxiway D/P/R/Y and Runway 15R-33L reconstruction, including mill/replace HMA, electrical lighting and ductbanks, PCCP pavement, storm drain, water main, access roads, earthwork, and grading. Senior manager responsible for assembling the project team and resources necessary to start-up this fast-paced, around-the-clock project. Provided oversight of construction, quality management, and administration of the Contract to ensure timely completion of the Project in conformance to the contract documents. Proactively managed and resolved issues with the Owner. ($83M).

Project Name: **I-95 at Contee Road Interchange Design-Build**
Location: Laurel, MD
Dates: December 2011-September 2013
Project Role: Senior Project Manager/Design-Build Manager
Current Firm: No, American Infrastructure
Client/Owner: Maryland State Highway Administration

Senior Project Manager/Design-Build Manager for this project that included a new interchange, ramps, and approach roadways connecting the InterCounty Connector and I-95 with Contee Road over I-95. The project also included a 4-span steel-girder bridge, 2 miles of 4-lane divided highway, relocation of several private utilities, intersection lighting and signals, bio-swales, and landscaping. Provided oversight of design, quality, and construction as the key person administering the Contract for the general contractor. Coordinated closely with three adjacent contracts, third party utilities, and the public while managing resources and materials to ensure timely completion of a quality project. ($34M)

Project Name: **InterCounty Connector Contract A Design-Build**
Location: Rockville, MD
Dates: April 2007-November 2011
Project Role: Segment Manager/Construction Manager
Current Firm: No, Granite Construction Company
Client/Owner: Maryland State Highway Administration

Segment Manager/Construction Manager from 2009 through 2011 and Project Controls Manager from 2007 to 2009 for the new construction of a 7+ miles segment of a 6-lane limited access toll road and access ramps connecting I-95 between Baltimore, MD, and Washington, DC. The project included erosion and sediment controls, private utility relocations, earthwork/embankment, 8 bridges, culverts/wildlife passages, drainage, pavement, noise barriers, intelligent transportation systems (ITS)/electronic toll collection (ETC), signage, and quality control. Responsible as key personnel for developing and implementing project-wide procedures and policies necessary to manage the work in accordance with the project requirements. Managed construction operations in collaboration with Design, Quality, Public Outreach, Safety, and Environmental personnel working for multiple state agencies and private companies. Identified and resolved issues timely with the Owner and Subcontractors or Suppliers. ($480M)

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

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

Not Applicable
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: Thomas Druhot, PE – Quality Assurance Manager</td>
</tr>
<tr>
<td>b. Project Assignment: Quality Assurance Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: Quinn Consulting Services, Inc.</td>
</tr>
</tbody>
</table>
| d. Years experience: With this Firm <1 Years With Other Firms 29 Years  
  Please list chronologically (most recent experience first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):  
  Registered professional engineer in Virginia with 29 years’ experience in engineering with specific emphasis on transportation systems, structures, utilities and construction methods with direct management responsibility in: business operations; cost control; quality assurance and quality control; materials testing; negotiation and execution of contracts; revenue and profit determination; engineering and contract management services; client and public interaction.  
  Quinn Consulting Services, Inc., June 2014-Present  
  Quality Assurance Manager: In charge of all Quality Assurance activities and monitored Quality Control for compliance with the approved QA/QC Plan, the Minimum Requirements as set forth in the VDOT QA/QC Design-Build Manual, and other relevant documents incorporated into the contract.  
  Virginia Department of Transportation, 2003-June 2014  
  Area Construction Engineer, Hampton Roads District: Responsible for contract management for construction and maintenance projects ranging from $300,000 to over $108,000,000. Mr. Druhot was responsible for Quality Assurance for these projects. Duties included ensuring contractor compliance with contracts, plans, specifications and applicable laws. Quality Assurance Management was the essence of the duties. Work included: review and comment of preliminary and final plans of designers, contract specifications and special provisions; constructability and bidability reviews; contractor bid tab review; risk analyses; holding preconstruction and pre-activity meetings; reviewing applicable sources of materials, material tickets, delivery tickets, and pay quantities to ensure all materials used were in conformance with VDOT specifications and contract provisions; assigning qualified and certified inspectors to perform quality assurance testing; working with VDOT Materials Division on, reviewing, accepting, sampling, and testing of all materials used in construction; inspecting constructed infrastructure; reviewing contractor’s quality control sampling and testing plans; reviewing inspectors’ daily work documentation and materials certifications. Earned VDOT Hampton Roads Materials Division Award for consistent QA documentation. Achieved average Construction Quality Improvement (CQIP) score of 93%. Ensured contractors delivered quality construction projects according to the plans and specifications, incorporated the correct materials and audit project diaries and records. He took over I-64 Central Coliseum Improvement Project in Hampton, Virginia as part of the Commissioner’s efforts to bring quality, schedule and budget control to the VDOT construction program.  
  Division Manager, Midwest Division (2000-2003): Responsible for profitability and operations of the division. Improved cash flow via reduction in unbilled turnover by 60%. Forecasted accurate revenues for corporate planning. Developed and implemented standard operating procedures. Implemented QA/QC procedures for accounting procedures. Implemented weekly tracking reports for revenue determination based on project budgets and schedules. Managed staff resources and scheduling for Environmentalists and Engineers. Managed project deliverables, schedules, costs and profits.  
  Program Manager/ Senior Associate, Virginia (1997-2000): Program Manager for $160 million interchange construction improvements along I-81 in Virginia. Coordinated development and use of cost and payment tracking system, trained client staff and over 35 inspectors on use of program. Provided monthly program management reports detailing contractor cost reimbursements, schedule adherence, deviation and risk analysis, engineering redesign requirements, and consultant progress and budgets. Coordinated activities among three prime contractors with three independent schedules, assisted in design conflict resolution, construction staging conflicts and simplification of temporary detours. Coordinated between client/consultant field staff and designers for revisions to construction plans resolving construction staging conflicts, and design conflicts. |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:  
  Purdue University (West Lafayette, IN)/BSCE/1985/Civil Engineering  
  Fordham University (New York, NY)/MBA/1989/Masters of Business Administration |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #:  
  1990/Professional Engineer/VA #040202144 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. |
1. Note your specific responsibilities and authorities for each project, not those of the firm.
2. Note whether experience is with current firm or with other firm.
3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.

