



STATEMENT OF QUALIFICATIONS

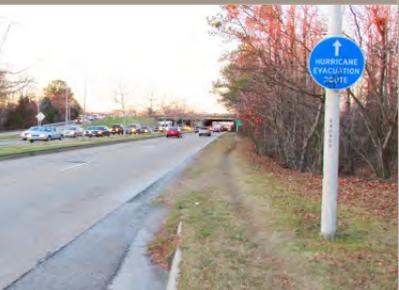
A DESIGN-BUILD PROJECT



Military Highway Continuous Flow Intersection

From: 0.023 Miles South of Lowery Road

To: 0.230 Miles North of Interstate 64, Norfolk, Virginia



STATE PROJECT NO.: 0165-122-V04 | FEDERAL PROJECT NO.: STP-5403 | CONTRACT ID NO.: C00001765DB81

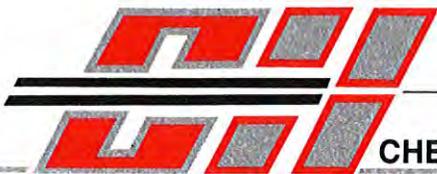




Letter of Submittal

3.2





January 29, 2015

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

RE: STATEMENT OF QUALIFICATIONS

Military Highway Continuous Flow Intersection
From: 0.023 Miles South of Lowery Rd. To: 0.230 Miles North of Interstate 64
Contract ID Number: C00001765DB81

Dear Mr. Stevenson,

As one of the nation's top self-performing Design-Build contractors, Cherry Hill Construction, Inc. (CHC), a Tutor Perini Company, is pleased to submit our Statement of Qualifications (SOQ) to the Virginia Department of Transportation (VDOT) for providing Design-Build (D-B) services for the Military Highway Continuous Flow Intersection Project. As requested, we are submitting one original paper version, one CD ROM containing the entire SOQ and ten abbreviated copies for this project. We have reviewed the Request for Qualifications (RFQ) documents dated 12/12/14, received the RFQ information package, attended the project information meeting on 12/18/14, and visited the project site.

D-B TEAM

Cherry Hill Construction, Inc. (CHC) will be the Lead Contractor with overall authority on the project. Our integrated project team will be co-located within sight of the project in our already established office located on Robin Hill Road.

CHC has selected Jacobs Engineering Group Inc., as our lead design firm to provide all engineering services for this project. CHC and Jacobs are experienced firms that have an established 12+ years working relationship on a variety of complex highway and bridge projects including D-B Contracts in this region. This familiarity and continuity along with our individual and joint firm experience will provide VDOT and the traveling public what is required to safely and successfully complete this challenging project.

3.2 LETTER OF SUBMITTAL

3.2.1 AUTHORIZED REPRESENTATIVES SIGNATURE

This submittal is signed in ink by an authorized representative of Cherry Hill Construction, Inc., A Tutor Perini Company, located at 8211 Washington Blvd., Jessup, MD 20794.

3.2.2 POINT OF CONTACT

The primary point of contact for CHC will be **Bernard P. Beauchemin, Vice President Estimating, Cherry Hill Construction, Inc., A Tutor Perini Company, 8211 Washington Blvd., Jessup, MD 20794, (t) 410.799.2382, (f) 410.799.5483, (e) bbeauchemin@chconstr.com**

3.2.3 PRINCIPAL OFFICER

The Principal Officer for CHC is **Ali Catik, President, Cherry Hill Construction, Inc., A Tutor Perini Company, 8211 Washington Blvd., Jessup, MD 20794 (t) 410.799.3577, (f) 410.799.5483, (e) acatik@perini.com.**

3.2.4 CORPORATE STRUCTURE, PERSON(S) FINANCIALLY RESPONSIBLE FOR THE CONTRACT

The Offeror is CHC, a C-Corporation incorporated in the State of Maryland, Federal Tax ID #52-0890004. CHC will be the signatory entity and have financial responsibility for the VDOT contract. As noted in the enclosed Surety Commitment letter, CHC exceeds the required bonding capacity. There are no liability limitations.



3.2.5 FULL LEGAL NAME OF LEAD CONTRACTOR & LEAD DESIGNER

Lead Contractor: *Cherry Hill Construction, Inc., a Tutor Perini Company*

Prime/general contractor responsible for overall construction and will serve as the legal entity who will execute the Contract with VDOT.

Lead Designer: *Jacobs Engineering Group Inc.*, Prime design consulting firm responsible for the overall design of this Project.

3.2.6 AFFILIATES AND SUBSIDIARIES

CHC is a wholly owned subsidiary of the Tutor Perini Corporation. CHC has listed all affiliated and/or subsidiary companies on Attachment 3.2.6 located in the Appendix.

3.2.7 DEBARMENT CERTIFICATIONS

CHC has executed Attachment 3.2.7(a) – Certification Regarding Debarment Form Primary Covered Transactions. All subcontractors identified in the Team’s organization chart have executed Attachment 3.2.7 (b) - Certification Regarding Debarment Form Lower Tier Covered Transactions. All debarment forms are located in the Appendix.

3.2.8 VDOT PREQUALIFICATION NUMBER AND STATUS

CHC’s prequalification status (No. C090) is Active and in good standing to bid on this Project as outlined in VDOT’s Rules Governing Prequalification Privileges. Evidence of CHC’s prequalification with VDOT and good standing with the Commonwealth’s State Corporation Commission is included in the Appendix.

3.2.9 LETTER OF SURETY/INSURANCE

CHC will provide performance and payment bonds based on the current estimated contract value referenced in Section 2.1 and these bonds

will cover the Project and any warranty periods. The bond will be underwritten by Travelers Casualty and Surety Company of America, Federal Insurance Company, Fidelity and Deposit Company of MD, and Liberty Mutual Insurance Company (as co-surety) for the full amount of the contract. The co-surety companies have an A.M. Best’s Rating of “A” or better, and each with a Financial Size Rating of “XV” or better (See surety letter in the Appendix).

3.2.10 SCC DPOR TABLE

Attachment 3.2.10, found in the Appendix, provides evidence and certifies that the CHC/Jacobs Team complies with the requirements set forth in Section 3.2.10 and subsections .1 through .4, where applicable and that all businesses and individuals listed are active and in good standing with the Commonwealth of Virginia and VDOT. Full size copies of DPOR licenses (Office(s), Key Personnel and Non-APELSCIDLA) and SCC registrations follow Attachment 3.2.10.

3.2.11 DBE COMMITMENT

CHC is committed to achieving the twelve percent (12%) DBE participation goal for the entire value of the contract.

We thank you for the opportunity to submit our SOQ and are confident that our team will provide VDOT with the highest quality project at the lowest possible cost.

Very truly yours,

CHERRY HILL CONSTRUCTION, INC.

Bernard P. Beauchemin

V.P. Estimating

Cherry Hill Construction, Inc., A Tutor Perini Company



Offeror's Team Structure

3.3



3.3 Offeror's Team Structure

INTRODUCTION

Cherry Hill Construction (CHC) has found by experience that the most efficient way to approach a Design-Build (D-B) project is to place an integrated D-B team co-located on site. For this project, we have assembled an integrated project team with extensive national and local experience in D-B and all aspects of this project. This project team will be co-located in our existing office located on Robin Hood Road, within sight of this project. CHC has been providing heavy construction services throughout VA, MD, and DC since 1966. We have constructed numerous successful highway projects of similar scope and complexity throughout the region. As a highly successful self-performing contractor, we have had great success in the implementation of D-B projects by delivering quality work, on time and within budget.

CHC is a wholly owned subsidiary of Tutor Perini Corporation (TPC) which is one of the country's top construction companies. TPC was founded in 1894 and is currently ranked No. 13 in the Top 400 Contractors by Engineering News-Record (ENR). The projects shown on the Work History forms represent our experience with similar type projects, including D-B projects with challenging traffic and budgetary constraints. CHC also safely completed these projects which all included aggressive schedule requirements. CHC brings the commitment, experience, management systems, and resources necessary to deliver the full value of D-B to this project.

CHC has assembled an integrated design-build team with unmatched experience in the design and construction of continuous flow intersections (CFI's). Our team includes: Jacobs Engineering Group Inc., Horrocks Engineers, Pennoni, and McPherson Consulting. Lead Designer Jacobs has been a local presence in Hampton Roads for more than 50 years and brings national D-B expertise. Horrocks Engineers is the nation's preeminent Continuous Flow Intersection design firm with seven CFI's designed, four of which were Design-Build, over the last 10 years. McPherson Consulting provides traffic operations and design expertise combined with unmatched local project experience. Pennoni has extensive utility coordination and design experience as well as a history of working well with the City of Norfolk and other local stakeholders. Companies are not the key to a successful project; it is the key personnel on the project team that make the difference. CHC will maintain this project team throughout the design and construction of this project.

3.3.1 KEY PERSONNEL

The Key Personnel Resume Forms for our six Key Personnel can be found in the Appendix of this document.

3.3.1.1 Design-Build Project Manager – **Mr. Dan Bell, P.E.** (CHC) has over 30 years of experience in heavy highway construction. He served as the D-B project manager on DDOT's 11th Street Bridges Corridor D-B Project. He has also held the role of construction manager on the Tappan Zee Bridge D-B Project, construction manager for the Woodrow Wilson Bascule Span Project and D-B project manager for the successful Richmond Airport Connector Road D-B in VA. For all of these referenced projects, Dan successfully led the public outreach and coordination efforts.

3.3.1.2 Quality Assurance Manager (QAM) – **Mr. Tom Druhot, P.E.** (Quinn) is a registered professional engineer in Virginia with 29 years of experience in the practice of engineering with specific emphasis on transportation systems, structures, utilities and construction methods. Tom is intimately familiar with VDOT's requirements stemming from his 11 year tenure culminating as VDOT's Area Construction Engineer in Hampton Roads. Tom has experience in all aspects of the quality process and will manage the independent quality assurance team.

3.3.1.3 Design Manager – **Mr. Mitch Johnson, P.E.** (Jacobs) has 26 years of experience in highway design including numerous interchange and arterial projects. He was the design engineer for VDOT's first solicited D-B project, the APM Terminals Interchange on Route 164 in Portsmouth. VDOT's APD division has heralded the APM project as a model D-B that proceeded from survey to construction in only nine months. He was design manager for the Pacific Boulevard D-B widening project in Sterling, VA as well as for the Central Region Rapid Deployment ITS Fiber project along I-95 and I-85 in Petersburg. He has developed a close relationship with CHC and project stakeholders including the City of Norfolk as the designer of record on the I-564 Intermodal Connector D-B in Norfolk. He has successfully worked with this project's identified staff from Pennoni, McPherson Consultants, Schnabel Engineering, H&B Surveying, KDR Real Estate, and InfraMap. These longstanding relationships mean communication will be open and quick with a high level of trust between design partners through the schedule-critical design and acquisition phase.

3.3.1.4 Construction Manager – **Mr. Jerry Whitlock, P.E.** (CHC) served as the construction manager for the Mark Center Short and Mid-Interim Improvements D-B Project in Northern Virginia where he was responsible

3.3 Offeror's Team Structure

for management of all aspects of the construction operation, including oversight of the Independent QC program and supervising a staff of engineers, superintendents, foreman, operators, laborers and other specialty craft. He managed all subcontractors and vendors. He has just completed a successful \$92M D-B highway project for the Federal government and is immediately available for this project. Prior to becoming a construction manager, he served in the role of project engineer for 10 projects, three of which were D-B Contracts. This required the management of a staff of field and office engineers, procurement of materials, coordination and scheduling efforts, coordination with subcontractors and 3rd party agencies including utility owners and railroads, budgeting, submittals, generation of monthly invoices, tracking quantities/cost, constructability reviews and assisting in the resolution of construction and technical issues, estimation and generation of proposals. Mr. Whitlock, Lieutenant Commander, is currently on military deployment overseas. Upon Jerry's June 2015 return, he will renew his Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and VDOT Erosion and Sediment Control Contractor Certification (ESCCC) prior to construction.

3.3.1.5 Traffic Operations Designer and Manager – **Mr. Alvin Powell, P.E., PTOE** (Jacobs) is a senior traffic engineer with experience at the Federal, State and Local Government levels. His expertise includes traffic operations, traffic safety, design and research. Mr. Powell is experienced in traffic signal warrant analysis, traffic signal design, traffic signal systemization, traffic signal timing, traffic signal optimization, roadway signing, pavement marking, maintenance of traffic alternative analysis, temporary traffic control design, traffic impact studies, intersection and corridor safety and operations analysis, neighborhood traffic calming, access management and operations and safety research. Horrock's CFI Specialists Ron Mortimer, TE and Brian Atkinson, PE will work alongside Karen McPherson and Alvin in developing the optimal configuration for the continuous flow intersection.

3.3.1.6 Lead Utility Coordination Manager – **Mr. Mike Baker** (Pennoni) has over 26 years of experience in utility design and coordination. He has managed the design and construction inspection of numerous large scale utility construction projects, including: the placement of various pre-cast manholes, re-building of existing occupied vaults and manholes, placement of fiberglass structures, PVC, steel bridge duct, removal of existing manholes, and enlargement of central office buildings. He has had great success working with Virginia utility providers, including Verizon Virginia and Dominion Virginia Power.

CRITICAL INDUSTRY EXPERTISE

Alvin Powell will lead the Traffic Team consisting of both local traffic operations and design expertise and national CFI design expertise. **Karen McPherson's** 25 years of traffic operations and design experience includes signal design, signal system feasibility studies, and signal timings. She has worked on numerous complex traffic projects in Norfolk including HRSD - South Trunk Sewer Force Main, Church Street, Boush Street, Hampton Boulevard Grade Separation, and recently the I-564 Intermodal Connector. **Brian Atkinson** specializes in CFI design and alternative delivery methods. Most recently, he has worked on the I-15 CORE Program Management Team on the University Parkway and Sandhill Road CFI project. He also worked on the layout of the Bangerter Highway and 6200 South CFI in Salt Lake County, Utah. Additionally, Brian served as the QA/QC Manager on the design of the Eagle Road and SH-44 CFI in Ada County, Idaho. **Ron Mortimer** is particularly gifted in working with the public and conveying complex and innovative transportation and land use scenarios in a clear and concise manner. Ron previously served on the University Parkway and Sandhill Road CFI and Bangerter Highway and 6200 South CFI project teams. He also was part of a CFI value engineering group in Colorado. Ron is currently serving as the Innovative Intersection Design Specialist for the design of the Eagle Road and SH-44 CFI in Ada County, Idaho. Ron will provide invaluable knowledge to the Traffic Team with his extensive years of CFI design and project execution. **Heather Ham** will coordinate public outreach and ensure the project is not only supported but understandable to the public from an operations standpoint. With this Traffic **A Team**, VDOT will receive:

1. Unmatched CFI design expertise with Brian and Ron's knowledge and experience
2. MOT plan with Karen's local knowledge and Brian and Ron's insight of successful CFI MOT implementation
3. A project that keeps a high priority on public safety and minimizes disruption to traffic during all phases of construction, with Heather's expertise in public outreach.

3.3.2 ORGANIZATIONAL CHART

We will utilize a proven organization that ensures continuous communication and cooperation within the project team. Many of our project staff have worked together in the past on similar projects. Moreover, all work will be

3.3 Offeror's Team Structure

done in our Norfolk office within sight of the project thereby enabling our team to hit the ground running with no learning curve. Our organization chart is at the end of this section.

The chain of command and primary reporting relationships are graphically depicted on the chart by solid lines. Secondary lines of communication, shown by dashed lines, reflect key areas of the project where lines of communication remain open and disciplines coordinate design and construction. This organizational structure follows an important underlying principle of resolving project issues at the lowest, most direct level in order to facilitate the quickest resolution with minimal disruption to the project. Should issue resolution not be immediately possible at that particular level, the issue then follows the chain of command up to the next level, and so on, until the issue is resolved. From the beginning stages of project development and further as the project evolves, this chain of command is established and clearly communicated to all involved. As shown in the Organization Chart, the major participants, their roles, how they interact, and how they fit into the overall team are further described below:

Design-Build Project Manager. As CHC's overall representative on the project, this is our team's single point of contact with VDOT for the entire Project. The D-B Project Manager has the authority, skills, and leadership abilities to manage and direct all aspects of the work. It is primarily through this link that contractual issues are communicated and public involvement is coordinated. It also establishes the position to which all major disciplines report, including the Design Manager, the Construction Manager, and the Public Outreach Coordinator. At the initiation of design, the D-B Project Manager will maintain the current working cost (CWC). As design proceeds, the CWC will be continuously updated by the Design and Construction Managers. External requests for additions to scope will be immediately evaluated for impacts to costs and schedule. This enables us to immediately respond to any requested changes in scope. This iterative, cooperative process is VDOT's best assurance to help keep the project within budget.

Quality Assurance Manager (QAM). The QAM will oversee all construction-related QA functions and personnel. The QAM and his staff have extensive experience developing, implementing, and monitoring quality assurance programs. The QA function will remain separate and distinct from all other design and construction activities and the QAM will report exclusively to the D-B Project Manager.

Design Manager. This position establishes a single point of contact for all design-related issues. Reporting directly to the D-B Project Manager, the Design Manager has overall responsibility for managing the design activities, establishing and overseeing the design QA/QC program, maintaining the design schedule, managing the design subcontractors and consultants, and coordinating design issues with the reviewing agencies. The Design Manager is responsible for integrating design disciplines with construction, permitting, ROW, utility, and QA/QC elements.

Construction Manager. This position will be the single point of contact for all construction related issues. He will report to the D-B Project Manager. In addition, the Construction Manager will remain continually involved in the design, permitting, utility, and construction disciplines. He will ensure that all elements of the work are inspected in accordance with the QA/QC Plan and will document to VDOT that the project was constructed in compliance with all applicable standards. Reporting directly up to the Construction Manager will be the Project Engineer and the Independent QC Team. The Construction Manager and Design Manager will work alongside each other and report to the D-B Project Manager

Design QA Manager will ensure the design QA process is being followed.

Design QC Manager will gather all disciplines' work first cuts, QC it and then pass it off to QA.

These positions will be the single point of contact for all design QA and QC related issues. They will report to the Design Manager. They will have responsibility for reviewing all elements of the design to ensure that the appropriate design standards are being met. In addition, the Design QA Manager and Design QC Manager will remain continually involved in the permitting, utility, and construction disciplines.

Traffic Operations Designer and Manager. This position will be the lead of the Traffic Team. Alvin's technical expertise with traffic control system design and coordination, including system integration will be combined with national CFI experts from Horrocks Engineers along with the un-matched local expertise of Karen McPherson. This team will be instrumental in the design and construction process to keep the project successfully moving forward. The Traffic Operations Designer and Manager will report directly to the Design Manager.

Public Outreach Coordinator. This position will be responsible for ensuring the project status and operations are effectively delivered to the project stakeholders and traveling public in a timely manner. This coordinator will have the day-to-day responsibility of interfacing with the D-B Project Manager, Design Manager, Construction Manager

3.3 Offeror's Team Structure

and partner with VDOT to effectively deliver updates and ensure that the communication between all components of the project is being effectively delivered to the public. Having been a former public official responsible for managing transportation projects on congested urban roadways, our coordinator understands the importance of timely and accurate distribution of information to the traveling public as well as police, fire and emergency personnel. She has dealt with the public from the traffic and acquisition perspectives, ensuring that detours and route changes are communicated to the public in a timely manner and dealing with hundreds of property owners, both residential and commercial, to ensure that they are accommodated with entrance changes and property acquisition. This owners experience will prove invaluable to the team and VDOT.

Lead Utility Coordination Manager. This position establishes a single point to contact for all permitting and utility-related issues. The Utility Manager will be responsible for timely action by the utility companies. The Utility Manager will have day-to-day responsibility for managing the entire permitting and utility relocation process and will report directly to the D-B Project Manager. In addition, the Utility Manager will ensure that these processes are integrated with the design, construction, ROW, and QA/QC disciplines.

Right of Way Manager. This position will be responsible for early identification of temporary and permanent easements and acquisitions to ensure this process will not delay the schedule. He will report directly to the Design Manager and work closely with the design team. Through this process, the team will provide to VDOT a complete inventory of easement and acquisition requirements.

Safety Manager. The Safety Manager will assure the overall safety and health of the public and those working on the Project. He will have the explicit authority to stop any work not complying with applicable safety standards. He will coordinate with the construction personnel on a daily basis, conduct project specific training programs, and integrate with the design, permitting, and utility disciplines to avoid potential hazards. Similar to QA, the safety manager reports outside of the construction operations chain of command and directly to the D-B Project Manager.

Subconsultants and Specialty Subcontractors

Given the resources and performance capabilities available from both CHC and Jacobs, we anticipate a significant amount of the work will be self-performed by these firms. We have included specialty subconsultants including:

Quinn Consulting (DBE-certified WBE/DBE)	Independent Quality Assurance
Pennoni	Public Outreach and Utility Coordination
McPherson Consulting (SWaM)	Traffic Engineering
Horrocks	Continuous Flow Intersection Expertise
GET Solutions (SWaM)	Independent Construction Quality Control
Schnabel	Geotechnical Engineering
KDR Real Estate	ROW Acquisition and Appraisal
InfraMap	Subsurface Utility Engineering and Mapping
H&B Surveying and Mapping, LLC	Survey

DBE participation and Small and Veteran-Owned Business contracting plan requirements will play a major role in the final determination of subcontractors and subconsultants awarded. Potential DBE/ SWaM participation categories may include asphalt paving, concrete flatwork, guardrails, signage, lighting, signals, painting, pavement markings and landscaping. Given CHC's experience in the region, we are fortunate to have developed strong relationships with the subcontracting and supplier community and will utilize these relationships to secure the most competitive subcontracting arrangements possible.

Independent Testing Laboratories

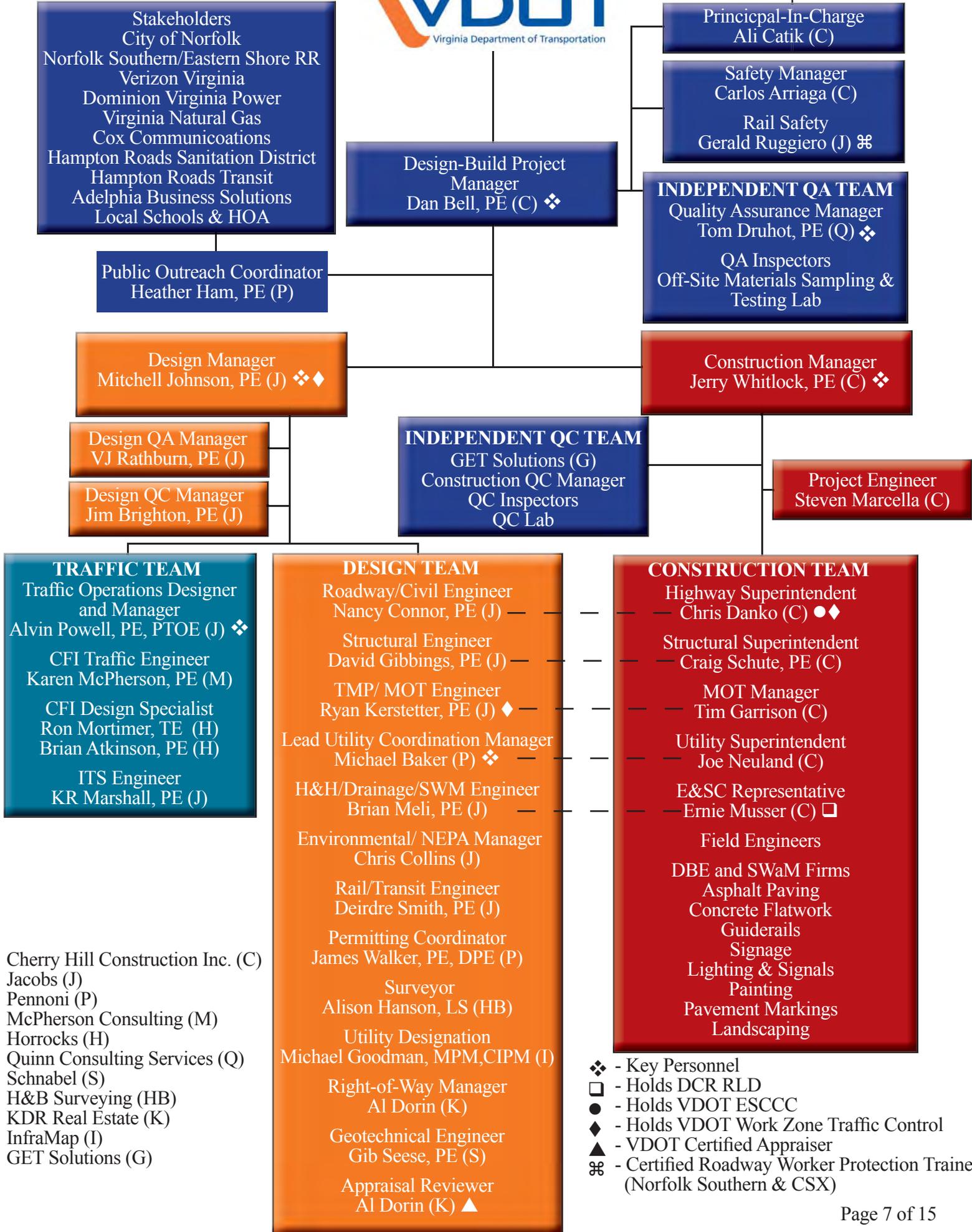
Quinn and GET Solutions will provide CHC with independent QA and QC laboratory testing services.

As part of all planning and scheduling procedures, the D-B Team will incorporate the VDOT Minimum QC and QA Requirements for D-B and Public-Private Transportation Act (PPTA) Projects (January 2012, or latest edition) (VDOT QA/QC Manual). Special emphasis will focus on meeting or exceeding the requirements outlined in Section 105 of the VDOT QC/QA Manual. The QA plan will clearly incorporate the elements of Identification, Characteristics, and Acceptance Criteria for specific activities, and maximum use of checklists, hold points, and witness points will also be incorporated. The QA Team will perform independent monitoring and tests to audit and evaluate the QC process. These activities and tests will be performed in accordance with the approved QA/QC plan, and will incorporate the guidelines of the VDOT QA/QC manual. Deficient or failing reports will be immediately addressed by the D-B Team, and the activity will be re-evaluated for compliance prior to resuming work.

Military Highway Continuous Flow Intersection

Norfolk, VA

Project Organization Chart



- Cherry Hill Construction Inc. (C)
- Jacobs (J)
- Pennoni (P)
- McPherson Consulting (M)
- Horrocks (H)
- Quinn Consulting Services (Q)
- Schnabel (S)
- H&B Surveying (HB)
- KDR Real Estate (K)
- InfraMap (I)
- GET Solutions (G)

- ❖ - Key Personnel
- - Holds DCR RLD
- - Holds VDOT ESCCC
- ◆ - Holds VDOT Work Zone Traffic Control
- ▲ - VDOT Certified Appraiser
- ⌘ - Certified Roadway Worker Protection Trainer (Norfolk Southern & CSX)



Experience of Offeror's Team

3.4

3.4 Experience of the Offeror's Team

INTRODUCTION

The **Cherry Hill Construction D-B Team** is a local team with national experience. Cherry Hill Construction, Inc. (CHC) brings decades of successful heavy highway project delivery in Virginia. CHC, a wholly owned subsidiary of the Tutor Perini Corporation is one of the largest highway constructors in the Mid-Atlantic having successfully delivered \$190 million in D-B Projects for FHWA-EFLHD in the past six years within budget and on schedule. Through formal partnership with EFLHD, VDOT, Ft. Belvoir, USACE, and Fairfax County DPW, CHC recently completed the award winning \$112.5 million Fairfax County Parkway Design-Build Project Phases I, II and IV. CHC and Jacobs are teamed together on the \$92 million I-564 Intermodal Connector Design-Build project in Norfolk. Additionally, CHC and Jacobs have worked together for the past 12 years on projects including the Fairfax County Parkway, White House Road Bridge Project in Maryland, and the Light Rail Double Tracking Project in Baltimore.

CHC brings the experience, commitment, management systems, and resources required to safely deliver this complex D-B project in a manner that meets or exceeds the expectations of all stakeholders. The management control systems that CHC will employ on this project have been refined through lessons learned in the successful delivery of complex civil projects over the course of the last several decades. Our corporate integrity, financial strength, and outstanding record of performance on challenging projects make us the right team to ensure the successful delivery of this project.

For this project, we have assembled an integrated project team with extensive national and local experience in D-B and all aspects of this project. This project team will be co-located in our existing office located on Robin Hood Road, within sight of this project.

Firm	Role
Cherry Hill Construction, Inc.	Lead Contractor
Jacobs Engineering Group Inc.	Lead Designer
Quinn Consulting (DBE-certified WBE/DBE)	Quality Assurance
Pennoni	Public Outreach and Utility Coordination
McPherson Consulting (SWaM)	Traffic Engineering
Horrocks Engineers	Continuous Flow Intersection Expertise
GET Solutions (SWaM)	Independent Construction Quality Control
Schnabel	Geotechnical Engineering
KDR Real Estate	ROW Acquisition and Appraisal
InfraMap	Subsurface Utility Engineering and Mapping
H&B Surveying and Mapping, LLC	Survey

RELEVANT PROJECT EXPERIENCE

Jacobs has had a local presence in the Hampton Roads area for more than 50 years. Jacobs consistently ranks in the top 5 engineering consulting firms in the country with over 500 employees in Virginia and a local office in Virginia Beach. Projects include FHWA I-564 Intermodal Connector D-B, Chesapeake Bay Bridge-Tunnel's (CBBT) engineer and construction manager since the 1950's including over \$2B in construction, maintenance and program manager for expansion, \$152M BRAC Infrastructure Improvements at Fort Belvoir, \$1.3B Ohio River Bridges D-B, \$478M MD 200 Intercounty Connector D-B in MD, Fairfax County Parkway and \$ 5.5B MWAA Dulles Metrorail Extension Program Management.

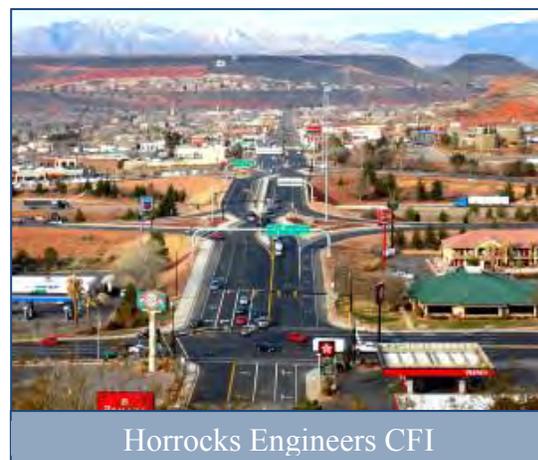
CHC and Jacobs have built a long-term working relationship on both conventional design-bid-build projects as well as D-B projects demonstrating that we work well together as a team, which is critical to successfully deliver this project for VDOT. The individual familiarity within our core Team allows streamlined project coordination and communication and we can perform the entire scope of work within our group. This leads to greater efficiency and control of quality during design execution.

The CHC and Jacobs Team include experts from across the industry to assist in the successful delivery of the Military Highway CFI including the following exclusive design firms:

3.4 Experience of the Offeror's Team

Horrocks Engineers brings expertise in the design of continuous flow intersections. They are one of the country's pre-eminent CFI design firms, having designed seven Continuous Flow Intersections over the past 10 years. Four of those CFI's were D-B projects.

Horrocks Engineers has worked with various DOTs to design, review, and perform traffic signal timing for CFIs. Horrocks was part of the Program Management team for the I-15 CORE project in Utah. This project reconstructed and widened 24 miles of I-15 for the Utah Department of Transportation (UDOT). The \$1.7 billion project was constructed to increase capacity, improve safety, work with local government transportation plans, and improve regional transportation needs. The 24 miles of mainline highway included 22 interchanges and 58 bridges, and required close coordination with two MPOs, Federal Highway Administration, Federal Transit Administration, Utah Transit Authority, numerous municipalities, and two counties. One of the critical intersections included in this project was a CFI at University Parkway and Sandhill Road in Provo. Horrocks performed the design concepts, design review, and signal timing for this CFI. They will be an unmatched asset for CFI design lessons learned in analysis, design and construction.



Horrocks Engineers CFI

In addition to signal timing on the University Parkway CFI, Horrocks' Signal Technicians have performed signal timing on the 3500 South Bangerter Highway CFI in West Valley City, and the SR-201 Bangerter Highway CFI in Salt Lake City. Horrocks also created a signal design layout for the CFI at Bangerter Highway and 6200 South in Salt Lake County. Horrocks is currently designing a CFI at Eagle Road and SH-44 in Ada County, Idaho, for the Idaho Transportation Department. The current intersection has been designated a high accident location and serves a high volume of left-turning vehicles. The CFI will alleviate congestion, improve traffic operations, and increase safety factors for all users of the intersection considering traffic trend expected 20 years post-construction.

McPherson Consulting is a certified Small, Women-owned, and Minority-owned Business (SWaM) drawing on over 25 years of hands-on traffic engineering, transportation planning, project management, analysis, and delivery experience. The firm provides a broad range of traffic engineering and transportation planning services including signal timing, signal design, traffic analysis, comprehensive signal system design, transportation planning studies, and interchange justification reports. McPherson Consulting is proud to have worked with almost every municipality in the eastern half of Virginia and many others throughout the state. Their signal timing experience extends throughout the United States. Karen McPherson has an excellent working relationship with the City of Norfolk and fully understands the signal systems in this very corridor. McPherson has designed and worked on the signal systems in this corridor for years, and is also familiar with the local projects impacting this project. Karen and Mitch, our Team's Design Manager, have worked together on numerous projects over the last five years.

Pennoni is a firm with experienced design professionals dedicated to providing quality professional services in the specialized disciplines of civil engineering, utility engineering, utility relocation management, environmental engineering, water and wastewater engineering, land surveying, construction administration, landscape architecture, land planning, transportation planning, and geotechnical engineering. Pennoni is currently serving as Strategic Advisor on the CBBT Expansion project and is working closely with Jacobs who is the design manager for the project. Pennoni's Heather Ham has been a transportation project manager in both the public and private sectors of Hampton Roads for 13 years. Currently, Pennoni services multiple on call contracts for Hampton Roads Municipalities. Pennoni's experience with municipalities provides a depth of experience in public outreach from individual property owner meetings to Public Hearings.