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

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Location</th>
<th>Dates</th>
<th>Project Role</th>
<th>Current Firm</th>
<th>Client/Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-564 Intermodal Connector Design-Build ★</td>
<td>Norfolk, VA</td>
<td>December 2014-January 2015</td>
<td>Quality Assurance Manager</td>
<td>Yes, Quinn Consulting Services, Inc.</td>
<td>VDOT</td>
</tr>
<tr>
<td>Middle Ground Boulevard Design-Build ★</td>
<td>Newport News, VA</td>
<td>February 2010-June 2014</td>
<td>Owner Project Manager</td>
<td>No, VDOT</td>
<td>VDOT</td>
</tr>
<tr>
<td>Route 1 Improvements at Telegraph Road at Quantico Marine Base ★</td>
<td>Quantico, VA</td>
<td>June 2014-October 2014</td>
<td>Owner Project Manager</td>
<td>Yes, Quinn Consulting Services, Inc.</td>
<td>VDOT</td>
</tr>
<tr>
<td>I-64 Widening, Segment 1 ★</td>
<td>Newport News, VA</td>
<td>July 2013-June 2014</td>
<td>Owner Construction Engineer</td>
<td>No, VDOT</td>
<td>VDOT</td>
</tr>
</tbody>
</table>

Mr. Druhot worked closely with the Design-Build Contractor and the FHWA Eastern Federal Lands Division to prepare the Quality Assurance/Quality Control Plan in conformance with the requirements of VDOT’s Minimum Standards for QA/QC on Design-Build and PPTA Projects, including materials acceptance and payment provisions/procedures prescribed in the contract by the FHWA. The project, which is scheduled to begin in 2015, will provide a connection from the existing I-564 to the Norfolk International Terminals and the Norfolk Naval Station. Key elements of this over 100 million dollar project include: four new traffic lanes separated by a grass median, a realignment of I-564 for future crossings of the Elizabeth River, and a redirection of Virginia Port Authority traffic. (Estimated $115M)

Owner Project Manager on this $40 Million roadway widening FHWA/VDOT Design-Build project. Project elements included: the construction of a six-lane divided limited access highway; the intersection improvements to major arterial roads in Newport News, Jefferson Avenue and Warwick Boulevard; HRSD force mains; City of Newport News water and sewer mains; fiber optic signal coordination; a shared use path; sound barriers; and a new bridge over the CSX Railroad. Responsibilities included overseeing initial RFP development and DB selection, Quality review, scope validation negotiations and work orders, overseeing design review process, ROW procurement and relocation, coordination of public relations outreach, IA/IV coordination to ensure the project was completed in accordance with the contract and the VDOT Design-Build Minimum Standards, monthly progress reviews and payments. ($40M)

This $4 Million project is a FHWA-Eastern Federal Lands Highway Division intersection project which provides critical access to a DoD facility on the Marine Corps Base Quantico. Reported directly to the Design-Build Project Manager with the QA authority and responsibility to stop any non-conforming work. Conducted QA preparatory inspection meetings prior to the start of any new work. He was responsible for: overseeing and directing the independent quality assurance testing and inspections; comparing the QA and QC tests to ensure that they are within the tolerances; and certifying the work was completed in accordance with the Contract Documents. ($4M)

Owner Construction Engineer contract development phase, on this estimated $144 Million interstate widening FHWA/VDOT Design-Build project. Project included: the construction of an additional third lane in each direction from Jefferson Avenue, Newport News for approximately 7 miles toward Williamsburg. Provided constructability reviews, RFP development and reviews, road user cost analyses, contract time determination report review, and subject matter expert input into risk identification and assessment.

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

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

Not Applicable
### ATTACHMENT 3.3.1

#### KEY PERSONNEL RESUME FORM

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title:</td>
</tr>
<tr>
<td>Michael Merritt, PE – Senior Manager Transportation</td>
</tr>
<tr>
<td>b. Project Assignment:</td>
</tr>
<tr>
<td>Design Manager (DM)</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K)</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 20 Years With Other Firms 6 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K), 1995-current</td>
</tr>
<tr>
<td>Senior Manager, Transportation: Responsible for the preparation of roadway design plans for state, federal and municipal transportation projects. Mr. Merritt excels in the design and coordination of urban and rural roadway and highway facilities including complex intersections and interchanges. Formerly served four years as Assistant Project Design Engineer in the NCDOT Roadway Design Unit. Current responsibilities include the management, coordination and preparation of roadway projects from planning stages through final plans and specifications.</td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>North Carolina State University (Raleigh, NC) BS/1989/Civil Engineering</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>2010/Professional Engineer/VA # 0402048200; 1995/Professional Engineer/NC # 021122</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each project, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
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<td>3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</td>
</tr>
<tr>
<td>Project Name: Monroe Bypass Design-Build ★</td>
</tr>
<tr>
<td>Location: Mecklenburg and Union Counties, NC</td>
</tr>
<tr>
<td>Dates: November 2010-July 2016</td>
</tr>
<tr>
<td>Project Role: Design Quality Manager/Section Design Manager</td>
</tr>
<tr>
<td>Current Firm: Yes, RK&amp;K</td>
</tr>
<tr>
<td>Client/Owner: North Carolina Turnpike Authority</td>
</tr>
<tr>
<td>Design Quality Manager/Section Design Manager responsible for the Design Quality Plan and overall design quality for this 19.7-mile, NCTA Design-Build Toll Road. Responsibilities also include serving as the Project Manager for a 3.2-mile roadway segment at the north terminus of the project. The project is a multi-lane facility designed mostly on new location with 8 interchanges designed to meet 70 mph design speed. The Project includes 37 bridges and 31 Box Culverts and numerous Retaining and Noise Walls. The project also includes Open Road Tolling (ORT) Infrastructure, Intelligent Transportation Systems (ITS) components, and Aesthetic Treatments. Project design includes roadway, structures, hydraulics, erosion control, signals, signing, ORT, and ITS. Other coordination requirements include permitting, utilities, railroad, Right-of-Way, and Public Involvement. Although not utilized, a continuous green “T” intersection was carefully studied and considered for replacing an interchange on this project. ($367.7M)</td>
</tr>
<tr>
<td>Project Name: R-2507A, US 13/US 158 Widening Design-Build ★</td>
</tr>
<tr>
<td>Location: Hertford and Gates Counties, NC</td>
</tr>
<tr>
<td>Dates: July 2011-December 2014</td>
</tr>
<tr>
<td>Project Role: Roadway Design Project Manager</td>
</tr>
<tr>
<td>Current Firm: Yes, RK&amp;K</td>
</tr>
<tr>
<td>Client/Owner: NCDOT</td>
</tr>
<tr>
<td>Roadway Design Project Manager responsible for the management and coordination of roadway design for this design-build project that widens 8 miles of US 13/US 158 from US 158/NC 45 near Winton in Hertford County to the US 158 Bypass in Tarheel in Gates County. The project consisted of one diamond interchange with US 158 and multiple complex intersections with median U-turn bulbs. These intersections included extensive concrete channelization islands for traffic operations and safety. This project also included the structure design of a 1,121-foot long bridge over the Chowan River and 84-foot long bridge over Buckhorn Creek. As Lead Designer, RK&amp;K was responsible for roadway design, structures</td>
</tr>
</tbody>
</table>
Design, hydraulic design, permits, right-of-way acquisition, utility coordination and relocation. The Team received a score of 92% during the technical proposal selection. ($54.4M)

| Project Name: U-4909, SR 2643 Union Cross Road Widening |
|-------------|------------------|
| Location: Forsyth County, NC |
| Dates: May 2007-December 2009 |
| Project Role: Roadway Project Manager |
| Current Firm: Yes, RK&K |
| Client/Owner: NCDOT |
| Responsible for the roadway design plans, quantity calculations, and plan preparation for this four-mile project which consisted of widening Union Cross Road from two lanes to four lanes with curb and gutter and a 30-foot median except for the 0.9-mile section north of I-40 which will be six lanes with a 30-foot median. The project included many complex intersections. These include eleven "T" intersections, eight four-legged intersection, and three U-turn bulb intersections. The project also included two major interchange modifications. The existing US 311 interchange was converted from a diamond to a diamond with two loops. The existing I-40 interchange was initially converted from a diamond to a single-point urban diamond interchange. Upon completion of the design, RK&K was requested by NCDOT to re-design the single-point urban interchange to a Diverging Diamond Interchange (DDI) to better serve heavy left turn volumes and to reduce construction costs. Unique to this project, RK&K was responsible for the design of one of North Carolina’s first Diverging Diamond Interchange (DDI) projects. Design work included roadway, hydraulic, construction staging concepts and utility coordination. This project maintained a very aggressive schedule. ($31M) |

| Project Name: I-3807 Ruin Creek Road Design-Build ★ |
|-------------|------------------|
| Location: Henderson and Vance County, NC |
| Dates: Month Year-Month 2004 |
| Project Role: Roadway Project Manager |
| Current Firm: Yes, RK&K |
| Client/Owner: NCDOT |
| Roadway Project Manager responsible for roadway design services required for the widening of 1.05-miles of Ruin Creek Road from Graham Avenue to Dabney Road, the replacement of the bridge over I-85, the improvement of the interchange ramps at I-85 and the enhancement of multiple intersections. Project scope included roadway design, hydraulic and erosion control design, structure design, signal design, traffic control plans, and utility coordination. The team received the highest technical design score of 93% and had the lowest cost proposal. The project was completed ahead of schedule. ($9.2M) |

| Project Name: R-4463B NC43 Connector Design-Build ★ |
|-------------|------------------|
| Location: New Bern and Craven County, NC |
| Dates: October 2006-November 2009 |
| Project Role: Roadway Design Project Manager |
| Current Firm: Yes, RK&K |
| Client/Owner: NCDOT |
| Roadway Design Project Manager responsible for roadway design, management, and coordination of this 2.5 mile Design-Build project. The Connector is a four-lane new location facility with a 46-foot median and partial control of access. The project included the reconstruction of the NC 43/NC 55 intersection and widened and improved approximately 0.5 mile of NC 55. Scope included roadway design, bridge design, hydraulic design, traffic control, pavement markings, traffic signals, signing, erosion control, utilities, environmental permits, Right-of-Way, railroad coordination, and public involvement. The team received the highest technical design score of 96% and this was the first NCDOT Design-Build project where the winner was determined by the technical score. The project was completed 12-months ahead of schedule. ($42.2M) |

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

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

Not Applicable
### KEY PERSONNEL RESUME FORM

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
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<td><strong>a. Name &amp; Title:</strong></td>
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<td><strong>b. Project Assignment:</strong></td>
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<tr>
<td><strong>c. Name of Firm with which you are now associated:</strong></td>
</tr>
<tr>
<td><strong>d. Years experience:</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>PCL Civil Constructors, Inc. (PCL), 2007-Present</strong></td>
</tr>
<tr>
<td><strong>Middlesex Corporation, 1999-2007</strong></td>
</tr>
<tr>
<td><strong>e. Education:</strong></td>
</tr>
<tr>
<td><strong>f. Active Registration:</strong></td>
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<tr>
<td><strong>g. Document the extent and depth of your experience and qualifications relevant to the Project:</strong></td>
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</tr>
<tr>
<td><em><em>List at least three (3), but no more than five (5) relevant projects</em> for which you have performed a similar function.</em>*</td>
</tr>
<tr>
<td><strong>Project Name:</strong></td>
</tr>
<tr>
<td><strong>Location:</strong></td>
</tr>
<tr>
<td><strong>Dates:</strong></td>
</tr>
<tr>
<td><strong>Project Role:</strong></td>
</tr>
<tr>
<td><strong>Current Firm:</strong></td>
</tr>
<tr>
<td><strong>Client/Owner:</strong></td>
</tr>
<tr>
<td><strong>Area superintendent beginning in 2015 for this project that includes modifying a one mile section of roadway featuring interchange modifications and a unique bridge structure with both aesthetic design and lighting. Alternate steel box or segmental box structures will be used in the interchange design. Mr. Mash is responsible for managing all aspects of roadway construction, ensuring contract requirements are met and ensuring QC activities are performed and proper materials are utilized by coordinating directly with quality control/quality assurance personnel ($138M)</strong></td>
</tr>
<tr>
<td><strong>Project Name:</strong></td>
</tr>
<tr>
<td><strong>Location:</strong></td>
</tr>
<tr>
<td><strong>Dates:</strong></td>
</tr>
<tr>
<td><strong>Project Role:</strong></td>
</tr>
<tr>
<td><strong>Current Firm:</strong></td>
</tr>
<tr>
<td><strong>Client/Owner:</strong></td>
</tr>
<tr>
<td><strong>Construction Superintendent in 2014 for this project that includes rehabilitating 2.4 miles of interstate concrete paving. Approximately 10,600 CY of concrete is being placed during replacement of 43,600 SY of concrete slabs. Mr. Mash was responsible for managing crews and subcontractors, adhering to strict schedule and MOT requirements and monitoring quality control, including conformance with all approved plans, specifications and materials. ($14M)</strong></td>
</tr>
</tbody>
</table>
Project Name: I-4 Connector/Selmon Crosstown from South of Selmon Expressway to 7th Avenue North Bridge Abutment
Location: Tampa, FL
Dates: June 2010-June 2014
Project Role: Earthwork Superintendent
Current Firm: Yes, PCL
Client/Owner: Florida Department of Transportation