Quinn Consulting Services Inc. (QCS) is a 100% woman owned Virginia DBE-certified WBE/DBE firm that specializes in Construction Inspection, Construction Management, QA/QC Inspection, Engineering Support, and NACE Certified Coating Inspection services. Their highly trained team, and intense commitment has supported over 50+ VDOT Regional, District-wide and project specific contracts in the past 15 years. As part of their QA/QC D-B Services, Quinn will develop a project specific QA/QC Plan for inclusion in the D-B submission package and fully implement this QA/QC Plan at project execution.

3.4 Experience of the Offeror's Team

Quinn has supported clients from all perspectives on large and small D-B projects. They have worked as owner QA representatives, contractor QA and QC inspectors, and consultant engineer quality assurance managers where they 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. Quinn is also working with CHC and Jacobs performing QA services on the I-564 Intermodal Connector D-B project in Norfolk.

GET Solutions, Inc. 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 for state/municipal work. In addition, GET Solutions is certified to perform Special Inspections testing services in accordance with the requirements of ASTM E-329. GET Solutions has become experts in the industry on construction quality control. GET Solutions is currently working with CHC and Jacobs on the I-564 Intermodal Connector D-B project in Norfolk.

Schnabel brings nearly 60 years of experience and expertise to evaluating and characterizing subsurface conditions, as well as defining the design parameters necessary to accommodate those conditions. Thus they help mitigate one of the greatest risks associated with construction—those associated with unforeseen geotechnical issues. With a local office in Newport News, they have contributed to the success of many projects in the Norfolk area. They provide expert guidance from project initiation through construction. In the planning stage, they advise how subsurface conditions will impact the project's layout, design, and cost. During the design phase, they support efforts relating to foundations and other structures at and below ground level. Once in construction, they are often called upon to help resolve construction issues resulting from variable ground conditions and construction activities. Schnabel has committed Principal Engineer Gib Seese, with decades of local Tidewater geotechnical engineering experience, as the geotechnical engineer of record for this project. Jacobs and Schnabel worked together on the MD 200 InterCounty Connector D-B project in MD as well as the WMATA's Blue Line Extension D-B and New York Avenue Infill Station D-B projects.

KDR Real Estate Services provides competent, high quality, cost effective real property acquisition services through honest and fair dealings with their clients and those from whom they acquire real property rights in a manner that is optimally beneficial to all concerned. They have personnel trained in maintaining RUMS. KDR has acquired property rights through the eminent domain process from over 3,400 properties on more than 100 individual projects, with more than 30 of these projects involving state and/or Federal funding. Seven of these projects were D-B projects including: I-81 Lane Addition, Middle Ground Boulevard, Fort Lee Entrance, Virginia Capital Trail – New Market and Varina Phases, Virginia Capital Trail, Route 35/Nottoway Bridge and the Fall Hill Avenue and Mary Washington Boulevard projects. KDR has extensive experience working both in this region and with members of this D-B Team including several projects with Design Manager Mitch Johnson.

InfraMap is a leading provider of Subsurface Utility Engineering (SUE) and Utility Infrastructure Mapping services. They collect utility infrastructure data in the field using sophisticated geophysical techniques and instrumentation (including Ground Penetrating Radar, GPR), with automated data collection gear and state of the art survey equipment. They collect and present this data to aid our clients in reducing the design and construction cost of major infrastructure projects. They will interact daily with our D-B Team during the course of this project. InfraMap is also working with CHC and Jacobs on the I-564 Intermodal Connector D-B project in Norfolk.

H&B Surveying and Mapping, LLC provides professional land surveying services to clients across Virginia. Responsive service and a dedication to accuracy and professionalism are the hallmarks of the firm. H&B has the expertise and ability to provide all general surveying services to include: global positioning system control/location surveys, property boundary determination and research; deed research and record analysis, topographic surveys; site as-built surveys, route surveys, construction control and layout, title certification, aerial survey control and site plan preparation. H&B D-B experience includes: Virginia Capital Bike Trail, Fall Hill Avenue and Mary Washington Boulevard Extension, Route 29 Solutions and I-64 Widening and Route 623 Interchange Improvements.



Project Risks

3.5

3.5 Project Risks

INTRODUCTION

Risk is inherent in any construction project regardless of the contracting method. As part of our previous D-B experience, we have been able to identify common risks involved with projects and have developed our list to identify risk areas particular to the Military Highway Continuous Flow Intersection project. We have developed strategies to mitigate these risks so they do not impact the project. The key to managing risk is early identification. Based on our review of the project documents including VDOT's detailed Value Engineering study dated 6/24-25/2014, site visits, and a detailed analysis of the project's tasks and issues, we have identified the following three risks to be the most critical to the successful completion of this project:

1. Traffic Operations
2. Public Outreach
3. Uncontrolled Third Party Impacts

Project Risk 1: Traffic Operations

Why Traffic Operations Risk is Critical

This design team has designed and constructed numerous major roadways throughout the City of Norfolk and elsewhere in VA and understands the importance of public involvement, and balancing demanding construction schedules versus commuter demands along key corridors. Understanding all types of users within the study area will be taken into account when determining the type and duration of lane closures and detours. Traffic impacts that will need to be considered during the project will vary throughout the stages of the project (alignment study, utility relocations, phased roadway constructions, etc.).

Proper Maintenance of Traffic (MOT) is critical to delivering a successful project to the traveling public. Adequate planning and strategizing are necessary to strike the appropriate balance between constructing the project in a timely manner, provide safe work zones, and safely moving traffic through the project limits. Various risks associated with MOT have been identified in order to begin preparing to mitigate or minimize each risk.

Project Impact - Traffic Congestion and Delay

- The City of Norfolk has requested that the Contractor maintain four lanes of traffic at all times during construction in order to minimize inconvenience to the public. The D-B team will work with VDOT and the City of Norfolk through the design process to optimize the design to allow for four lanes of traffic during all peak periods.

Mitigation Strategies

- Establish peak hours where closures should be limited to maximize capacity when it is needed most. These closures may be tailored by time of day and specific directions of critical lanes.
- Utilize intelligent transportation systems (ITS) to measure real-time travel times or identify major incidents that have occurred within the surrounding network that would cause diversion such that the Contractor can be notified when lane closures should be removed to mitigate congestion.
- Provide and plan for adequate detours when full closures are necessary.
- Analyze existing traffic patterns to maximize available capacity and assess various phasing scenarios:
 - Capacity is created by both amount of pavement or amount of green time at signalized intersection. Determine the best approach that will minimize congestion by evaluating more restrictive closures or potentially eliminate specific phases at intersections for short durations versus less restrictive closures and construction phasing that may extend over longer durations.
 - Identify potential bottlenecks in the proposed MOT phasing and actively seek solutions that will minimize disruption to daily traffic flow.
- Coordinate a public involvement strategy to notify the traveling public and adjacent property owners of upcoming closures and lane shifts.

3.5 Project Risks

- Identify a goal for the percentage of traffic needed to divert to alternate routes.
- Depending on the goal identified, determine the appropriate mediums and messages necessary to achieve the goal established for each closure.
- Coordination with adjacent businesses and residents regarding access changes throughout construction.
- Create a core group of stakeholders that meet on a regular basis throughout the project to discuss upcoming and past lanes closures to identify successes and shortcomings to improve upon in future endeavors. This open communication will allow all stakeholders to understand why a certain benefit to them may be a detriment to another stakeholder and thus foster a give and take environment.
- Develop signal timing plans throughout the corridor and along adjacent corridors that could be used to clear congestion or re-route traffic demands in the event of an incident or special event.

Project Impact - Safety

Mitigation Strategies

- Coordination with key stakeholders, law enforcement, and emergency responders.
- Establishment of a traffic management plan that identifies the procedures that will be implemented and followed on the project to provide for the safe and efficient passage of traffic.
- Development of an incident management plan that identifies protocols for notifying emergency services, traffic operations personnel, etc. and defines roles and responsibilities in the event of an incident. These plans would be tailored by system since interstate impacts have different protocols as opposed to the local streets.
- Regular inspection of traffic control.
- Advanced Warning signs and VMS boards to notify of traffic changes.
- Railroad crossing coordination and safety training.
- Adjustment of construction speed limits.

Project Impact - Change over to signal system and CFI configuration

Mitigation Strategies

- Educate public regarding CFI operation and expectations.
- Thorough inspection of signal equipment and other traffic control devices including all signing and lane markings prior to final conversion to ensure a smooth transition.
- Educate City operation staff of operations and equipment coding to ensure smooth transition and address citizen concerns, both vehicular and bicycle and pedestrian accommodation.

VDOT's Role

Provide information on previous stakeholder concerns and operational restrictions. Assist in facilitating cooperation between various operating agencies for coordination and previously established working groups to collaborate on response to unplanned events, emergency management, or after hour operations. Provide input of past experience of the traffic operations in the corridor.

3.5 Project Risks

Project Risk 2: Public Outreach

Why Public Outreach is Critical

As every public entity knows, the success of a project is measured just as much by the public perception as it is by the technical merits of the project. The Military Highway Continuous Flow Intersection is the first CFI in Virginia; therefore, public consensus for the project is a critical component of the project's success. In order to accept the project, the public must first understand the project. The Virginia Department of Transportation (VDOT) has done a good job of introducing the concept of a continuous flow intersection to the public. Going forward, it will be incumbent upon the successful D-B team to ensure that the public stays informed as the project progresses.

There are a number of stakeholders, besides the general public, who will utilize this corridor throughout construction and will need to be continuously updated on any changes in the existing conditions. Some of these stakeholders include Hampton Roads Transit, City of Norfolk Public Works, Public Utilities, Police, Fire and Rescue departments and City of Norfolk Public Schools. The D-B team will provide an early communication plan to stay in front of traffic pattern changes and to ensure the public has ample notice so not to cause potential safety hazards for the public and those constructing the improvements.

Project Impacts

- Project impacts may include public rejection, negative press, lack of stakeholder and third-party participation/coordination, and challenging work zone conditions.

Mitigation Strategies

- Our proposed mitigation includes assembling a team thoroughly experienced in CFI MOT and public involvement in Virginia. The D-B Team has designers who have proven and extensive experience developing Transportation Management Plans for CFIs. The team also has Heather Ham, who is an established public involvement leader for VDOT transportation improvement projects in the Hampton Roads area. Having worked for the City of Virginia Beach as a Senior Project Manager and the Transportation Program Manager for nine years, Ms. Ham brings an owner's perspective to the D-B team. In her time at the City of Virginia Beach, she was involved in over 100 public meetings for transportation projects. These meetings ranged from one-on-one meetings with individual property owners to formal design public hearings. Her understanding of the owner's expectations will allow the D-B team to anticipate VDOT's needs and continually be working to resolve public outreach issues.

A successful project also takes a proactive Public Outreach program consisting of:

- A project website and 800 number to update the public on progress, next steps, and MOT
- Mail and handout informational flyers
- Regular meetings with City of Norfolk Public Works, Public Utilities, Police, Fire and Rescue departments, HRT, Norfolk Public Schools, and other key stakeholders to discuss upcoming phases of the MOT
- Community meetings with stakeholders, including trucking supervisors to discuss MOT and final configuration concerns, as well as the general public to educate them on the design/construction phasing
- Educational videos on the project website and/or at meetings to demonstrate CFI configuration and progress
- VMS boards to inform motorists of upcoming changes in traffic patterns
- Press releases announcing conditions and progress
- Social media sites to reach additional stakeholders and offer feedback
- Local TV and/or radio ads

VDOT's Role

Assist in determining which tools are best utilized to reach the broadest cross section of impacted stakeholders, assist/review in developing materials, and assist in coordinating with stakeholders.

3.5 Project Risks

Project Risk 3: Uncontrolled Impacts by Third Parties

Why Uncontrolled Impacts by Third Parties (Utilities & Right of Way) is Critical

Utilities Risk Identification: As detailed in the RFP, the location of the existing and planned utilities within the project corridor will require relocation and/or design mitigation to minimize disruptions to facilities and utility customers. The major utilities can be characterized as either wet or dry. Due to these relocations, and the impacts of the roadway design, there will be significant right of way impacts to both residential and commercial properties, including the Hilton Hotel, as well as Norfolk Southern Railroad and Eastern Shore Railroad.

Dry Utilities	Wet Utilities
Dominion Power of Virginia	City of Norfolk Water
Virginia Natural Gas	City of Norfolk Sewer
Verizon Virginia	Hampton Roads Sanitation District
Cox Communications	
Adelphia Business Solutions	

The impacted utilities are woven throughout the projects limits. The most significant impacts will be the gravity sanitary sewer facilitates and the concrete utility duct banks. The gravity sanitary sewer, owned by the City of Norfolk, is primarily located along the northern side of the Military Highway corridor. The sewer facilities are located within the roadway footprint in some areas but primarily outside the pavement and under the proposed sidewalk. There are a few perpendicular crossings of the corridor which will be addressed in design. The utility duct banks serve both telecommunications and electrical facilities and are primarily located on the southern side of the corridor with some perpendicular crossings.

The remaining facilities consist of City of Norfolk Water and Virginia Natural Gas distribution mains located along both the north and south side of the corridor; Verizon Virginia and Adelphia Business Solutions telecommunication facilities located primarily on the southern side of the corridor with multiple perpendicular crossings; and both overhead and underground Dominion Power Facilities located both parallel and perpendicular to the corridor.

Why This Risk Is Critical: In order to provide an accurate utility relocation/mitigation design, utilities impacted by the project need to be identified early in the process. The utilities along this corridor serve a large commercial area of the City of Norfolk which includes businesses, including the Hilton Hotel, a public school facility, residential properties, a medical complex and access to the Norfolk International Airport. Additionally, the multiple underground communications cables in the area are high speed and long distance fiber optic carriers which have a high degree of risk associated with service disruptions to their commercial customers. The utility facilities along the project service thousands of residential and business/commercial customers.

Project Impacts

The risks identified above could negatively impact schedule, costs and cause major utility service disruptions to both commercial and residential consumers adjacent to the project corridor. Any disruption to the underground long distance fiber optic lines could create serious service disruptions and subsequent costs associated with same. Damages to the large wet utility structures could have serious effects for thousands of municipal customers served by the facilities and delay in property owner relocation could delay construction due to insufficient property access.

Mitigation Strategies

The Design-Build Team will assign a seasoned and dedicated team to utility coordination and relocation design. Upon notice of award, the utility team will schedule meetings with all impacted wet and dry utilities to discuss the project requirements, facility impacts and schedule. Early coordination will allow for effective coordination with the utility owners for relocation and best option risk management strategies. Long lead times are often required for service outages to both large electric cables and long distance fiber optic circuits to accomplish

3.5 Project Risks

minimal disruption to their business and large commercial customers. Extensive right of way research will also be required to determine if prior rights, franchise and/or private agreements impact the responsibility for costs of the relocation of the utilities.

The D-B team will include all of the utility stakeholders in the over-the shoulder (OTS) design review meetings in order to provide a cooperative and iterative design process. The early involvement of the utility companies during design will help provide the most efficient utility and project design.

CHC and Jacobs have been working closely with a number of these wet and dry utilities on the I-564 Norfolk Naval Base access project. In addition, our team's existing relationships with the City of Norfolk, Verizon and Dominion Power will allow for a streamlined utility coordination, design and review process and will therefore mitigate potential risks to the project and VDOT. In particular, Pennoni is one of three Verizon EOC (Engineer of Choice) consultants for telecommunication and system design for aerial and underground relocation projects in the United States. Similarly, Pennoni is working with Dominion Power of Virginia on a major reliability initiative that involves the undergrounding of Dominion's aerial distribution systems in the Hampton Roads Region. Our team's Heather Ham, PE has worked extensively for over 10 years with all of these utility owners affected by this project as a facility owner with the City of Virginia Beach.

VDOT and Other Agencies' Role

Provide any information, maps, base data gathered relating to location, ownership and nature of existing utilities identified in the project corridor. Coordinate and /or host joint utility impact and relocation efforts by scheduling regular meetings for all involved utilities and posting proposed schedules and responsible contacts for each utility.

ROW Risk Identification: Third party entities, over which the D-B's team has limited control, are those from whom actions are required to clear the needed highway and include the following:

- Landowners from whom property rights will be needed
- Tenants or owner-occupants who will need to be relocated
- Legal counsel who represent owners and tenants
- Lenders and other lienholders from whom releases of interest will be needed

Project Impacts

The primary negative impacts from right-of-way risks include:

- Schedule delays
- Higher costs
- Strained relationships among landowners, contractor team members, and VDOT employees
- Adverse public relations

Mitigation Strategies

- Identify "critical path parcels" as soon as possible
- Hold a public information meeting or hearing where potential difficult landowners might be identified and possible design changes could be discussed to facilitate successful negotiations
- As soon as possible after the contract has been awarded, identify, confirm, and contact suspected occupants of buildings that will need to be removed
- Minimize plan revisions to avoid necessary appraisal changes
- For parcels with corporate ownership, identify individuals who may act on behalf of the ownership entity before initiating preparation of offer packets
- Adhere strictly to VDOT's policy regarding the minimum allowed time for a response from landowners once offer is made

VDOT's Role

While the risk in a D-B project is placed primarily upon the contractor, there are some areas where VDOT cooperation can enhance the minimization of risk with timely responses and reasonable flexibility. These areas primarily involve the review process of the construction plans, appraisals, and RW-24 reports.