Earthwork Superintendent from 2010-2014 for this $412M project that serves as a multi-lane toll road connecting I-4 and the Lee Roy Selmon Expressway, and facilitates freight truck access to and from the Port of Tampa. The roadway project included more than six miles of storm drainage pipe, water and sewer utility construction, mechanically stabilized earth walls, and roadway/asphalt construction. Charles was responsible for roadwork operations including excavation, embankment, drainage, paving, striping, and flatwork. This included managing multiple subcontractors. Charles also managed utility relocations and protection during construction, including the delicate oil encased transmission lines feeding the Port of Tampa. He ensured compliance to the contract documents and work was performed in a quality manner. His attention to erosion control and management of facilities received amazing positive feedback from the CEI and FDOT project team. ($412M)

Project Name: I-4 Interchange at S.R. 408 (East/West Expressway)
Location: Orlando, FL
Dates: January 2009-May 2010
Project Role: Earthwork Superintendent
Current Firm: Yes, PCL
Client/Owner: Florida Department of Transportation

Superintendent of earthwork operations from 2007-2010 for this project that included roadway and bridge widening, resurfacing, safety, and aesthetic improvements. The SR-408/East-West Expressway project included roadway and bridge widening from six lanes to 10 lanes, plus additional auxiliary lanes for existing and new toll facilities from Crystal Lake Drive to Conway Road. The AASHTO bridge widening consists of both concrete and steel driven piles, and cast-in-place substructure and superstructure. The piling on the Lake Underhill Bridge widening will be the longest 30-in. concrete piling in the State with lengths up to 280-ft. Demolition of existing structures, in two separate night closures to minimize impacts and a new flyover bridge consisting of steel tub girders are also included. Additional work includes extensive steel sheet pile walls, drainage, roadway widening, cast-in-place retaining walls, aesthetic features, and construction of a new exit toll ramp plaza. ($128M)

Project Name: I-75 Widening and Bruce B. Downs Boulevard Interchange
Location: Tampa, FL
Dates: April 2007-December 2008
Project Role: Superintendent
Current Firm: Yes, PCL
Client/Owner: Florida Department of Transportation

Superintendent from 2007-2008 for this $43M project for FDOT D7 that included roadway improvements and bridge construction for an existing interchange at I-75 and Bruce B. Downs Boulevard. The project will widen southbound I-75 from Bruce B. Downs to the Hillsborough River and includes a steel tub girder flyover bridge for southwest Bruce B. Downs Boulevard to I-75 southbound, as well as ramp modifications. Charles managed the field operations of the self-performed earthwork on this project. This included excavation, ponds, embankment, drainage, MOT, and roadway base operations. He ensured proper access for erection equipment. The major earthwork elements include 25,000 square feet of mechanically stabilized earth walls at both approaches. There is approximately 7,000 LF of new storm drainage of various diameters that includes 455 LF of 84-in. diameter reinforced concrete pipe installed to a depth of 18-ft. below existing grade. Along I-75 southbound, the contract included three miles of roadway widening, which involved adding an additional 12-ft. wide lane and a 10-ft. wide shoulder. This facilitates a longer merge from Bruce B. Downs Boulevard and provides an overall better flow of traffic for this portion of the Interstate system. His responsibilities also included the management of subcontractors for the drilled shaft installation, guardrail, paving, and striping operations. Additionally, ensured quality construction in accordance with all approved plans, specifications and materials. ($43M)

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

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

Mr. Mash is currently fully assigned to the I-49 North Bridge Segment K Project. He will be made available immediately upon contract award for constructability reviews, partnering meetings, planning and scheduling of the Military Highway CFI project. He will also be available full-time to mobilize onto the project site in early 2016 when design documents and permits are anticipated to be complete.
### Brief Resume of Key Personnel anticipated for the Project.

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Nick Dais, PE, PTOE – Project Manager, Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Traffic Operations Designer and Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K)</td>
</tr>
<tr>
<td>d. Years experience: With this Firm</td>
<td>1 Years With Other Firms 16 Years</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K), 2014-current</td>
<td></td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
<td>University of Maryland (College Park, MD)/ME/1999/Transportation Engineering and Planning</td>
</tr>
<tr>
<td>Aristotle University (Greece)/BS/1994/Civil Engineering</td>
<td></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
<td>2007/Professional Engineer/VA #040242329; 2007 Professional Traffic Operations Engineer (PTOE)/National Registration #2134</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
<td></td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each project, not those of the firm.</td>
<td></td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
<td></td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</td>
<td></td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</td>
<td></td>
</tr>
<tr>
<td>Project Name:</td>
<td>Transit Signal Priority and Queue Jumping – Traffic signal modification</td>
</tr>
<tr>
<td>Location:</td>
<td>Alexandria, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>February 2014-January 2015</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Project Manager (Traffic)</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>Yes, RK&amp;K</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>City of Alexandria</td>
</tr>
<tr>
<td>Project manager for designing traffic signal modifications at 10 intersections for the City of Alexandria. Designed exclusive priority signals for use by Washington Metropolitan Area Transit Authority (WMATA) transit vehicles. Designed queue jumping along with transit signal priority, that enable the Metrobuses to bypass long queues at these signalized intersections and allow for an early green light or extended green light through the use of cellular and GPS communication between the transit vehicle and the traffic signal. ($2.6M)</td>
<td></td>
</tr>
<tr>
<td>Project Name:</td>
<td>Route 50 at Courthouse Road Interchange – Traffic signal design</td>
</tr>
<tr>
<td>Location:</td>
<td>Arlington, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>November 2008-September 2012</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Lead Traffic Engineer</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>No, AECOM</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>VDOT</td>
</tr>
<tr>
<td>Designed three traffic signals per VDOT and Arlington County standards. Performed an interchange traffic operations analysis and detour traffic impact study for US 50 (Arlington Boulevard) with Courthouse Road, Fairfax Drive, and 10th Street interchanges. Analyzed traffic operations including LOS and length of queues; and determined traffic impacts of</td>
<td></td>
</tr>
</tbody>
</table>
the proposed detour routes to the local street network during construction. Summarized in a report and presented results of the traffic analysis as well as recommendations for the US 50 interchange. ($48M)

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Glebe Road Pedestrian Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Arlington County, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>September 2007-July 2010</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Lead Traffic Engineer</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>No, AECOM</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>Arlington County</td>
</tr>
<tr>
<td>Designed actuated traffic signals for four intersections with loop detectors, conduit and cable runs, signal poles and heads, pedestrian heads, signing, phase diagrams, and initial timing charts. Developed the 100% engineer's cost estimate for construction of the $1.6 million project using current cost data from VDOT bid tabulations and Arlington County on-call contracts. ($1.6M)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Sycolin Road at Tavistock Drive Traffic Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Town of Leesburg, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>February 2011- December 2011</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Lead Traffic Engineer</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>No, AECOM</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>Town of Leesburg</td>
</tr>
<tr>
<td>Designed a traffic signal for the intersection of Sycolin Road at Tavistock Drive with video detection, loop detectors, conduit and cable runs, signal poles and LED heads, pedestrian heads and pushbuttons, signing, phase diagrams, signal pole legend, color sequence chart, and initial timing charts. The design accommodated future roadway construction by setting signal poles, controller, and power service in the ultimate location. Developed the 100% engineer's cost estimate for construction. ($0.25M)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>11th Street Bridges Signing and Pavement Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Washington, DC</td>
</tr>
<tr>
<td>Dates:</td>
<td>June 2009-July 2010</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Lead Traffic Engineer</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>No, AECOM</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>District Department of Transportation</td>
</tr>
<tr>
<td>Task leader responsible for the design of signing and pavement marking construction plans for the Design-Build project. Design includes 15 overhead sign structures along I-295, I-695, DC 2-295, 11th Street bridge and several hundred ground-mounted signs on local intersections and roadways. The 11th Street corridor design-build project consisted of reconstructing and reconfiguring the interchange of the Southeast/Southwest Freeway and the Anacostia Freeway over the Anacostia River in southeast Washington, DC, over a distance of approximately one mile. The complicated junction of re-designated freeways I-295, I-695 and DC 295, necessitated extensive design of new signage. Inter-discipline coordination was required between roadway plans, traffic signal plans and lighting, utilities, and bridges plans. Signing and pavement marking plans included sign details using Clearview fonts and GuidSign software, overhead sign structure details and complete sign schedule. ($220M)</td>
<td></td>
</tr>
</tbody>
</table>

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

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

Not Applicable
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Dave Plum, PE – Senior Manager, Municipal Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Lead Utility Coordination Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K)</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 15 Years With Other Firms 20 Years</td>
<td>Please list chronologically (most recent experience first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP (RK&amp;K), 1989-1999 and 2010-current</td>
<td>Senior Manager, Municipal Engineering: Responsible for management and design of water, sewer relocation projects and coordination of relocation of private utilities</td>
</tr>
<tr>
<td>URS, 1999 -2010</td>
<td>Vice President-Office Manager: Responsible for managing 5 branch office in two states. Work included highway, water, sewer, drainage, structural and environmental engineering design projects</td>
</tr>
<tr>
<td>e. Education:</td>
<td>Old Dominion University (Norfolk, VA), BSCE/1979/Civil Engineering</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
<td>1986/Professional Engineer/VA # 0402016205 and two other state registrations ( MD, NC)</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
<td>1. Note your specific responsibilities and authorities for each project, not those of the firm.</td>
</tr>
<tr>
<td></td>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
<tr>
<td></td>
<td>3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</td>
<td></td>
</tr>
<tr>
<td>Project Name:</td>
<td>Route 250 Interchange at McIntire Road</td>
</tr>
<tr>
<td>Location:</td>
<td>Charlottesville, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>January 2006-December 2014</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Utility Project Manager</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>Yes, RK&amp;K</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>City of Charlottesville</td>
</tr>
<tr>
<td>Utility Project Manager for the alignment study and design of all water and sewer relocations associated with a new interchange. As the Lead Utility Coordinator, Mr. Plum was responsible for verifying conflicts, determining cost estimates and cost sharing participation, and conducting utility field inspection with public and private utility owners. He coordinated the relocation of Dominion Power, Comcast, and Verizon franchise utilities and incorporated them into the construction contract. He determined prior rights and compensable rights and calculated all pro-rates for the entire project. He designed the relocations for water distribution and transmission mains, including 400 LF of 6-inch, 1,260 LF of 8-inch, and 1,820 LF of 18-inch. Included in the design were 195 LF of 24-inch bore and jack casing pipe for the 18-inch water distribution main and 400 LF of 48-inch casing pipe for a replacement 30-inch gravity interceptor sewer; he reviewed plans and estimates for private utility relocations.</td>
<td></td>
</tr>
<tr>
<td>Project Name:</td>
<td>Downtown Tunnel/Midtown Tunnel/Martin Luther King Freeway Extension Design-Build ★</td>
</tr>
<tr>
<td>Location:</td>
<td>Norfolk and Portsmouth, VA</td>
</tr>
<tr>
<td>Dates:</td>
<td>January 2011-January 2018</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Utility Relocation Manager</td>
</tr>
<tr>
<td>Current Firm:</td>
<td>Yes, RK&amp;K</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>VDOT</td>
</tr>
<tr>
<td>Utility Relocation Manager performing staff augmentation for VDOT to review all public utility relocations and franchise utility relocations. Worked with construction contractor’s design team to prepare multi-party agreements with a public utility owner and two party agreements with franchise “dry” utility owners and ensure the documents are correctly prepared for the multiple phases of construction. Work on this contract included reviewing and justifying all</td>
<td></td>
</tr>
</tbody>
</table>
utility conflicts identified at the 30-percent design stage, reviewing preliminary quantity estimates and working with the contractor to develop their final cost estimate prior to financial close. ($2.1B)

Project Name: **I-64 Widening and Route 623 Interchange Design-Build ★**
Location: Henrico and Goochland Counties, VA
Dates: September 2013-October 2015
Project Role: Utility Project Manager
Current Firm: Yes, RK&K
Client/Owner: VDOT
Lead Utility Coordinator responsible for preliminary investigations and utility coordination related to water, sewer and sewer force main and franchise utilities for the design-build project to widen I-64 to 3 lanes in each direction. ($33.2M)