Appendix



SOQ Checklist



ATTACHMENT 3.1.2

Project: 0165-122-V04

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

Project: 0165-122-V04

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	
Key Personnel Resume – Traffic Operations Designer and Manager	Attachment 3.3.1	Section 3.3.1.6	no	
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.7	no	

ATTACHMENT 3.1.2

Project: 0165-122-V04

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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



Form C-78-RFQ



List of Affiliated or Subsidiary Companies

ATTACHMENT 3.2.6

State Project No. 0165-122-V04

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Parent Company - Affiliate	Tutor Perini Corporation	15901 Olden Street Sylmar, CA 91342
Affiliate	AirTech Systems, Inc	1125 Close Avenue Bronx, NY 10472
Affiliate	Anderson Companies, Inc.	11400 Reichold Rd. Gulfport, MS 39503
Affiliate	Becho, Inc.	15901 Olden Street Sylmar, CA 91342
Affiliate	Black Construction Corporation	15901 Olden Street Sylmar, CA 91342
Affiliate	Black Construction Investments, Inc.	15901 Olden Street Sylmar, CA 91342
Affiliate	Black Micro Corporation	15901 Olden Street Sylmar, CA 91342
Affiliate	Bow Equipment Leasing Co., Inc.	15901 Olden Street Sylmar, CA 91342
Affiliate	Brice Building Co., LLC	201 Sunbelt Parkway Birmingham, AL 35211
Affiliate	Daniel J. Keating Construction Co., LLC	1600 Arch Street, Suite 300 Philadelphia, PA 19103
Affiliate	Desert Mechanical, Inc.	15870 Olden Street Sylmar, CA 91342
Affiliate	E.E. Black, Limited	15901 Olden Street Sylmar, CA 91342
Affiliate	Federated Fire Protection Systems, Inc.	150 Broadway, Suite 1910 New York, NY 10038
Affiliate	Fisk Acquisition, Inc.	10855 Westview Drive Houston, TX 77043

ATTACHMENT 3.2.6

State Project No. 0165-122-V04

Affiliated and Subsidiary Companies of the Offeror

Affiliate	Fisk Electric Co.	10855 Westview Drive Houston, TX 77043
Affiliate	Fisk International, Ltd.	10855 Westview Drive Houston, TX 77043
Affiliate	Five Star Electric Corp.	101-32 101st Street Ozone Park, NY 11416
Affiliate	FK Management Services, Inc.	1695 Allen Road, PO Box 6690 Evansville, IN 47719-0690
Affiliate	FKC, LLC	1695 Allen Road, PO Box 6690 Evansville, IN 47719-0690
Affiliate	Frontier Kemper Constructores Limitada	1695 Allen Road, PO Box 6690 Evansville, IN 47719-0690
Affiliate	Frontier-Kemper Constructors ULC	1695 Allen Road, PO Box 6690 Evansville, IN 47719-0690
Affiliate	Frontier-Kemper Constructors, Inc.	1695 Allen Road, PO Box 6690 Evansville, IN 47719-0690
Affiliate	G.W. Murphy Construction Company, Inc.	15901 Olden Street Sylmar, CA 91342
Affiliate	GreenStar Services Corporation	30 North MacQuesten Parkway Mount Vernon, NY 10550
Affiliate	Harrell Contracting Group, LLC	368 Highland Colony Parkway Ridgeland, MS 39157
Affiliate	International Construction Management Services, Inc.	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	James A. Cummings, Inc.	One East Broward Blvd., Suite 1300 Fort Lauderdale, FL 33301
Affiliate	Johnson Western Constructors, Inc.	940 Doolittle Drive San Leandro, CA 94577
Affiliate	Johnson Western Gunitite Company	940 Doolittle Drive San Leandor, CA 94577
Affiliate	Keating Project Development, Inc.	1600 Arch Street, Suite 300 Philadelphia, PA 19103
Affiliate	Lunda Construction Company	620 Gebhardt Rd. Black River Falls, WI 54615-0699
Affiliate	Mt. Wayte Realty, LLC	73 Mt. Wayte Avenue Framingham, MA
Affiliate	Nagelbush Mechanical, Inc.	1800 NW 49th Street, Ste 110 Fort Lauderdale, FL 33309

ATTACHMENT 3.2.6

State Project No. 0165-122-V04

Affiliated and Subsidiary Companies of the Offeror

Affiliate	PCR Insurance Co.	15901 Olden St. Sylmar, CA 91342
Affiliate	Percon Constructors, Inc.	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	Perini Holding Company Cayman Islands	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	Perini International Corporation	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	Perini Management Services, Inc.	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	R.E. Dailey & Co.	73 Mt. Wayte Avenue Framingham, MA 01701
Affiliate	RA Properties, LLC	11400 Reichold Road Gulfport, MS 39503
Affiliate	Roy Anderson Corp	11400 Reichold Road Gulfport, MS 39503
Affiliate	Rudolph & Sletten, Inc.	1600 Seaport Blvd., Suite 350 Redwood City, CA 94063-5575
Affiliate	Safe Harbor Electric, Inc.	1800 NW 49th St., Suite 110 Fort Lauderdale, FL 33309
Affiliate	Superior Gunitite LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Superior Gunitite	12306 Van Nuys Blvd. Lakeview Terrace, CA 91342
Affiliate	TPC Aggregates, LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor Holdings, LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor Micronesia Construction, LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor Pacific Construction, LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor Pacific, Inc.	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor Perini Building Corp.	5055 E. Washington St., Ste 210 Phoenix, AZ 85034
Affiliate	Tutor Perini Merger Company	15901 Olden Street Sylmar, CA 91342

ATTACHMENT 3.2.6

State Project No. 0165-122-V04

Affiliated and Subsidiary Companies of the Offeror

Affiliate	Tutor-Saliba Corporation	15901 Olden Street Sylmar, CA 91342
Affiliate	Tutor-Saliba LLC	15901 Olden Street Sylmar, CA 91342
Affiliate	Valley Concrete & Framing, Inc.	12308 Van Nuys Blvd Lakeview Terrace, CA 91342
Affiliate	WDF, Inc.	30 North Macquestan Parkway Mount Vernon, NY 10550
Affiliate	WDF/Nagelbush Holding Corp.	1800 NW 49th Street, Ste 110 Fort Lauderdale, FL 33309



Debarment Forms

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

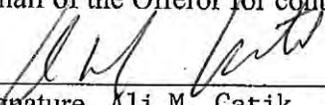
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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


Signature Ali M. Catik Date 1/29/15 Title President

Cherry Hill Construction, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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

Signature

Date

Title

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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

	January 15, 2015	President
Signature	Date	Title
<hr/>		
Quinn Consulting Services, Inc.		
<hr/>		
Name of Firm		

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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

	1/7/2015	
Signature	Date	<u>Regional Technology Principal</u> Title

Pennoni Associates Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

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

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

Paul J. Deane 1/9/15 President
Signature Date Title

McPherson Consulting, LLC.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

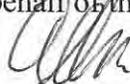
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0165-122-V04

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

	January 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.

	1/13/15	Senior Vice President
Signature	Date	Title

Schnabel Engineering Consultants, 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.

<u><i>Leslie R. Reynolds</i></u>	<u>January 9, 2015</u>	<u>Vice President</u>
Signature	Date	Title

H&B Surveying and Mapping, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

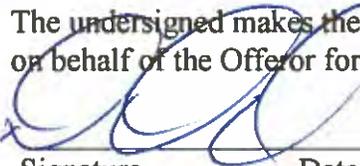
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

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.

	1/29/15	Principal
Signature	Date	Title
D. Mark Scholefield, P.E.		
GET Solutions, Inc.		
Name of Firm		

ATTACHMENT NO. 3.2.7(b)

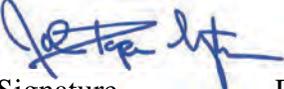
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

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.

	1/16/2015	Vice President Business Development
Signature	Date	Title

InfraMap Corp.

Name of Firm

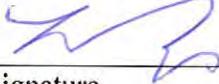
ATTACHMENT NO. 3.2.7(b)

**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.

	<u>1/9/15</u>	<u>Senior Mang. Dir.</u>
Signature	Date	Title
<u>Axial Advisory Group LLC</u>	<u>(dba Volbridge Property Advisors/Axial Advisory Group)</u>	
Name of Firm		



Offeror's VDOT Prequalification Certificate

TRANSPORT - E22
LSPPREQ

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PREQUALIFIED VENDORS SORTED BY VENDOR NAME
THIS LIST INCLUDES ALL PREQUALIFIED LEVELS
AS OF 06/12/2014

06/12/2014
2:37 PM
PAGE 93

- C -

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C090

CHERRY HILL CONSTRUCTION, INC.
PREQ. EXP : 03/31/2015

--PREQ ADDRESS -----	WORK CLASSES (LISTED BUT NOT LIMITED TO)
8211 WASHINGTON BLVD.	002 - GRADING
JESSUP, MD 20794-9400	003 - MAJOR STRUCTURES
PHONE : 410-799-3577	006 - PORTLAND CEMENT CONCRETE PAVING
FAX : 410-799-5488	007 - MINOR STRUCTURES
	045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: BEAUCHEMIN, BERNARD PAUL P.
EMAIL: DARMSTRONG@CHCONSTR.COM

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

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

=====



Surety Letter



TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
LIBERTY MUTUAL INSURANCE COMPANY
FEDERAL INSURANCE COMPANY

December 22, 2014

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

Re: Cherry Hill Construction, Inc.
Request for Qualification
A Design Build Project – Military Highway Continuous Flow Intersection

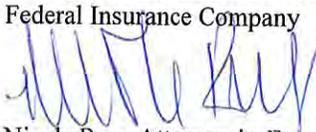
Dear Mr. Stevenson,

This letter confirms that Cherry Hill Construction, Inc., a Tutor-Perini Company, is a highly regarded and valued bonding client of Travelers Casualty and Surety Company of America, Federal Insurance Company, Fidelity and Deposit Company of Maryland and Safeco Insurance Company of America (herein after referred to as “co-surety”). Each of the co-surety companies has an A.M. Best’s Rating of “A” or better, and each with a Financial Size Rating of “XV” or better. All of the co-surety partners are listed in the Department of the Treasury’s Listing of Approved Sureties (Department Circular 570) dated July 1, 2014.

Cherry Hill Construction, Inc. has a long and successful track record of completing complex road and bridge projects on time and within the available budget. As respects to bonding capacity, the co-surety will consider supporting Cherry Hill Construction, Inc. on individual projects up to \$600,000,000 with an aggregate backlog approaching \$6,000,000,000. Cherry Hill Construction, Inc. is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

Naturally, as is customary within the surety industry, the issuance of any bid or final bonds is always contingent upon a favorable underwriting review to include, but not limited to, a satisfactory review of contract terms, conditions, documents, and confirmation of an acceptable financing source to Cherry Hill Construction, Inc. and its co-surety at the time a request for bonds is made. It should be understood that any arrangement for the issuance of bonds is a matter strictly between Cherry Hill Construction, Inc. and its co-surety. We assume no liability to third parties or to you by issuance of this letter.

Sincerely,
Travelers Casualty and Surety Company of America
Fidelity and Deposit Company of Maryland
Liberty Mutual Insurance Company
Federal Insurance Company



Nicole Roy, Attorney-in-Fact



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. 228579

Certificate No. 006119953

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

Michael J. Cusack, John J. Gambino, Nicole Roy, Natalie Coneys, Donald H. McCarter, Sandra C. Lopes, Jean M. Feeney, Nicholas Labbe, John Dechiaro, and Laurie Rothwell

of the City of Boston, State of Massachusetts, 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 6th day of October, 2014.

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



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 6th day of October, 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.



[Signature]
Marie C. Tetreault, Notary Public

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

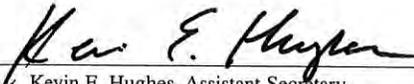
FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing 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 22nd day of December, 20 14.


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.

**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 **MICHAEL BOND, 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 **Michael J. CUSACK, John J. GAMBINO, Sandra C. LOPES, Nicole ROY, Natalie CONEYS, Donald H. MCCARTER, Jean M. FEENEY, Nicholas LABBE, John DECHIARO and Laurie ROTHWELL, all of Boston, Massachusetts, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

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

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 11th day of September, A.D. 2014.

ATTEST:

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



By: _____

Eric D. Barnes

*Assistant Secretary
Eric D. Barnes*

Michael Bond

*Vice President
Michael Bond*

State of Maryland
City of Baltimore

On this 11th day of September, A.D. 2014, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **MICHAEL BOND, Vice President, and ERIC D. BARNES, Assistant Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

Maria D. Adamski

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



EXTRACT FROM BY-LAWS OF THE COMPANIES

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

CERTIFICATE

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 22nd day of December, 20 14.



Gerald F. Haley

Gerald F. Haley, Vice President

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

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

Certificate No. 6700719

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Donald H. McCarter; Jean M. Feeney; John DeChiaro; John J. Gambino; Kathleen M. Flanagan; Laurie Rothwell; Michael J. Cusack; Natalie Coneys; Nicholas Labbe; Nicole Roy; Richard A. Leveroni; Sandra C. Lopes

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 3rd day of September, 2014.



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

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

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 3rd day of September, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



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

By: Teresa Pastella
Teresa Pastella, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 22nd day of December, 20 14.



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

currency rate, interest rate or residual value guarantees.

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



Chubb
Surety

POWER
OF
ATTORNEY

Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company

Attn: Surety Department
15 Mountain View Road
Warren, NJ 07059

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 each hereby constitute and appoint Natalie Coneys, Michael J. Cusack, John DeChiaro, Jean M. Feeney, John J. Gambino, Nicholas Labbe, Sandra C. Lopes, Donald H. McCarter, Laurie Rothwell and Nicole Roy of Boston, Massachusetts -----

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 obligatory 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 15th day of September, 2014.

Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

David B. Norris, Jr.

David B. Norris, Jr., Vice President



STATE OF NEW JERSEY

ss.

County of Somerset

On this 15th day of September, 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 thereto 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 like 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 thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316885
Commission Expires July 16, 2019

Katherine J. Adelaar
Notary Public

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 the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. 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 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 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 Vigilant 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 22nd day of December, 2014



Dawn M. Chloros
Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903- 3493 Fax (908) 903- 3656 e-mail: surety@chubb.com



SCC and DPOR Information



ATTACHMENT 3.2.10

State Project No. 0165-122-V04

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Cherry Hill Construction Inc.	F0290223	Foreign Corporation	Active	8211 Washington Boulevard, Jessup, MD 20794	Class A Contractor H/H	2701014225	05-31-2015
Jacobs Engineering Group Inc	F119261-8	Corporation	Active	1100 N. Glebe Road, Suite 500, Arlington, VA 22201	Branch Office: ARC, ENG	0411000506	02-29-2016
				2108 West Laburnum Ave, Suite 100, Richmond, VA 23227	Branch Office: ENG	0411000617	02-29-2016
				2901 South Lynnhaven Rd, Suite 200, Virginia Beach, VA 23452	Branch Office: ENG	0411000623	02-29-2016
Quinn Consulting Services Inc.	0492551-7	Corporation	Active	1801 Pleasure House Road, Suite 101 & 102, Virginia Beach, VA 23455	ENG	0411001133	02-29-2016
Pennonni Associates Inc.	F1800798	Foreign Corporation	Active	410 North Center Drive, Suite 100 Norfolk, VA 23502	ENG, LS	0411001104	02-29-2016
				14532 Lee Road Chantilly, VA 20151	LA, ENG	0411001005	02-29-2016
				323 W Camden St, Suite 600 Baltimore, MD 21201	ENG	0411000664	02-29-2016
				8818 Centre Park Drive, Suite 200 Columbia, MD 21045	ENG, LA	0411001153	02-29-2016
McPherson Consulting, LLC	S4826683	LLC	Active	1229 Heathcliff Drive, Virginia Beach, VA 23464	ENG	0407006508	12-31-2015

ATTACHMENT 3.2.10

State Project No. 0165-122-V04

SCC and DPOR Information

KDR Real Estate Services, Inc.	0571210-4	Corporation	Active	2500 Grenoble Road Richmond VA 23294	Real Estate Corporation	0226007129	12-31-2016
				2500 Grenoble Road Richmond VA 23294	Real Estate Broker	0225108043	03-31-2015
Schnabel Engineering Consultants, Inc.	07126741	Corporation	Active, In Good Standing	300 Ed Wright Lane Suite 1 Newport News, VA 23606	ENG	0411000699	02-29-16
H&B Surveying and Mapping, LLC	S290560-4	Limited Liability Company	Active	612 Hull Street Suite 101B Richmond, VA 23224	LS	0407005432	12-31-2015
Geotechnical Environmental & Testing Solutions Inc.	0541847-0	Corporation	Active	204-B Grayson Road Virginia Beach, VA 23462	ENG	0407004018	12-31-2015
InfraMap Corp.	F105525	Foreign Corporation	Active	10365 Cedar Lane Glen Allen, VA 23059	ENG, LS	0407003343	12-31-2015
Axial Advisory Group	S0719767	Limited Liability Company	Active	656 Independence Parkway #220 Chesapeake, VA 23320	Appraisal	4008001594	12-31-2015
Horrocks Engineers, Inc.	F1985813	Foreign Corporation	Active	2162 W. Grove Parkway, Suite 400 Pleasant Grove, Utah 84062	ENG	0407006674	12-31-2015

ATTACHMENT 3.2.10
State Project No. 0165-122-V04
SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Cherry Hill Construction Inc.	Jerry Whitlock	Norfolk, VA	6808 Meridian Ct Chesapeake Beach, MD 20732	Professional Engineer	0402043179	01-31-2016
Jacobs Engineering	Mitchell Johnson	Richmond, VA	2158 Kelly Ridge Road Richmond, VA 23233	Professional Engineer	0402023838	01-31-2017
Jacobs Engineering	Alvin Powell	Arlington, VA	6 Marshire Ct Owings Mills, MD 21117	Professional Engineer	0402046609	06-30-2015
Quinn Consulting Services, Inc.	Thomas Alan Druhot	1801 Pleasure House Road, Suite 101 & 102, Virginia Beach, VA 23455	1801 Pleasure House Road, Suite 101 & 102, Virginia Beach, VA 23455	Professional Engineer	0402021446	07-31-2016
Axial Advisory Group	Lawrence Colorito Jr	656 Independence Parkway #220 Chesapeake, VA 23320	656 Independence Parkway #220 Chesapeake, VA 23320	Real Estate Appraiser	4001002033	01-31-2017

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CHERRY HILL CONSTRUCTION, INC.