Project Name: **Limited Services Design Contract Statewide 2011, Task Order: Garrisonville Road (Route 610)**
Location: Stafford County, VA
Dates: August 2012-October 2014
Project Role: Project Engineer
Current Firm: Yes, RK&K
Client/Owner: VDOT
Project Manager responsible for the coordination and design of utilities in conjunction with the widening of Garrisonville Road and Onville Road in Stafford County. The project required the development of cost participation estimates and determination of pro rates. The project included the relocation of water mains, fire hydrants, air release valves and associated service connections along with the evaluation and design of gravity sanitary sewer and sanitary sewer force main. The design required close coordination with franchise utility owners to avoid conflicts. ($3.5M)

Project Name: **Limited Services Design Contract Statewide 2008, Task Order: Mosby Road**
Location: Berryville, VA
Dates: December 2010-April 2012
Project Role: Project Manager
Current Firm: Yes, RK&K
Client/Owner: VDOT
Project Manager responsible for the coordination and design of utility relocations in conjunction with the extension of Mosby Boulevard. The design avoided conflicts with proposed storm drains, open ditches, natural gas mains and overhead and underground franchise utilities, and included over 1,450 linear feet of 6- thru 12-inch water mains, fire hydrants and air release valves. Two concrete encased 4-inch PVC casing pipes and two 16-inch steel casing pipes were installed under Route 7 and Mosby Boulevard as part of the project to permit future utility extensions for the Town and County without disturbing the newly constructed road. ($1.7M)

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

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

Not Applicable
Attachment 3.4.1 (a) and (b)

Work History Forms

PCL Civil Constructors, Inc.
PROJECT SCOPE

PCL Civil Constructors, Inc. (PCL) served as the lead contractor. Teamed with URS Corporation (URS), as the lead design engineer, the PCL-led team was selected by the Florida Department of Transportation’s (FDOT) District Four to design and construct an important section of the I-95 Corridor widening in Palm Beach County, Florida. The PCL team was responsible for all aspects of the design-build process, including design, permitting, utility relocation, construction, safety, quality control and public relations.

PROJECT DESCRIPTION

This I-95 widening project converted over two miles of an existing six lane highway to a ten lane configuration, including auxiliary and HOV lanes. Similar to the Military Highway project in size and scope, the I-95 widening included complex geometry, extremely heavy traffic (AADT over 125,000), innovative MOT, utility relocations and coordination with multiple stakeholders (railroad, city, county, local residents, etc.). The PCL team proposed and utilized a simplified MOT phasing to minimize the impacts to traffic. The project was constructed in four basic phases. Traffic lanes were maintained without creating confusion for travelers entering and driving through the project. In partnership with FDOT, the PCL team engineered, coordinated and scheduled the demolition of multiple structures during one night closures to avoid extended impacts to the traveling public. PCL’s innovative approach to simplify the MOT was provided at no additional cost to FDOT.

Over two miles of sound wall was a major element of the I-95 widening project. Installation required extensive utility coordination and a willingness to partner with both FDOT and the local communities impacted by the construction. The PCL team attended and participated in public meetings on a local level to help ensure communication with the community groups that were project stakeholders. Communication through community outreach was a key to the success of the project.

FDOT approved and “rolled-out” a new value-added asphalt specification while the I-95 project was ongoing. In the spirit of partnering the PCL team accepted FDOT’s request to add the value-added asphalt specification to the I-95 Widening project via change order. This new concept provided a performance specification holding the prime contractor responsible for the finished asphalt product and workmanship for a period well beyond the standard warranty. As solution providers and construction leaders, PCL welcomed the opportunity to furnish a quality end product that the entire team was proud of and willing to stand behind.

PCL solved the Owners problems regarding safety and congestion on this project. We recognized that we work for the public through a contract with FDOT, so we communicated and met with local stakeholders. Quality was not compromised at any point.

Evidence of Performance

During the course of the I-95 Widening project, Hurricanes Charley, Frances and Jeanne impacted the project and all of south Florida. These three storms all occurred within just two months of each other. The hurricanes caused damages, temporary delays and required shutdowns directed by a State of Emergency. Repair of hurricane damages was added to the Contract via change order by FDOT. The PCL Team was able to overcome delays and still finish within the allowable Contract Time.

*For multiple phase projects, only 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.
<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-408 (East-West Expressway) Intersection and Widening (from Crystal Lake to Conway) Orlando, FL</td>
<td>HNTB Corporation</td>
<td>Orlando-Orange County Expressway Authority 407-690-5000 Ben Dreiling 407-690-5000 <a href="mailto:dreiling@oocea.com">dreiling@oocea.com</a></td>
<td>February 2010</td>
<td>December 2009</td>
<td>$77,889</td>
<td>$72,120*</td>
</tr>
</tbody>
</table>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**PROJECT SCOPE**
PCL Civil Constructors, Inc. (PCL) served as the prime contractor for the Orlando-Orange County Expressway Authority to construct major widening and a new interchange at SR 408/Conway Avenue, in downtown Orlando, Florida.

**PROJECT DESCRIPTION**
In addition to the new interchange at Conway Avenue, the project converted nearly a mile of an existing six-lane highway to a 10-lane configuration, plus auxiliary lanes for existing and new toll facilities. The PCL team was responsible for all aspects of construction, including environmental permit compliance, utility relocations, maintenance of traffic, safety, quality control, and public relations.

**Similar Scope and Complexity:**
The scope of work on the SR 408 Widening Project is relevant to the Military Highway project as follows:

- **New Interchange Construction:** The SR 408 project included the widening of a major roadway and bridge in an urban environment, as well as the construction of a new flyover ramp interchange.
- **Extensive Maintenance of Traffic/Phased Construction:** The SR 408 project required extensive maintenance of traffic and phased construction sequences. All work took place adjacent to heavy volumes of daily traffic (AADT more than 150,000).
- **Utility Relocations:** PCL was required to coordinate all utility relocations throughout the project corridor. These utilities were especially congested at the location of the toll booth facility that PCL was required to expand as part of our scope.

**Environmental Sensitivity:** The SR 408 project required strict environmental permit restrictions. All runoff generated on-site had to be treated with proper environmental controls before leaving the site or entering the lake (Lake Underhill) located within the project limits. Runoff was controlled through the use of silt curtain and steel sheet piles installed along the shoreline of the lake and at the project limits. In addition, turbidity levels were monitored daily, as required by the environmental permits.

Evidence of Performance: A significant change that PCL initiated was the elimination of a crossover MOT sequencing. PCL was granted permission to close the expressway completely for the erection of the Conway Road steel tub girders. This allowed PCL to not only eliminate the designed crossover traffic configuration, but to eliminate a shoring tower that was part of the original design. The change orders on the project resulted in an overall cost savings to the Authority.

**Proposed Personnel for this Project:**
- Andrew Cestaro
- Eric Chavez, PE
- Charlie Mash

*For multiple phase projects, only 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.
### LEAD CONTRACTOR - WORK HISTORY FORM

**ATTACHMENT 3.4.1(a)**

**LIMIT 1 PAGE PER PROJECT**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
</table>

### Evidence of Performance

Change orders on the SR 520 included additional work and revisions requested by the Owner. However, the reduction in erosion control costs provided a net reduction in the overall project cost for the Owner. PCL prides itself on providing quality products. On this project, we were able to provide just that with the added bonus of opening of the mainline configuration four months early.

“I’m pleased to recommend PCL Civil Constructors to you. Over the past three years, WSDOT has worked with PCL on our SR520 widening project between SR202 and W. Lake Sammamish Parkway. I worked directly with Pat Malone, their Puget Sound area Civil Manager, and found him to be responsive and keenly interested in delivering a quality project. PCL completed the project on time, within budget, managed traffic control without incidents, and we routinely met with Pat and Pacific Northwest Regional Vice President Fred Auck to review the project status. All in all, I was very pleased with the work they did for us. We also had PCL perform a smaller moderate sized project to seismic retrofit I-90 bridges in Seattle. While the project was smaller and less complex than the larger SR520 widening project, they performed and maintained the same level of commitment to quality, budget and schedule as the larger project. I have no hesitations in signing a future contract with PCL, and would be happy to discuss our past PCL experience with you.”

Russ East, PE

WSDOT Assistant Regional Administrator for Snohomish and King Counties

### Relevant Scope of Work

- Project Management
- Roadway Construction
- Traffic Control & Transportation Management Plan
- Structures
- Hydraulic & Erosion Control
- Environmental Permitting/Coordination
- Signing Design

The SR 520 Widening site was constrained by environmentally sensitive areas such as Bear Creek, wetlands, a county park and the Sammamish River. At the outset, PCL met with WSDOT and the Department of Ecology (DOE) to discuss the sensitive nature of the project. Major concerns, critical areas, and goals for the project were identified and agreed upon. PCL, WSDOT and DOE worked together to improve the erosion control plans. In the end, the creek buffer was successfully rehabilitated with native species and in a condition better than it was prior to construction. The teamwork between the agencies and the contractor resulted in a project savings of nearly one million dollars.

*For multiple phase projects, only 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.*
PROJECT SCOPE

The 6.4 miles of I-40, from west of Wade Avenue to east of Jones Franklin Road is a critical commuter freeway with traffic volumes that exceed 130,000 vehicles per day and was the cause of rush hours that lasted for hours. Contracted by the North Carolina Department of Transportation to reduce congestion and improve traffic flow, the Design-Build team widened the existing four-lane divided roadway to a six-lane divided facility. The project also included widening dual bridges over US 1/US 64 and dual bridges over eastbound Wade Avenue. With innovation and an aggressive roadway design and construction schedule, the project approach steered clear of complex traffic issues and was successfully completed nearly a full year ahead of schedule.

Highway/Roadway Design:  I-40, known as the Triangle’s “Main Street,” is also a critical freeway. Current traffic volumes exceed 130,000 vehicles per day, which is far above the capacity of a freeway in this area; leading to an evening rush hour that can last upwards of three hours eastbound.

This rolling urban freeway with a 70-mph design speed included the following roadway improvements: the design of one 12-foot wide lane in each direction of I-40 expanding the interstate from four to six lanes; a 12-foot wide paved shoulder was added in each direction, built to the same depth as the roadway, which allows for easier expansion of the highway in the future; median guiderail was installed throughout the project and guardrail was replaced on the outside shoulders; at the eastbound I-40/Wade Avenue split, the roadway was expanded to provide three lanes for I-40 from the current two lanes. Within this urban environment, stormwater management was addressed through advanced drainage techniques.

Pavement Markings and Signing: As a heavily traveled urban facility, special attention was focused on signing and pavement markings to assist motorists in their decision making.

Intelligent Traffic Systems: Responsible for the design of ITS communications cable routing plans, CCTV cameras, and ITS.

Bridge Design: Structural Engineering: Structures were designed for the bridge widening at Wade Avenue and US 1 / 64, as well as two sound barrier walls (including requisite noise analysis).

Utilities: Responsible for the identification of conflicting utilities, coordination of Level "A" S.U.E. data and management of utility coordination efforts. Utility design included the design and permitting of water services for the construction office and asphalt plant facilities.

**Similar Scope and Complexity:**
- Widening of interstate roadway from four to six lanes
- Design-Build Delivery
- Complex Traffic Issues
- Public Involvement
- Utility Coordination
- Noise Walls and Analysis

**Lessons Learned:**
1. Successful Design Team used alternative methods for delivering materials to the median in order to reduce exposure to traffic and reduces construction time.
2. Designer coordinated closely with subconsultants and the Contractors which was vital to successfully delivering this Design-Build project.
3. Designer staged submittals of design plans (structure, traffic controls, erosion control, etc.) allowing work to begin much sooner than following the traditional process. The process worked especially well for median widening because right-of-way and permit needs were minimal.
4. Performed additional traffic studies to show additional hauling during the day will not impact the traveling public. The additional hauling time helped to reduce the construction time and to shorten public impacts.

*For multiple phase projects, only 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.*
a. Project Name & Location: Route 58 Phase II Widening
b. Name of the prime/ general contractor responsible for overall construction of the project: DLB Inc.
c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities: VA Department of Transportation, 276-669-9910, Dennis Harris, PE, Dennis.Harris@VDOT.Virginia.gov
d. Construction Completion Date (Original): August 2012
e. Construction Completion Date (Actual or Estimated): October 2012 (Actual)
f. Contract Value (in thousands): Construction Contract Value (Original) $20,095, Construction Contract Value (Actual or Estimated) $21,410

g. Design Fee for the Work: $291,221

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.

Relevant Scope of Work
- Roadway
- Structure/Bridge
- Utilities
- Environmental
- Hydraulics
- Stormwater Management
- TMP (SOC)
- Signing
- Pavement and Marking
- Quality Assurance
- Quality Control
- Project Management

PROJECT SCOPE
The RK&K Richmond office served as the Lead Designer to provide final plans to VDOT.