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Additional Services

General

SCC ID: F0290223
 Entity Type: Foreign Corporation
 Jurisdiction of Formation: MD
 Date of Formation/Registration: 3/4/1975
 Status: Active
 Shares Authorized: 91000

Select an action

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Principal Office

8211 WASHINGTON BLVD
JESSUP MD20794

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

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Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, October 17, 1994

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

Jacobs Engineering Group Inc.

a corporation organized under the laws of DELAWARE
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:

William J. Bridge

Clerk of the Commission

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Commonwealth of Virginia
State Corporation Commission

S
Cor



CISM0180

CORPORATE DATA INQUIRY

01/06/15

19:14:31

CORP ID: F119261 - 8 STATUS: 00 ACTIVE STATUS DATE: 10/17/94
CORP NAME: JACOBS ENGINEERING GROUP INC.

DATE OF CERTIFICATE: 10/17/1994 PERIOD OF DURATION: INDUSTRY CODE: 70
STATE OF INCORPORATION: DE DELAWARE STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: MON NO: MON STATUS: MONITOR DTE:
R/A NAME: CT CORPORATION SYSTEM

STREET: 4701 COX ROAD, SUITE 285 AR RTN MAIL:

CITY: GLEN ALLEN STATE : VA ZIP: 23060

R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 10/04/13 LOC : 143

ACCEPTED AR#: 214 14 4328 DATE: 10/02/14 HENRICO COUNTY

CURRENT AR#: 214 14 4328 DATE: 10/02/14 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
14	1,700.00					241,000,000

(Screen Id:/Corp_Data_Inquiry)

Commonwealth OF Virginia



State Corporation Commission

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.

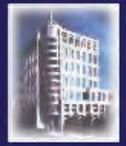


Signed and Sealed at Richmond on this Date
August 4, 2014


Joel H. Peck, Clerk of the Commission



Commonwealth of Virginia
State Corporation Commission



**SCC
 Clerk's
 Information
 System**

CISM0180

CORPORATE DATA INQUIRY

01/08/15

09:06:47

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CORP ID: 0492551 - 7 STATUS: 00 ACTIVE STATUS DATE: 12/01/08
 CORP NAME: QUINN CONSULTING SERVICES INCORPORATED
https://cisiweb.scc.virginia.gov/images/scc_banner
 DATE OF CERTIFICATE: 10/24/1997 PERIOD OF DURATION: INDUSTRY CODE: 00
 STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
 MERGER IND: S SURVIVOR CONVERSION/DOMESTICATION IND:
 GOOD STANDING IND: Y MONITOR INDICATOR:
 CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:
 R/A NAME: JOHN H QUINN JR
 STREET: 2208 S KNOLL ST AR RTN MAIL:
 CITY: ARLINGTON STATE : VA ZIP: 22202 2134
 R/A STATUS: 4 ATTORNEY EFF. DATE: 10/24/97 LOC : 106
 ACCEPTED AR#: 214 12 5293 DATE: 08/22/14 ARLINGTON COUNT
 CURRENT AR#: 214 12 5293 DATE: 08/22/14 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
14	100.00					5,000



CIS has changed to enhance its navigation.

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Pennoni Associates Inc., a corporation incorporated under the law of Pennsylvania, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on August 25, 2009; 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:

December 17, 2012

Joel H. Peck

Joel H. Peck, Clerk of the Commission

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State Corporation Commission

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

Pennoni Associates Inc.

General

SCC ID: F1800798
 Entity Type: Foreign Corporation
 Jurisdiction of Formation: PA
 Date of Formation/Registration: 8/25/2009
 Status: Active
 Shares Authorized: 100000

Select an action

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Principal Office

3001 MARKET ST
 2ND FLOOR
 PHILADELPHIA PA19104

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Registered Agent/Registered Office

CORPORATION SERVICE COMPANY
 Bank of America Center, 16th Floor
 1111 East Main Street
 RICHMOND VA 23219
 RICHMOND CITY 216
 Status: Active
 Effective Date: 4/29/2011

Screen ID: e1000

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Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, December 11, 2013

This is to certify that the certificate of organization of

McPherson Consulting, LLC

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: December 11, 2013



State Corporation Commission

Attest:

Joel H. Peck
Clerk of the Commission

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McPherson Consulting, LLC

General

SCC ID: S4826683
 Entity Type: Limited Liability Company
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 12/11/2013
 Status: Active

Principal Office

1229 Heathcliff Dr.
 Virginia Beach VA23464

Registered Agent/Registered Office

JOHN S BURTON
 575 LYNNHAVEN PKWY SUITE 278
 VIRGINIA BEACH VA 23452
 VIRGINIA BEACH CITY 228
 Status: Active
 Effective Date: 12/11/2013

Select an action

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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:

Joel H. Beck

Clerk of the Commission

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CORP ID: 0571210 - 4 STATUS: 00 ACTIVE STATUS DATE: 07/07/03
CORP NAME: KDR REAL ESTATE SERVICES, INC.

DATE OF CERTIFICATE: 01/30/2002 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: ALLEN G DORIN JR



STREET: 2500 GRENOBLE RD AR RTN MAIL:

CITY: RICHMOND STATE : VA ZIP: 23294
R/A STATUS: 2 OFFICER EFF. DATE: 07/09/03 LOC : 143
ACCEPTED AR#: 213 01 0173 DATE: 11/20/12 HENRICO COUNTY
CURRENT AR#: 213 01 0173 DATE: 11/20/12 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
13 100.00 100

Commonwealth of Virginia



State Corporation Commission

I Certify the Following from the Records of the Commission:

Schnabel Engineering Consultants, Inc. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is August 12, 2009.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
November 17, 2009*

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



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Business Entity Details

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Schnabel Engineering Consultants, Inc.

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 07126741
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 8/12/2009
 Status: Active
 Shares Authorized: 10000

Select an action

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Principal Office

9800 JEB STUART PARKWAY, STE 200
 GLEN ALLEN VA23059

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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

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Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, April 27, 2009

This is to certify that the certificate of organization of

H & B Surveying and Mapping, LLC

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: April 27, 2009



State Corporation Commission

Attest:

Joel Heck
Clerk of the Commission

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H & B Surveying and Mapping, LLC

General

SCC ID: S2905604
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 4/27/2009
Status: Active

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
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Principal Office

612 HULL STREET STE 101B
RICHMOND VA23224

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Registered Agent/Registered Office

TIMOTHY H GUARE
TIMOTHY H GUARE PLC
6802 PARAGON PL STE 100
HENRICO VA 23230
HENRICO COUNTY 143
Status: Active
Effective Date: 7/2/2009

Screen ID: e1000

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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

Joel H. Peck, Clerk of the Commission

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

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

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Principal Office

204 GRAYSON ROAD
 VIRGINIA BEACH VA23462

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

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

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Build # 1.0.0.2.136

Commonwealth OF Virginia



State Corporation Commission

I Certify the Following from the Records of the Commission:

InfraMap Corp., a corporation incorporated under the laws of DELAWARE is authorized to transact business in Virginia and is in good standing. It obtained a certificate of authority from the Commission on October 22, 1990.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
August 19, 2010*

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

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



Commonwealth of Virginia
State Corporation Commission

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

InfraMap Corp.

General

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

Select an action

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Principal Office

10365 CEDAR LANE
 GLEN ALLEN VA23059

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

Registered Agent/Registered Office

PAUL HAYES
 10365 CEDAR LANE
 GLEN ALLEN VA 23059
 HANOVER COUNTY 142
 Status: Active
 Effective Date: 9/4/1998

Screen ID: e1000

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STATE CORPORATION COMMISSION

Richmond, January 17, 2002

This is to Certify that the certificate of organization of

Axial Advisory Group, LLC

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: January 17, 2002



State Corporation Commission

Attest:

Joel H. Peck

Clerk of the Commission

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.

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Commonwealth of Virginia
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Axial Advisory Group, LLC

General

SCC ID: S0719767
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 1/17/2002
Status: Active

Select an action

- [File a registered agent change](#)
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Principal Office

1000 SMOKEY MOUNTAIN TRAIL
CHESAPEAKE VA23320

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Registered Agent/Registered Office

GREGORY J MONTERO
INMAN & STRICKLER
575 LYNNHAVEN PKWY STE 200
VIRGINIA BEACH VA 23452
VIRGINIA BEACH CITY 228
Status: Active
Effective Date: 12/24/2004

Screen ID: e1000

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Build # : 1.0.0.24156

Commonwealth of Virginia



STATE CORPORATION COMMISSION

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

HORROCKS ENGINEERS, INC.

a corporation organized under the laws of UTAH 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. Beck
Clerk of the Commission

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



Commonwealth of Virginia
State Corporation Commission

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HORROCKS ENGINEERS, INC.

SCC eFile

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: F1985813
Entity Type: Foreign Corporation
Jurisdiction of Formation: UT
Date of Formation/Registration: 1/26/2015
Status: Active
Shares Authorized: 1000000

Select an action

[File a registered agent change](#)
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Principal Office

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Registered Agent/Registered Office

CT CORPORATION SYSTEM
4701 COX ROAD SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 1/26/2015

Screen ID: e1000

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION

COMMONWEALTH OF VIRGINIA

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-9500

EXPIRES ON
05-31-2015

NUMBER
2701014225

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS* H/H

CHERRY HILL CONSTRUCTION INC
8211 WASHINGTON BLVD
JESSUP, MD 20794



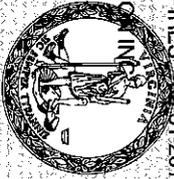
Gordon N. Dixon
Gordon N. Dixon, Director

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(POCKET CARD)
COMMONWEALTH OF VIRGINIA
CLASS A BOARD FOR CONTRACTORS
CONTRACTOR

CLASSIFICATIONS H/H
NUMBER: 2701014225 EXPIRES: 05-31-2015
CHERRY HILL CONSTRUCTION INC
8211 WASHINGTON BLVD
JESSUP, MD 20794



(DETACH HERE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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1001 0 (7/11) 10702B-3

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

NUMBER
0411000506

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: ARC, ENG

JACOBS ENGINEERING GROUP INC
1100 NORTH GLEBE RD
STE 500
ARLINGTON, VA 22201



Nick A. Christner
Nick A. Christner, Interim Director

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(POCKET CARD)

COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000506 EXPIRES: 02-29-2016
PROFESSIONS: ARC, ENG
JACOBS ENGINEERING GROUP INC
1100 NORTH GLEBE RD
STE 500
ARLINGTON, VA 22201



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9960 Mayland Dr., Suite 400, Richmond, VA 23233

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COMMONWEALTH OF VIRGINIA**

EXPIRES ON
02-29-2016

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

NUMBER
0411000617

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

PROFESSIONS: ENG

JACOBS ENGINEERING GROUP INC
2108 WEST LABURNUM AVE STE 100
RICHMOND, VA 23227



Gordon N. Dixon
Gordon N. Dixon, Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

NUMBER
0411000623

EXPIRES ON
02-29-2016

9980 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8580

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

PROFESSIONS: ENG

JACOBS ENGINEERING GROUP INC
2901 SOUTH LYNNHAVEN RD #200
VIRGINIA BEACH, VA 23452



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000623 EXPIRES: 02-29-2016
PROFESSIONS: ENG
JACOBS ENGINEERING GROUP INC
2901 SOUTH LYNNHAVEN RD #200
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COMMONWEALTH OF VIRGINIA

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

EXPIRES ON

02-29-2016

NUMBER

0411001133

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



Jay W. DeBoer
Jay W. DeBoer, Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APPLSCIDLA
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



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COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411001104

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

PROFESSIONS: ENG, LS

PENNONI ASSOCIATES, INC.
410 NORTH CENTER DR STE 100
NORFOLK, VA 23502



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA
BOARD FOR APPLSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001104 EXPIRES: 02-29-2016
PROFESSIONS: ENG, LS
PENNONI ASSOCIATES, INC.
410 NORTH CENTER DR STE 100
NORFOLK, VA 23502



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COMMONWEALTH OF VIRGINIA**

EXPIRES ON
02-29-2016

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

NUMBER
0411001005

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

PROFESSIONS: LA, ENG

PENNONI ASSOCIATES, INC.
14532 LEE ROAD
CHANTILLY, VA 20151



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA
BOARD FOR APPELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001005 EXPIRES: 02-29-2016
PROFESSIONS: LA, ENG
PENNONI ASSOCIATES, INC.
14532 LEE ROAD
CHANTILLY, VA 20151



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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411000664

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

PROFESSIONS: ENG

PENNONI ASSOCIATES, INC.
323 W CAMDEN ST SUITE 600
BALTIMORE, MD 21201



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APPELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000664 EXPIRES: 02-29-2016
PROFESSIONS: ENG
PENNONI ASSOCIATES, INC.
323 W CAMDEN ST SUITE 600
BALTIMORE, MD 21201



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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON

02-29-2016

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

NUMBER

0411001153

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

PROFESSIONS: ENG, LA

PENNONI ASSOCIATES, INC.
8818 CENTRE PARK DR
STE 200
COLUMBIA, MD 21045



Jay W. DeBoer
Jay W. DeBoer, Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APPELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001153 EXPIRES: 02-29-2016
PROFESSIONS: ENG, LA
PENNONI ASSOCIATES, INC.
8818 CENTRE PARK DR
STE 200
COLUMBIA, MD 21045



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9960 Mayland Dr., Suite 400, Richmond, VA 23233

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COMMONWEALTH OF VIRGINIA

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

EXPIRES ON

12-31-2015

NUMBER

0407006508

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

PROFESSIONS: ENG

MCPHERSON CONSULTING LLC
1229 HEATHCLIFF DR
VIRGINIA BEACH, VA 23464



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407006508 EXPIRES: 12-31-2015
PROFESSIONS: ENG
MCPHERSON CONSULTING LLC
1229 HEATHCLIFF DR
VIRGINIA BEACH, VA 23464



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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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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

EXPIRES ON
12-31-2016

NUMBER
0226007129

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

KDR REAL ESTATE SERVICES INC
2500 GRENOBLE RD
RICHMOND, VA 23294



Jay W. DeBoer
Jay W. DeBoer, Director

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(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) 367-8500

EXPIRES ON

12-31-2014

NUMBER

0226 007129

REAL ESTATE BOARD
REAL ESTATE CORPORATION, PARTNERSHIP, ASSOCIATION LICENSE
POST IN A CONSPICUOUS PLACE
THIS LICENSE TO BE KEPT IN CUSTODY AND CONTROL OF PRINCIPAL BROKER

KDR REAL ESTATE SERVICES INC
2500 GRENOBLE RD
RICHMOND, VA 23294



Gordon N. Dixon
Gordon N. Dixon, Director

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(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) 367-8500

EXPIRES ON

03-31-2015

NUMBER

0225108043

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



Gordon N. Dixon
Gordon N. Dixon, Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411000699

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

PROFESSIONS: ENG

SCHNABEL ENGINEERING CONSULTANTS, INC
300 ED WRIGHT LANE
SUITE 1
NEWPORT NEWS, VA 23606



Jay W. DeBoer
Jay W. DeBoer, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

EXPIRES ON
12-31-2015

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

NUMBER
0407005432

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

PROFESSIONS: LS

H & B SURVEYING & MAPPING LLC
612 HULL ST
SUITE 101B
RICHMOND, VA 23224



Gordon N. Dixon
Gordon N. Dixon, Director

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

EXPIRES ON
12-31-2015

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

NUMBER
0407004018

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
Gordon N Dixon, Director

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COMMONWEALTH OF VIRGINIA

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



DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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10010 (7/11) 107028-3

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2015

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

NUMBER
0407003343

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

PROFESSIONS: ENG, LS

INFRAMAP CORP
10365 CEDAR LANE
GLEN ALLEN, VA 23059



Gordon N. Dixon
Gordon N. Dixon, Director

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COMMONWEALTH OF VIRGINIA
BOARD FOR APPELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407003343 EXPIRES: 12-31-2015
PROFESSIONS: ENG, LS
INFRAMAP CORP
10365 CEDAR LANE
GLEN ALLEN, VA 23059



(FOLD)

(DETACH HERE)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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Details of license number 4008001594

Name: AXIAL ADVISORY GROUP LLC
License Number: 4008001594
License Description: Appraisal Business Registration
Business Type: LLC
Address: 656 INDEPENDENCE PKWY STE 220
CHESAPEAKE, VA 23320
Initial Certification Date: 2009-12-14
Expiration Date: 2015-12-31

[print](#)

No Open Complaints

"Open Complaints" reflect only those complaints against regulants for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed. **State law prohibits the disclosure of any information about open complaints** [Code of Virginia Section 54.1-108].

(<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+54.1-108>) Members of the public may review official records and obtain copies only after a complaint investigation is closed.

No Closed Complaints

"Closed Complaints" reflect complaints against regulants closed since 1990. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.

To inquire about closed complaints, see the department's Public Records Access (<http://www.dpor.virginia.gov/recordsanddocuments/>) or contact the department's Information Management Section at (804) 367-8583 or publicrecords@dpor.virginia.gov (<mailto:publicrecords@dpor.virginia.gov>).

The information on this page was last updated on 2014-04-03.

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

EXPIRES ON
12-31-2015

NUMBER
0407006674

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: ENG

HORROCKS ENGINEERS INC
2162 W GROVE PKWY STE 400
PLEASANT GROVE, UT 84062



Jay W. DeBoer
Jay W. DeBoer, Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407006674 EXPIRES: 12-31-2015
PROFESSIONS: ENG
HORROCKS ENGINEERS INC
2162 W GROVE PKWY STE 400
PLEASANT GROVE, UT 84062



DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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10010 (7/11) 107028-3

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

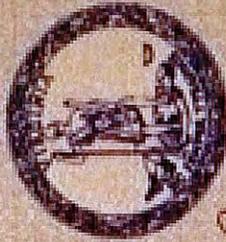
EXPIRES ON
01-31-2016

NUMBER
0402043179

9950 Maryland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 357-8500

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

**JERRY TODD WHITLOCK
6808 MERIDIAN CT
CHESAPEAKE BEACH, MD 20732**



Gordon N. Dixon
Gordon N. Dixon, Director

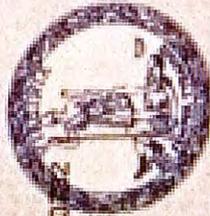
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**COMMONWEALTH OF VIRGINIA
BOARD FOR APPLICANTS
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402043179 EXPIRES: 01-31-2016**

**JERRY TODD WHITLOCK
6808 MERIDIAN CT
CHESAPEAKE BEACH, MD 20732**



(DETACH HERE)

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9950 Maryland Dr., Suite 400, Richmond, VA 23233**

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON

01-31-2017

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

NUMBER

0402023838

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

MITCHELL F JOHNSON
2158 KELLY RIDGE ROAD
RICHMOND, VA 23233



Jay W. DeBoer
Jay W. DeBoer, Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
06-30-2015

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 387-8500

NUMBER
0402046609

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

ALVIN POWELL
6 MARCSHIRE CT
OWINGS MILLS, MD 21117



Jay W. DeBoer
Jay W. DeBoer, Director

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Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 600 • Washington, DC 20006 USA • Tel: 202-785-0060 • Fax: 202-785-0609 • www.tpcb.org



November 13, 2014

Alvin Powell
Jacobs Engineering Group
6 Marcshire Court
Owings Mills, MD 21117 USA

The Transportation Professional Certification Board (TPCB, Inc) is pleased to inform you that your PTOE certification has been renewed through 11/22/2017.

You will not be receiving a new certificate as the one sent to you does not indicate an expiration date and can be displayed as long as you are a certified PTOE. Note that your certificate shows your original certification date.

During your three-year certification period, please be aware of the following requirements that will assist in your certification maintenance and future renewal:

- maintain at least one valid governmentally issued professional engineering license;
- demonstrate attainment of 45 of professional development hours, as required per the attached document.

Prior to the expiration of your PTOE, you will be notified of your renewal deadline. Additional examinations are not required if you renew within **three-months** of your expiration date 11/22/2017.

From time to time, TPCB will distribute a newsletter. If you would like to contribute to the newsletter, please send any items of interest to: certification@tpcb.org.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,



Timothy P. Harpst, P.E., PTOE
Chair, Transportation Professional Certification Board Inc.

Attachments

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

EXPIRES ON
07-31-2016

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

NUMBER
0402021446

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



James W. DeBoer
J.W. DeBoer, Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402021446 EXPIRES: 07-31-2016

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



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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

EXPIRES ON
01-31-2017

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

NUMBER
4001002033

REAL ESTATE APPRAISER BOARD

CERTIFIED GENERAL REAL ESTATE APPRAISER

LAWRENCE J COLORITO JR
656 INDEPENDENCE PARKWAY
SUITE 220
CHESAPEAKE, VA 23320-0000



Jay W. DeBoer
Jay W. DeBoer, Director

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Key Personnel Resume Forms

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title:	J. Daniel Bell, P.E., Vice President
b. Project Assignment:	Design-Build Project Manager
c. Name of Firm with which you are now associated:	Cherry Hill Construction, Inc., A Tutor Perini Company
d. Years experience: With this Firm <u>1</u> Years with Other Firms <u>30</u> Years Please list chronologically (most recent experience first) your employment History, position and general experience or field of practice for the last fifteen (15) years. (NOTE: If you have less than 5 years of experience, please list all of your experience for those you have worked.):	<p>Cherry Hill Construction, Inc., A Tutor Perini Company 2014 – Present – Jessup, MD Start Date: 2014 End Date: Present Position: Vice President Responsibilities: Manage the Mid-Atlantic Operations and oversee the project operations. Assist the projects and provide support to the project teams. Project oversight to ensure projects are completed safely, with high quality, ahead of schedule and on budget. Executive oversight for CHC’s current I-564 Intermodal Connector Design-Build project in Norfolk.</p> <p>Start Date: 2012 End Date: 2014 Company: American Bridge Company, Coraopolis, PA Position: Construction Manager (Tappan Zee Constructors) Responsibilities: Supervised (6) Area Project Managers (6) Area Project Engineers and a professional staff of (70) engineers, surveyors and administrators. Overall leadership of the project craft labor of up to (550) employees.</p> <p>Start Date: 2010 End Date: 2012 Company: American Bridge Company, Coraopolis, PA Position: Operations Manager, New York District Responsibilities: Management and oversight of all design and construction activities through administrative direction to the Project Managers, Superintendents and Project Engineers. Develop, negotiate and execute all subcontracts and purchase orders. Manage all operations for projects in the New York District.</p> <p>Start Date: 2009 End Date: 2010 Company: Skanska USA Civil Southeast, Virginia Beach, VA Position: Design-Build Project Manager Responsibilities: Supervised (3) Area Construction Managers, (1) Design-Build Coordinator, (6) Area Project Engineers and a professional staff of (40) engineers, surveyors and administrators. Overall leadership of the project craft labor of up to (120) employees.</p> <p>Start Date: 2008 End Date: 2009 Company: American Infrastructure, Chantilly, VA Position: Design-Build Project Manager Responsibilities: Managed the pursuit for all design-build projects including the successful award of the Richmond Airport Connector Road. Responsible for Team staffing for the project and providing executive management of the project team for the duration of the project. Developed, negotiated and executed all subcontracts and purchase orders.</p> <p>Start Date: 2003 End Date: 2008 Company: American Bridge Company, Coraopolis, PA Position: Project Director/District Manager Responsibilities: Provide management direction to the project team on the Bascule Spans of the Woodrow Wilson Bridge. Management and oversight of all construction activities through administrative direction to the Project Superintendents and Project Engineers. Developed, negotiated and executed all subcontracts and purchase orders.</p> <p>Start Date: 1985 End Date: 2003 Company: Dick Corporation, Pittsburgh, PA Position: Project Director Responsibilities: Management of project teams with full project responsibility on numerous projects ranging from \$17M to \$51M.</p>
e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:	University of Pittsburgh/Pittsburgh, Pennsylvania/BS/1984/Civil Engineering
f. Active Registration: Year First Registered/Discipline/VA Registration #:	

1990/Professional Engineer/Pennsylvania #039751E
2012/Professional Engineer/New Jersey #24GE05008400
2013/Professional Engineer/New York #091871-1

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

1. Note your specific responsibilities and authorities for each assignment, 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 assignment.

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

Tappan Zee Bridges (DB), New York State Thruway Authority, New York, NY (\$3.25B) – Construction Manager (CM). Mr. Bell was the senior representative for American Bridge during the successful pursuit of the project and during the design and construction phases. He supervised a staff of 6 area project managers, 6 area project engineers, and a professional staff of 70 engineers, surveyors, and administrators. He provided leadership of the project craft labor of up to 550 employees. He was responsible for overseeing the design effort to include constructability reviews and design task review meetings. He coordinated with multiple stakeholders to ensure the project met contractual requirements of all agencies. The project included: design & construction of (2) new Tappan Zee Bridges with an overall span length of 3 miles each. The bridge work included: steel pipe piles; precast pile caps; reinforcing steel; cable stay spans; approach spans which included structural steel plate girders and full depth precast deck panels. The bridge also included state of the art systems for security and ITS; new signal gantries; and lighting systems. The landings work included: phased construction; excavation and embankment; drainage; utility relocations; paving; tunnels; signing; guardrail; lighting; drilled shaft foundations; retaining walls; noise walls; new AETC (All Electronic Toll Collection) systems. **Firm: Tappan Zee Constructors (JV: Flour, American Bridge, Granite, Traylor Bros); Project Dates: 2012 to 2014.**

11th Street Bridges Corridor (DB), DDOT, Washington, DC (\$265M) – Design-Build Project Manager (DBPM). Mr. Bell was the (POC) supervising a staff of 3 area construction managers, 1 design-build coordinator, 6 area engineers, and a staff of 40 engineers, surveyors, and administrators. He provided leadership of the project craft of up to 120 employees. He was responsible for managing the project from the proposal through all phases of permitting, design, and construction. He coordinated with multiple stakeholders to ensure the project met contractual requirements of all agencies. He ensured strict adherence to the QA/QC programs for both design and construction. The project included: design & construction of (3) new 11th Street Bridges. The bridge work included: concrete cylinder piles; new concrete piers and abutments; structural steel plate girders; new bearings; new superstructure; shared use path for pedestrians and bikes; security and lighting systems; and signing. The landings work included: phased construction; excavation and embankment; drainage; utility relocations; paving; tunnels; signing; guardrail; lighting; driven pile foundations; retaining walls; noise walls; temporary shoring; signalization and signing; and major utility relocations. **Firm: Skanska USA Civil Southeast; Project Dates: 2009 to 2010**

Richmond Airport Connector Road (DB), Transurban & VDOT, Richmond, VA (\$40M) – Construction Manager (CM). Mr. Bell was the primary POC for the DB Team and supervised a staff consisting of engineers, superintendents, utility coordinators, inspectors, managers, and field personnel. He was responsible for managing this project from the proposal that provided the overall best value, through all phases of permitting, design and construction. He developed, negotiated and executed all subcontracts and purchase orders for the project. The project included: design & construction of the new Richmond Airport Connector Road. The project consisted of new alignment and highway of approximately 2.8 miles long. The project included: (4) new bridges with one over an active CSX tracks; retaining walls; noise walls; excavation and embankment; new drainage; pavement; signing and signalization; guardrail; storm water management ponds and management; wetland mitigation; and major utility relocations. **Firm: American Infrastructure.; Project Dates: 2008 to 2009**

Woodrow Wilson Bridge Bascule Spans, Maryland SHA, Alexandria, VA (\$205M) – Construction Manager (CM). Mr. Bell was the primary POC and provided overall management direction for the project team for the duration of the project. He executed the successful completion, profitably and ahead of schedule, of the world's largest drawbridge. He also developed, negotiated and executed all subcontracts and purchase orders; monitored and controlled construction activities; planned and developed construction means and methods; managed the financial aspects of the contract to protect the company's interest while maintaining a high quality relationship with the Owner; planned and staffed key field positions; provided training to all project team members; monitored the quality process of the project; and ensured that the site specific safety plan was fully implemented on the project. The project included: construction of the Bascule Spans – Outer loop and Inner loop of the I-495/I-95 bridge over the Potomac river. This work included: new concrete substructure bascule piers; superstructure; structural steel bascule girders; bridge machinery; electrical and lighting; ITS and security systems; warning gates; energy gates; and the new operator's house and bridge control systems. **Firm: American Bridge; Project Dates: 2003 to 2008**

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.

As the DBPM, Mr. Bell would not be required to be on-site full-time and he is not currently assigned to any other individual projects.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Thomas A. Druhot, P.E., Quality Assurance Manager
b. Project Assignment: Quality Assurance Manager
c. Name of Firm with which you are now associated: Quinn Consulting Services, Inc.
d. Years experience: With this Firm <u>1</u> Years With Other Firms <u>29</u> 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): Mr. Druhot is a registered professional engineer in Virginia with 29 years' experience in the practice of engineering with specific emphasis on transportation systems, structures, utilities and construction methods. He has direct management responsibility in: business operations; cost control; quality assurance and quality control; negotiation and execution of contracts; revenue and profit determination; engineering and contract management services; client and public interaction. Quinn Consulting Services, Incorporated Start Date: 2014 End Date: Present Position: Quality Assurance Manager Responsibilities: 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. Start Date: 2003 End Date: 2014 Company: Virginia Department of Transportation Position: Area Construction Engineer, Hampton Roads District Responsibilities: <ul style="list-style-type: none">◆ Responsible for contract management for maintenance and construction projects ranging from \$300,000 to over \$108,000,000.◆ Consistently met or exceeded statewide contract goals of on time completion, on budget, quality, environmental stewardship, and safety.◆ Participated in statewide VRTCA committee on contract administration◆ Defended multiple claims from contractors at Commissioner Hearings and at court mandated arbitration.◆ Provided television and newspaper interviews.◆ Served on selection committees for Design-Build projects and professional engineering design services.◆ Managed project assignments for state employees and consultants, forecasting workloads, staffing needs, schedules and budgets. Start Date: 1992 End Date: 2003 Company: The Louis Berger Group, Inc. Position: Division Manager, Midwest Division (2000-2003) Responsibilities: <ul style="list-style-type: none">◆ 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.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Purdue University, West Lafayette, IN / B.S.C.E./1985/- Civil Engineering Fordham University, New York, NY / M.B.A./1989/ Business

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1990/Professional Engineer/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.)

I-564 Intermodal Connector (Design-Build), Norfolk, VA, FHWA – Quality Assurance Manager. Mr. Druhot worked closely with the Design-Build Contractor and the Eastern Federal Lands Division of the FHWA in preparing the project specific Quality Assurance/Quality Control Plan that follows both the requirements as set forth in VDOT's Minimum Standards for QA/QC on Design-Build and PPTA Projects as well as the materials acceptance and payment provisions/procedures prescribed in the contract by the Federal Highway Administration. The I-564 Intermodal Connector project, which is scheduled to begin in 2015 once final design is complete, will provide a safe, high speed, connection from 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. **Firm: Quinn Consulting Services, Inc. Project Dates:** 2014- current.

Middle Ground Boulevard (Design-Build), Hampton Roads, VA, VDOT – Owner Project Manager on this 40 million dollar 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, overseeing ROW procurement and relocation, coordination of public relations outreach, IA/IV coordination to make certain the project was completed in accordance with the contract documents and the VDOT Design-Build Minimum Standards, monthly progress reviews and payment verification. **Firm: VDOT Project Dates:** 2010-2014

Route 1 Improvements at Telegraph Road at Quantico Marine Base (Design-Build), VDOT – Quality Assurance Manager. This 4 million-dollar project is a Federal Highway Administration-Eastern Federal Lands Highway Division project. This intersection provides critical access to a DoD facility on the Marine Corps Base Quantico (MCBQ). Mr. Druhot reported directly to the Design-Build Project Manager with the Quality Assurance authority and responsibility to stop any work not being performed in accordance with the Contract requirements. He 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; for comparing the QA and QC tests to ensure that they are within the tolerances; and for certifying that the work was completed in accordance with the Contract Documents. **Firm: Quinn Consulting Services, Inc. Project Dates:** 2014

I-64 Widening, Segment 1 (Design-Build), VDOT – Owner Construction Engineer. Mr. Druhot served as Owner Construction Engineer contract development phase, on this estimated 144 million dollar interstate widening FHWA/VDOT Design-Build project. Project elements included: the construction of an additional third lane in each direction from Jefferson Avenue, Newport News for approximately 7 miles toward Williamsburg. During contract development phase, Mr. Druhot 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. This interstate widening project involves construction of new left lanes in the median of existing interstate, storm water management design based on new requirements, ROW purchases, utility relocations, resurfacing of existing lanes, the widening of six bridge and two drainage structures, coordination with City of Newport News, wetland impacts, and sensitive MOT conditions. **Firm: VDOT Project Dates:** 2013-2014

* 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.