PROJECT DESCRIPTION
RK&K provided final plans under contract to VDOT for the roadway design of this two-mile section of Route 58 beginning at Route 667 and ending at Route 638. The project widened and provided parallel lanes adjacent to the existing two-lane road to widen it to a four-lane divided facility. This produced a continuation of the highway, whose roadway matched the previous roadwork to the west. This project had been placed “on the shelf” for many years. In order for VDOT to deliver its program in support of the American Reinvestment and Recovery Act, the entire plan set needed a rework to current design standards and environmental regulations.

Similar to the Military Highway project with roadway improvements, RK&K’s design work included major drainage and stormwater management effort to redesign the project to the latest standards, extensive coordination with utility relocations and two new bridge structures over the Middle Fork of the Holston River. This rural principal arterial was designed with a 55 mph design speed and includes a graded median along with left and right turn lanes at intersecting roadways.

RK&K developed the traffic control plan to encompass the proposed road improvements along with the bridges and utility relocations. The new alignment was selected to ensure that one new bridge could be constructed while maintaining the existing road and bridge. Many of the utility relocations could not be completed until the large cut slopes were in place. The roadway, drainage, bridge and retaining wall elements were carefully evaluated to determine which elements impacted existing utilities. RK&K developed a comprehensive TMP that included phased sequencing of the construction while accommodating utility coordination, earthwork operations, and maintenance of traffic.

Environmental controls were critical to protect a spring within the project area. Phased erosion and sediment control, closely integrated with the design and traffic management plan tied to the construction phasing were essential on this project.

Evidence of Performance
Safety: Last minute redesign of an entrance to accommodate a specialized vehicle
Schedule: RK&K took this project, which has been “shelved” for a number of years, and upgraded all design elements to current standards and had the project ready for PAC in four months to meet VDOT’s desired advertisement schedule.
Cost: Close coordination with the Contractor to eliminate a proposed retaining wall based on site conditions
Environmental Stewardship: Context sensitive design allowed the roadway to be widened over a spring of unknown origin without damaging the source of the spring.

Proposed Personnel for this Project:
- Owen Peery, PE
- Stuart Samberg, PE
- Mike Hogan, PE

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## Relevant Scope of Work
- Roadway
- Survey
- Structures and Bridges
- Structure Demolition
- Environmental
- Geotechnical
- Hydraulics
- Traffic Control Devices
- Transportation Management Plan
- Right-of-Way
- Utility Relocations and Coordination
- Public Involvement/Relations
- Quality Assurance
- Quality Control
- Intelligent Transportation Systems
- Construction Engineering & Inspection
- Project Management

### Project Scope

The RK&K Richmond office, with assistance from the RK&K Virginia Beach, Fairfax and Baltimore offices, served as the Lead Designer for this project. This project is one of the largest undertaken to date as part of the Virginia Department of Transportation (VDOT) First Cities Initiative. As the prime consultant, RK&K is providing complete engineering services for planning and design of a new interchange on the Route 250 Bypass at the intersection with McIntire Road as agent for the City of Charlottesville.

### Project Description

This project was developed in three phases under one contract and although not procured as a D-B contract, the three phases emulate the role, responsibilities, and services of a Lead Designer on such. Phase I services included development of Conceptual Alternatives, Detailed Alternatives and a Preferred Alternative through Public Hearing and completion of the Environmental Documents. Phase II services included final design and assisting the City with bidding and procurement of the project. Phase III services continue and consist of construction management and inspection as well as construction engineering working in coordination with the contractor. Project elements have included environmental/NEPA documentation, Public Involvement, Traffic Data Collection and Analysis, Roadway Design, Structural Design, Traffic Engineering Design, Hydraulic and Hydrologic Analysis and Design, Graphic/Computer Renderings, and Project Website Hosting. Under the First Cities Initiative / LAP, all work has been performed for the City of Charlottesville and closely coordinated with VDOT and the Federal Highway Administration (FHWA).

### Interchange Design

Major features of this design include complete roadway reconfiguration and reconstruction, new roadway construction, a single-span–semi-integral abutment bridge, two box culverts including stream diversions, extensive utility relocations, and multiple retaining walls. In addition, the RK&K Team prepared landscaping planting plans and cultural resource mitigation commitments. The roadway design was optimized to limit right-of-way requirements, avoid parkland and historic property acquisition, to best-fit the roadway profiles to the existing topography and provide a grade separation at this urban intersection.

### Traffic

A key element in the development of the interchange concepts was the incorporation of context sensitive design concepts to the safety, congestion, and connectivity. Several of the interchange concepts that were developed incorporated modern roundabouts instead of traffic signals at the ramp termini along McIntire Road. RK&K performed traffic engineering analyses using SIM Traffic and SIDRA based on projected 2035 design year traffic volumes as well as several interim years to determine the most appropriate configuration for the interchange. In total, RK&K evaluated 13 interchange configurations. Following the public involvement and in conjunction with all stakeholders, a tight urban diamond interchange was selected, designed and constructed with signals at the ramp termini. A bridge to carry Route 250 traffic over McIntire Road was designed and constructed. Construction engineering and inspection is being provided. Pending delivery of the bridge rail, the interchange is ready for traffic ahead of schedule.

### Successful Delivery

The project will be opened for traffic in February 2015, thereby qualifying the contractor for an incentive payment.

### Similar Scope and Complexity:
- Maintenance of Traffic
- Urban Roadway
- Active Public Involvement
- Complex Traffic
- Traffic Control Devices/ITS
- CE&E
- Project Management

### Lessons Learned:

In order to facilitate development of this context-sensitive project with intense public interest, RK&K adopted an aggressive public involvement approach which included a project web site (www.250interchange.org), over a dozen workshops with an 18 member steering committee, regular updates to City Council, neighborhood meetings, public workshops and coordination with local, state and federal oversight agencies. Without this pro-active approach, this project would not have advanced to the construction stage. Our team used a similar pro-active approach to keep VDOT, the public, and City officials informed through all stages of design and construction so there were no surprises. The traveling public was informed of changes to traffic patterns and other important information.

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### Evidence of Performance

**Interchange Contractor will meet his incentive date to earn a bonus for opening project to traffic early.**

### Proposed Personnel for this Project:
- Owen Peery, PE
- Mike Hogan, PE
- Dave Plum, PE
- Joe Rausso
- Gary Johnson, PE, DBIA
- Stuart Samburg, EIT