As the QAM, Mr. Druhot would not be required to be on-site full time.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title:	Mitch Johnson, PE Design Manager
b. Project Assignment:	Design Manager
c. Name of Firm with which you are now associated:	Jacobs Engineering Group Inc.
d. Years experience: With this Firm <u>7</u> Years with Other Firms <u>20</u> Years Please list chronologically (most recent experience first) your employment History, position and general experience or field of practice for the last fifteen (15) years. (NOTE: If you have less than 5 years of experience, please list all of your experience for those you have worked.):	<p>Jacobs Engineering Group, Richmond, Virginia Start Date: 2014 End Date: Present Position: Director of Virginia Surface Transportation Responsibilities: Responsible for project production and performance among statewide design staff. Start Date: 1988 End Date: 1994 Position: Highway Design Engineer Responsibilities: Responsible for design elements including: horizontal, vertical, superelevation, drainage, stormwater management, erosion and sediment control, MOT, right-of-way design, and cost and quantity estimates.</p> <p>Start Date: 2009 End Date: 2014 Company: Kimley-Horn and Associates, Richmond, Virginia Position: Transportation Project Manager Responsibilities: Responsible for Richmond transportation design staff production and performance.</p> <p>Start Date: 2008 End Date: 2009 Company: Vanasse Hangen Brustlin, Richmond, VA Position: Transportation Design Director Responsibilities: Responsible for Richmond transportation design staff production and performance.</p> <p>Start Date: 2006 End Date: 2008 Company: Dewberry, Culpeper, VA Position: Director of Technical Services Responsibilities: Responsible for office design staff production and performance.</p> <p>Start Date: 1999 End Date: 2006 Company: Vanasse Hangen Brustlin, Richmond, VA Position: Transportation Project Manager Responsibilities: Responsible for individual project management and small team direction to execute projects</p>
e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:	Virginia Tech, Blacksburg, VA/BS/1988/Civil Engineering
f. Active Registration: Year First Registered/Discipline/VA Registration #:	1993/Professional Engineer/VA/#023838 VDOT Advanced Work Zone Certification 091412012 9/30/16
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<ol style="list-style-type: none">1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm</i>3. <i>Provide beginning and end dates for each assignment.</i> <p>(List at least three (3) but no more than five (5) relevant projects for which you have performed a similar function.)</p>

I-564 Intermodal Connector, Norfolk, VA – Design Manager. Design-Build project for EFLHD, FHWA by Cherry Hill Construction – Design Manager.

Directed engineering design team for approximately 2.8 miles of new four-lane limited access highway from existing I-564 in the area of Terminal Boulevard on the east to the Naval Station Norfolk (Second St.) and Norfolk International Terminals on the west. Design-build improvements include construction of two miles of new-alignment interstate-standard highway, a new interchange with I-564, bridges and local connectors, storm water management areas, Norfolk Southern rail crossing, noise walls, potentially contaminated and hazardous materials, connectivity to Naval Station Norfolk Gate 6, Navy commercial vehicle inspection station, significant utility relocations, and areas of other infrastructure improvement associated with the I-564 Connector. **Firm:** Jacobs **Project Dates:** Services 2014, Construction 2015-2016 **Cost:** Project cost \$90 million.

Fall Hill Avenue Bridge over I-95 and Mary Washington Boulevard Extension, Fredericksburg, VA – Project Manager.

This project involved Design-Build preliminary engineering and completion of a National Environmental Policy Act (NEPA) environmental assessment (EA), receiving a Finding of No Significant Impact (FONSI). Project included a public hearing and preliminary Design-Build (30 percent) plans for widening two miles of Fall Hill Avenue from two to four lanes divided from Central Park shopping center to U.S. Route 1. The project included new four-lane bridge over I-95 with barrier separated bike and walkways, a segment of Mary Washington Boulevard on new alignment, significant heavy utility relocations, as well as traffic study with noise analysis to support the preliminary design and EA. A roundabout intersection connects Mary Washington Boulevard with Fall Hill Avenue and a 10-foot shared use path follows the entire corridor, linking to the Fredericksburg trail system. The NEPA document was supported by significant historic and cultural resources coordination. The contract structure included five subconsultants and is a municipally administered VDOT project and included federal funding. **Firm:** Kimley-Horn **Project Dates:** Services 2011-2013 **Cost:** \$44 million, design-builder under contract.

APM Terminals Access Interchange, Route 164, Portsmouth Va for Tidewater Skanska and VDOT – Design Team Managing Engineer

for \$22 million interchange and ancillary roadways for new container port facility. VDOT's first solicited Design-Build project proceeded from survey to mobilization in only nine months; project fully delivered in less than two years. Managed team of five engineers and technicians; responsible for all highway design elements including drainage, as well as document production. Developed work zone traffic control plan that included raising existing alignment of Route 164 while under traffic. Plans produced to VDOT standards coordinated through Norfolk Residency. Attended contractor coordination meetings, VDOT field inspection meetings, and public hearing. **Firm:** VHB **Project Dates:** Services: 2005; Construction: 2006 **Cost:** \$22 Million.

Pacific Boulevard Widening, Design-Build Project, for VDOT – Design Project Manager.

Mitch was Design Project Manager and engineer of record for this Design-Build project completed in 2012 by General Excavation, Inc. This project involved widening Pacific Boulevard from two to four lanes from the intersection of Sterling Boulevard to Relocation Road, a length of 0.4 mile. Funding through ARRA. Project included widening plans, parallel shared use path, storm drainage, signal design, power and communications connection coordination, work zone traffic control plans and type B TMP. Project proceeded from Notice to Proceed to construction in four months. **Firm:** Kimley-Horn **Project Dates:** Services: 2010 **Cost:** \$2 million.

Central Region Rapid Deployment ITS Fiber Optic Installation, with Elite Contr. for VDOT – Responsible Charge Engineer

for 17-mile Design-Build installation of fiber optic raceway along I-95, I-85, and U.S. Route 460 within existing rights-of-way. Project serves planned installations of variable message signage and traffic monitoring camera systems. Installation consists of plowed and directionally bored HDPE raceways with splice vaults and pull boxes. Design includes hanger installation on nine bridges, three over active rail lines. Coordinated three on-bridge utility railroad crossing permits with CSX and Norfolk Southern. **Firm:** VHB **Project Dates:** Services: 2009 **Cost:** \$2 million

- 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.

As the Design Manager, Mr. Johnson would not be required to be on-site full-time.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title:	Jerry T. Whitlock, P.E., Project Manager
b. Project Assignment:	Construction Manager
c. Name of Firm with which you are now associated:	Cherry Hill Construction, Inc., A Tutor Perini Company
d. Years experience: With this Firm <u>10</u> Years with Other Firms <u>0</u> Years Please list chronologically (most recent experience first) your employment History, position and general experience or field of practice for the last fifteen (15) years. (NOTE: If you have less than 5 years of experience, please list all of your experience for those you have worked.):	<p>Cherry Hill Construction, Inc., A Tutor Perini Company – 2005 – Present – Jessup, MD Start Date: 2014 End Date: Present Active Duty Deployment: Confined Joint Task Force – Horn of Africa Position: Construction Manager Responsibilities: Managing the design and construction of a \$92M design-build project which included overseeing an 89 person Seabee Battalion Detachment with in excess of 100 pieces of heavy equipment, military-to-military horizontal construction and combat engineer training with 6 African armies and AMISOM.</p> <p>Start Date: 2012 End Date: 2014 Position: Construction Manager Responsibilities: Served as the construction manager for the Mark Center Short and Mid-Interim Improvements Design-Build (DB) Project. Responsible for management of all aspects of the construction operation, to include oversight of the Independent quality control program and supervising a staff of engineers, superintendents, foreman, operators, laborers and other specialty craft. He managed all subcontractors and vendors.</p> <p>Start Date: 2005 End Date: 2012 Position: Project Engineer Responsibilities: Jerry served in the role of project engineer for 10 projects, 3 of which were Design-Build Contracts. This required the management of a staff of field and office engineers. Procurement of materials, coordination and scheduling efforts, coordination with subcontractors and 3rd party agencies including utility owners and railroads, budgeting, submittals, generation of monthly invoices, tracking quantities/cost, constructability reviews and assisting in the resolution of construction and technical issues, estimation and generation of proposals.</p> <p>Start Date: 2005 End Date: Present Navy Mobile Construction Battalion 23, Fort Belvoir, VA Responsibilities: Served as Civil Engineering Corp Officer in various Battalion level staff positions.</p> <p>Start Date: 2004 End Date: 2005 C Company 1092nd Engineer CBT BN (Heavy), West Virginia Army National Guard, Moundsville, West Virginia Responsibilities: Lead and supervised the horizontal construction platoon of C Company. Effectively lead troops and managed equipment under variable time and operational constraints. Assist in the efficient transition of the unit from Combat Engineer Company to a Heavy Combat Engineer Company.</p>
e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:	West Virginia University, Morgantown, West Virginia/MS/2003/Civil Engineering Virginia Military Institute/Lexington, Virginia/BS/2002/Civil Engineering
f. Active Registration: Year First Registered/Discipline/VA Registration #:	2002/Professional Engineer/VA/#0402043179 Jerry's Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and VDOT Erosion and Sediment Control Contractor Certification (ESCCC) will both be renewed prior to the commencement of construction.
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<ol style="list-style-type: none">1. <i>Note your specific responsibilities and authorities for each assignment, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm</i>3. <i>Provide beginning and end dates for each assignment.</i>

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

Combined Joint Task Force – Horn of Africa (DB), Federal Government, East Africa (\$92M) – Construction Manager (CM). Lieutenant Commander Whitlock is managing the design and construction of this \$92M design-build project from initial design through fit out and up through topping out of construction. He managed an 89 person Seabee Battalion Detachment with in excess of 100 pieces of heavy equipment performing military-to-military horizontal construction, vertical construction and combat engineer training with 6 African armies and AMISOM. **Firm:** West Virginia Army National Guard, Moundsville, West Virginia; **Project Dates:** January 2014 to June 2015.

Mark Center Short and Mid-Term Improvements (DB), EFLHD/VDOT, Alexandria, VA (\$9.1M) – Construction Manager (CM). Mr. Whitlock was the primary point of contact (POC) for all construction activities on this “Best Value” project. He supervised a staff of engineers, superintendents, foreman, operators, laborers and other specialty craft. He managed all subcontractors and vendors. As construction manager, he ensured strict adherence to the independent quality control program. He reviewed the design submissions for constructability and was involved in the utility coordination with all impacted utilities via the VDOT Right of Way and Utilities Management System (RUMS). The Mark Center Project included Right of Way Acquisition, roadway construction on heavily traveled interstate ramps and local roads, utility relocations, stringent environmental concerns and storm water management practices and an aggressive schedule. This project was successfully completed providing much needed alleviation from the complex transportation issues resulting from recent increases in traffic volumes. **Firm:** Cherry Hill Construction, Inc., A Tutor Perini Company; **Project Dates:** August 2012 to January 2014.

Fairfax County Parkway (FCP), Phases I/II & IV (DB), EFLHD/VDOT, Springfield, VA (\$112.5M) – Project Engineer (PE). Mr. Whitlock was the project engineer supervising a staff of field and office engineers. He was responsible for managing the budget on the project, submittals, scheduling and coordination with subcontractors and procurement of materials. The project included 6 major highway bridge structures, highway and local ramps and interchanges, over 2.7 miles of roadway construction, utility relocation, stringent environmental concerns and SWM practices, a critical ordnance safety and removal program, and an extremely aggressive contract completion schedule. Context sensitive means and methods were used in the design of the Accotink Creek bridge structure (424 LF, three-span steel girder construction) minimizing impact to the watershed. Additional design work enhanced multi-modal accessibility at the Fullerton Road intersection, including widened sidewalks and architectural lighting. This project also received the 2013 DBIA Transportation National Merit Award and the 2013 DBIA Mid-Atlantic Transportation Award. **Firm:** Cherry Hill Construction, Inc. A Tutor Perini Company; **Project Dates:** 2010 to 2011

9th Street Bridge Replacement over CSXT and Amtrak Rail and New York Avenue (DB), EFLHD/DDOT, Washington, DC (\$58.4M) – Project Engineer (PE) Mr. Whitlock was the project engineer and supervised a staff consisting of field and office engineers. He was responsible for managing the budget, submittals, scheduling and coordination with subcontractors and procurement of materials. He also reviewed the design submittals for constructability and conformance with the Contract requirements. He was involved in the public outreach program and participated in numerous stakeholder meetings including coordination with the railroads. Project required multi-disciplined design efforts to facilitate the phased removal and complete reconstruction of the interchange and new bridge structure spanning NY Avenue, active CSXT and AMTRAK railroads, while maintaining existing vehicular and pedestrian traffic. Context sensitive means and methods were used in the design of the bridge structure, which resulted in numerous enhancements including widened sidewalks and bicycle lanes, and architectural elements including ornamental fencing and traffic railing, parapet and substructure treatments, and upgraded lighting fixtures. A partnership was established between all project shareholders including FHWA-EFLHD, DDOT, Amtrak, CSXT, and the USPS for this crucial project. **Firm:** Cherry Hill Construction, Inc., A Tutor Perini Company; **Project Dates:** 2008 to 2009

Taylor St. Bridge Replacement over WMATA, CSXT and Brookland Avenue (DB), EFLHD/DDOT, Washington, DC (\$10.9M) – Project Engineer (PE) Mr. Whitlock was the project engineer for one of D.C.’s first DB transportation projects. Principal responsibility was to assist the project manager in reviewing all the design submissions for constructability and conformance with the contract requirements. He managed the schedule and budget and was responsible for all submittals. He assisted in the procurement of all materials and coordination of subcontractors. He was involved with the public outreach program as well as coordination with the various stakeholders including the railroads. Project required phased demolition and reconstruction under traffic of a 294’ long, 2-span bridge crossing roadways and 4 active freight and passenger rail lines. The bridge consisted of hybrid steel girders, low permeability high performance CIP concrete superstructure, and MSE retaining structure approaches. The team provided formal QA/QC programs as well as community outreach programs. **Firm:** Cherry Hill Construction, Inc. A Tutor Perini Company; **Project Dates:** 2005 to 2007

- 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.

Jerry is currently on active duty deployment and is scheduled to return June 2015. He is currently not assigned to any other project and the Military Highway Design Build Project would be his full time assignment.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Alvin Powell, P.E., PTOE, Senior Traffic Engineer
b. Project Assignment: Traffic Operations Designer and Manager
c. Name of Firm with which you are now associated: Jacobs Engineering Group Inc.
d. Years experience: With this Firm <u>9</u> Years With Other Firms <u>6</u> 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): Jacobs Engineering Group Inc.: Start Date: 2006 End Date: Present Position: Senior Traffic Engineer Responsibilities: Senior Traffic Engineer with traffic engineering experience at the Federal, State and Local Government levels. Expertise includes traffic operations, traffic safety, design and research. Mr. Powell is experienced in traffic signal warrant analysis, traffic signal design, traffic signal systemization (including system detection, communications and coordination), traffic signal timing, traffic signal optimization, roadway signing, pavement marking, maintenance of traffic alternative analysis, temporary traffic control design, traffic impact studies, intersection and corridor safety and operations analysis, neighborhood traffic calming, access management, travel forecasting and analysis, and operations and safety research. Mr. Powell's responsibilities include preparation of plans, specifications, and estimates. His completed design projects include full traffic control signal reconstruction, temporary traffic signals, accessible pedestrian signals (APS) including implementation of Leading Pedestrian Intervals (LPI), hazard identification beacons (HIB's), uninterruptible power supply (UPS) installation, Opticom preemption installation, video detection installation and signal systemization. Mr. Powell has also represented the Maryland State Highway Administration and the Montgomery County Department of Transportation in Maryland at various review meetings, public meetings and a public hearing as a technical consultant. Start Date: 2003 End Date: 2006 Company: Michael Baker Corporation Position: Traffic Engineer Responsibilities: Served as an on-site consultant Traffic Engineer at the District of Columbia Department of Transportation in Washington, DC. Conducted traffic signal warrant analyses for over 75 intersections. Performed all-way stop control warrant analysis at various intersections in the District. Also, developed recommendations for signage and pavement marking improvements at locations throughout the District. Assisted in the review of traffic signal plans, communications plans, specifications, street lighting plans, temporary traffic control plans and signal timing and coordination plans. Reviewed transportation studies, corridor studies, high accident location studies, traffic impact studies and traffic calming studies submitted to DDOT by outside consultants. Developed Synchro/SimTraffic models to evaluate proposed geometric improvements at various intersections in the District. Performed traffic signal timing analysis and optimization projects including evaluation of pedestrian timings and vehicle clearance intervals along key roadways in the City. Performed pedestrian safety improvement studies at various locations. Start Date: 2000 End Date: 2002 Company: Howard University/Federal Highway Administration (FHWA) – U.S. Department of Transportation Position: Graduate Research Assistant at Turner Fairbanks Highway Research Center Responsibilities: responsible for CORSIM modeling.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Howard University, Washington, D.C. Masters Computer Science / 2002 / Modeling and Simulation Howard University, Washington, D.C. Masters Engineering / 2000 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
2011/ Professional Engineer / VA Registration / #046609
2011/ Professional Traffic Operations Engineer / #3167
2012/ Certified Traffic Control Design Specialist (Advanced) / VDOT #041212006

- 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.)

Fort Belvoir BRAC Improvements, U.S. Army Corp of Engineers – *Lead Traffic Engineer*. He served as the lead traffic engineer responsible for providing traffic engineering services including traffic signal design, traffic signal timing, roadway regulatory and guide sign development, and pavement markings for Fort Belvoir in Virginia. Additional signing was also developed for way finding along I-95 and Fairfax County Parkway onto Fort Belvoir. **Firm: Jacobs; Project Dates: 2009 – 2011.**

Aberdeen Proving Ground BRAC Improvements, U.S. Army Corps of Engineers – *Lead Traffic Engineer*. He served as the lead traffic engineer responsible for providing traffic engineering services including traffic signal design, traffic signal timing, roadway regulatory and guide sign development and design, and pavement markings for facilities in Aberdeen, Maryland. Traffic signal design services included the design of an integrated network with communication and control links for the entire signal system. The network included 13 traffic signals with accessible pedestrian signal (APS) and countdown pedestrian signals (CPS). **Firm: Jacobs; Project Dates: 2009 – 2012.**

I-270/ MD 109 Traffic Engineering Design Division (TEDD), Maryland State Highway Administration – *Lead Traffic Engineer* responsible for traffic signal design services including the design of a temporary traffic control signal to serve the I-270/MD 109 ramps during replacement of the nearby Little Bennett Creek bridge in Frederick County, Maryland. This project included the design of a one-lane, two-way traffic control signal with emergency vehicle preemption to allow the replacement of the bridge. The traffic signal included video traffic detection and Opticom vehicle preemption to facilitate emergency response vehicles travelling through the work zone. The signal was also included an uninterruptible power supply (UPS). **Firm: Jacobs; Project Dates: 2006 - Present.**

MD 542 (Loch Raven Blvd) at Taylor Avenue Traffic Signal Operations and Safety Review, Maryland State Highway Administration District 4 – *Traffic Engineer*. He conducted a review of the traffic signal operations at that intersection to evaluate the feasibility of proposed intersection improvement alternatives including split phasing, and geometric improvement options. **Firm: Jacobs; Project Dates: 2009.**

Travel Forecasting and Analysis Division, Maryland State Highway Administration – *Traffic Engineer*. Independent review of various studies including the MOT Evaluation Report for the proposed MD 210 at Kerby Hill/Livingston Road Interchange in Prince George’s County, Maryland. MD 210 is a major arterial connecting the Washington, D.C. Capital Beltway to the southern suburbs of Prince Georges County, Maryland. The roadway carries an AADT of 70,651 vehicles. The report evaluated options for maintaining capacity during the conversion of this at-grade intersection into a grade-separated interchange. The review examined the options presented and the improvements recommended for maintaining capacity during construction. Syncro/SimTraffic models were reviewed to ensure proper calibration and the simulation results were verified. The cost and benefits for each option presented was reviewed and recommendations developed for option selection. **Firm: Jacobs; Project Dates: 2014- present**

* 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.

As the Traffic Operations Designer and Manager, Mr. Powell would not be required to be on-site full-time.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Michael G. Baker, Director Of Telecommunications/Energy Utility Design Department
b. Project Assignment: Lead Utility Coordination Manager
c. Name of Firm with which you are now associated: Pennoni Associates Inc.
d. Years experience: With this Firm <u>19</u> Years With Other Firms <u>7</u> 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): Pennoni Associates Inc. Start Date: 1996 End Date: Present Position: Director of Telecommunications/Energy Utility Department Responsibilities: As Director, Mr. Baker has managed the design and construction inspection of numerous large scale utility construction projects, including: the placement of various pre-cast manholes, re-building of existing occupied vaults and manholes, placement of fiberglass structures, PVC, steel bridge duct, removal of existing manholes, and enlargement of central office buildings.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Essex Community College, Baltimore, MD /1982/Mechanical Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) Strip 1 Tysons, Washington Gas Light Company (WGL) – Utility Coordination Engineer. Mr. Baker prepared the final route selection and prepared and reviewed full construction documents for the relocation and replacement of approximately five miles of 16-inch transmission pipe out of Route 7 through the Tysons Corner area with 24-inch pipeline. Coordination efforts were required with the Metropolitan Washington Airports Authority (MWAA), Capitol District Transportation Authority (DTA), and Virginia Department of Transportation (VDOT) during the extent of this project duration. The full plan and profile design was permitted through VDOT in conjunction with the I-495 crossing. Company: Pennoni Project Dates: 2012 - Present MITRE Corporate Campus, McLean, VA – Utility Coordination Engineer. Mr. Baker is responsible for the full evaluation of the location, condition, and easement/right-of-way for all of the existing utility relocations, as well as detailed coordination with the County and all service providers, for the expansion of MITRE’s existing campus. Company: Pennoni Project Dates: 2013 - Present

MD 200 Intercounty Connector Design-Build, MD State Highway Administration, Montgomery and Prince George's Counties, MD – Utility Coordination Engineer.

Mr. Baker oversaw the planning, design, and evaluation of the location, condition, and easement/right-of-way for the existing telecommunication and electrical distribution facilities within the 19-mile Intercounty Connector Project Corridor. The project included the evaluation of distribution facilities for Contract A, from I-270/I-370 East to MD 97; Contract B, from MD 97 East to US 29; and Contract C, US 29 East to I-95.

Company: Pennoni **Project Dates:** 2009 - 2014

Dominion Strategic Underground Program – Utility Coordination Engineer.

Mr. Baker will oversee the distribution design, attainment/recordation of easements and permits (when required), identification of private utilities (when required), underground installation, overhead removals, and property restoration resources necessary to convert designated existing overhead distribution facilities to underground in Dominion's Virginia service territory.

Company: Pennoni **Project Dates:** 2014 - Present

Verizon Fios, Loudon County, Virginia – Project Manager.

Mr. Baker managed the engineering, surveying, construction inspection, and right-of-way acquisition services for this Verizon project. The scope of services included the facility relocation, under grounding of existing utility lines, utility line extensions, and conduit installations. Also, Mr. Baker designed and prepared the service construction documents, assisted with construction contract administration, provided permitting, prepared legal descriptions/ exhibits, and acquired rights-of-way.

Company: Pennoni **Project Dates:** 2008 - 2009

* 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.

As the Lead Utility Coordination Manager, Mr. Baker would not be required to be on-site full-time.



Work History Forms

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Fairfax County Parkway (FCP) Phase I/II & IV (Design-Build) Location: Springfield, VA	Name: Johnson, Mirmiran & Thompson, Inc 72 Loveton Circle Sparks, MD 21152	Federal Highway Administration Eastern Federal Lands Hwy. Division 21400 Ridgetop Circle Sterling, VA 20166-6511 Mr. Robert Morris T 703.404.6302 F 703.404.6217 E robert.morris@fhwa.dot.gov	November 2010 Phase I/II July 2011 Phase IV	November 2010 (Phase I/II) (Actual) July 2011 (Phase IV) (Actual)	\$73,756 Contract Value (Excludes Owner's Option #3 and Phase IV)	\$112,416 Contract (Final) Value (Includes Owner's Option #3 and Phase IV)	\$112,416

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.



OVERALL PROJECT DESCRIPTION:

The Eastern Federal Lands Highway Division (EFLHD), as the representative for the Virginia Department of Transportation (VDOT)/U.S. Army Garrison Fort Belvoir/Fairfax County, selected Cherry Hill Construction Inc., A Tutor Perini Company (CHC) for this Award Winning Design-Build (D-B) project. The four-lane divided limited access highway completed the missing connection of FCP to I-95 and provides critical access to the National Geospatial-Intelligence Agency's (NGA) facility at Fort Belvoir EPG. **D-B Fee \$112.5M.**

PROJECT COMPONENTS:

- The 2.2 mile project began at Rolling Road /Franconia-Springfield Parkway and proceeded southeastward on a new alignment ending east of Fullerton Road.
- The project also included widening of I-95 to accommodate a new exit lane designed as a certified Defense Access Road that provides direct access to the NGA.
- Phased erosion and sediment control and maintenance-of-traffic (MOT), grading, drainage and paving, five stormwater management facilities with controlled clay core embankment, six new bridge structures, noise walls, lighting, traffic signals, landscaping, signing/stripping and extensive environmental services were all a part of the D-B project.
- This project also provided a connection from FCP N.B. to Boudinot Dr. via Ramp B; and access from S.B. FCP to Boudinot Dr. via Ramp D and a new bridge crossing environmentally sensitive Accotink Creek.
- The project required coordination with other contractors working on adjacent projects including the base.

PROJECT CHALLENGES:

- The FCP alignment cut through the Engineering Proving Ground (EPG) and crossed five former firing ranges and testing sites including three RCRA sites that had significant groundwater and soil contamination, and stringent Land Use Controls required by an EPA Consent Order to protect human health and the environment including the investigation, characterization, and ultimate disposal of over 22,000 TNS of contaminated materials to an offsite facility.
- Access across the Accotink Creek for significant bridge structure and roadway construction was needed for schedule demands and project continuity.
- Phase IV was added to provide access to N.B. FCP from Boudinot Dr. by extending Boudinot Dr. beneath the FCP and constructing Loop B increase scope.
- To meet the requirements of Base Relocation and Closure (BRAC), the FCP project had an extremely aggressive schedule.

PROJECT SOLUTIONS:

- Implemented a detailed waste investigation and characterization plan for contaminated material in early construction phases. This investigation plan assured schedule demands were not impeded by recognition of disposal requirements early on.
- Designed and gained approval from the Department of Natural Resources for a low level stream crossing across the Accotink Creek which provided access for bridge and roadway construction.
- By maintaining a schedule ahead of the milestones throughout Phases I and II, EFLHD and VDOT were able to add Phase IV to the project taking advantage of available American Recovery and Investment Act (ARRA) funds.
- The D-B Team implemented a formal partnering process and initiated design upon Notice-of-Award, beginning in Oct. 2008 and delivered approval for construction plans that allowed construction of the western end (west of Accotink Creek) of the project to commence in April 2009. Having performed the preliminary engineering for VDOT, Jacobs interacted with the D-B Team through this successful partnering process. Full plan approval for the remainder of the contract was received on Aug. 2009, approximately three months ahead of schedule. This accelerated design schedule allowed earlier construction starts that enabled the opening of Phases I/II on Sept. 20, 2010, nearly a month ahead of scheduled.

*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.

SIMILAR SERVICES

- | | |
|-------------------------|---------------------------------|
| ✓ Roadway | ✓ Noise Walls |
| ✓ Survey | ✓ ROW Services |
| ✓ Structure and Bridges | ✓ Utilities |
| ✓ Environmental | ✓ Public Involvement/ Relations |
| ✓ Geotechnical | ✓ Independent QA/QC |
| ✓ Hydraulics | ✓ Construction |
| ✓ Traffic Control | Engineering / |
| ✓ ITS Devices | Inspection |
| | ✓ Project Management |

PROJECT RELEVANCE

- Large complex Design-Build Project in Virginia
- ROW Services provided by D-B Team
- Jacobs performed the preliminary engineering for VDOT
- Public Outreach program
- Independent QA/QC Programs
- Extensive design collaboration and coordination
- Formal Partnering Program
- Coordination with multiple 3rd Party Agencies
- Design and construction of 4 signalized intersections

PROJECT HIGHLIGHTS

- Project received the VTCA 2012 Transportation Engineering Award for Projects Greater Than \$10M
- ACEC 2011 Honor Awards for Excellence in Engineering Design
- 2013 DBIA Transportation National Merit Award
- 2013 DBIA Mid-Atlantic Transportation Award
- Maintaining positive schedule throughout the D-B of Phases I and II opening nearly a month ahead of schedule.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: 9th Street Bridge Replacement over New York Avenue and Amtrak and CSXT Railways Design-Build Location: Washington, DC	Name: Johnson, Mirmiran & Thompson, Inc. 72 Loveton Circle Sparks, MD 21152	Federal Highway Administration Eastern Federal Lands Hwy. Division 21400 Ridgetop Circle Sterling, VA 20166-6511 Mr. Ken Atkins T 703.404.6307 F 703.404.6217 E kenneth.atkins@fhwa.dot.gov	July 2010	May 2011 (Actual) (Project Extended at Owners Request)	\$43,960 Contract Value	\$58,444 Contract (Final) Value	\$58,444 Contract Value (Owner increased scope by adding ROW acquisition and Rail Road services by Amtrak and CSX-T to the D-B contract)

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.



OVERALL PROJECT DESCRIPTION:

The Federal Highway Administration-Eastern Federal Lands Highway Division (EFLHD) representing the District Department of Transportation (DDOT) selected Cherry Hill Construction, Inc., A Tutor Perini Company (CHC) for this competitively bid "Best Value" Design-Build (D-B) project. The Team was issued Notice-to-Proceed on September 6, 2006 and completed its 100% design milestone approximately one-month ahead of schedule. Construction was able to begin in advance of the August 2009 scheduled date. The Project used a community outreach program, in which the Design-Build team established a project website, hosting community Advisory Neighborhood Commission (ANC) Ward 5 meetings, and implemented an extensive aesthetic content program. Project was completed with no environmental violations and zero claims.

PROJECT COMPONENTS:

- Design and construction of a new four span structure over CSXT and Amtrak rail facilities and New York Ave on a parallel alignment with the existing 7-span structure.
- Full depth reconstruction and widening of 1,700 feet of New York Ave along with the realignment and construction of three new signalized intersections.
- Complete removal of the existing structure after traffic was set in to the final configuration.
- The project included the design and construction of ornamental street lighting, new storm water management (SWM) bioretention facilities, relocation of an 18" diameter structure mounted waterline, a new cast-in-place concrete retaining wall to minimize impacts to an adjacent SWM facility, landscaping, phased erosion and sediment control, and coordination with adjacent projects.

PROJECT CHALLENGES:

- DDOT was unable to allocate sufficient resources to obtain the temporary and permanent easements required for the Project to go to construction.
- Coordinating with DC Water, Washington Gas, PEPCO, MCI and Amtrak and CSXT Railroads.
- Maintaining the volume of an average of 60,000 vehicles on New York Avenue and 24,000 vehicles on 9th Street mandated seven major traffic phases to accommodate peak rush-hour volumes without impact.
- DDOT's goal required emphasis on the aesthetic design to achieve an elegant structure with numerous architectural enhancements.

PROJECT SOLUTIONS:

- The Team formed a partnering agreement with DDOT, EFLHD and CSXT, United States Postal Service, Amtrak and the DC Water as significant stakeholders. These stakeholders were essential to the acquisition of easements and property transfers for the construction of the project. In support of the Owners property needs, a Contract Modification was issued to the D-B Team for right-of-way services. The D-B Team performed all Title Searches, Assessments, Plat preparations, and assisted with the assembly of agreements and closing services.
- Project phasing allowed vehicular and pedestrian traffic free movement throughout the project, with zero impact to the peak rush hour movement by using a lane closure that was reversed daily during both construction and demolition.
- An aesthetic development program was led by local artist specializing in urban streetscape design was created. The program allowed the Owner to work with the artist to develop a design, adding or deducting elements at will, all the while maintaining their budget and creating the envisioned "gateway."

*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.

SIMILAR SERVICES

- | | |
|--|---|
| ✓ Roadway | ✓ Utility Coordination and Installation |
| ✓ Multiphase MOT | ✓ QA/QC |
| ✓ Structure and Bridges | ✓ Construction Engineering / Inspection |
| ✓ ROW Services | ✓ Project Management |
| ✓ Geotechnical | ✓ Coordination with Party Agencies |
| ✓ Hydraulics | |
| ✓ Partnering with 3 rd Party Agencies | |

PROJECT RELEVANCE

- Multi-Phased MOT to handle high volume traffic and not impact peak rush-hour
- ROW services provided by Design-Build Team
- Design and construction of multiple signalized intersections.
- Independent QA/QC Program
- Coordination with 3rd Party Agencies including Railroads
- Developed the Public Outreach Program and cooperated with adjacent local businesses and property owners to minimize any impacts during construction.

PROJECT HIGHLIGHTS

- **Achieved 19.2% DBE through the federal SBA program**
- Team focus on achieving an elegant, streamlined bridge with numerous architectural enhancements along with an aesthetic development program lead by a local artist specializing in urban design.
- Project had very successful Partnering and Public Outreach programs.
- CHC accelerated the project schedule by acquiring the necessary Amtrak materials at no contractor profit.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-95 Express Toll Lanes (Section 100) I-895 to South of Kenwood / Chesaco Avenue Bridges Location: Baltimore, MD	Name: Greenhorne & O'Mara, Inc. / Century Engineering, Inc. A Joint Venture Baltimore MD	Maryland Transportation Authority I-95 GEC Partners 8019 Corporate Drive, Suite F Mr. Gradon Tobery Construction Project Manager T 410.931.0440 F 410.931.4110 E Gradon.tobery@stvinc.com	December 2010	July 2011 (Actual)	\$86,797 Contract Value (Original)	\$96,017 Contract Value (Actual)	\$96,017

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.

 	<p>OVERALL PROJECT DESCRIPTION: This "Award Winning" project consisted of the extensive highway widening of a section of I-95, in order to provide two Express Toll Lanes (ETL) in each direction. Cherry Hill Construction, Inc. A Tutor Perini Company (CHC) was the Lead Contractor providing construction services on this \$96M project extending 1.8 miles from the I-895 split to south of the Kenwood Avenue Bridge in Baltimore County. The express toll lanes consist of a 12' outside shoulder, two 12' lanes and a 4' inside shoulder. This project also included extending the Chesaco Avenue Bridge and providing soil nail walls at both the Chesaco and Hazelwood Avenue structures. Also included were 8 retaining walls and 9 noise abatement walls used to reduce impact to adjoining properties and stay within the existing right-of-way.</p> <p>PROJECT COMPONENTS:</p> <ul style="list-style-type: none"> Multi-phased MOT to allow continuous traffic on I-95 (178,000 ADT) as well as 2 existing overpasses during all construction phases. Direct coordination with adjacent property owners for CHC to obtain temporary construction easements. Over 320,000 cubic yards of excavation and embankment. 7 cast-in-place retaining walls requiring over 77,400 linear feet of H-pile and over 27,000 cubic yards of concrete. Top-down retaining wall comprised of H-pile, lagging with a drainage system and grouted tendon tie-backs, with an architectural cast-in-place concrete facing. 9 new noise abatement walls (approximately 341,850 square feet) requiring 20,034 linear feet of drilled shaft foundations. 4 soil nail walls with architectural treatment totaling 11,171 square feet. 23,831 linear feet of various diameter (15" to 48") storm drains and structures and over 30,000 linear feet of 6" underdrain. 53,326 square yards of cement stabilized soils, 187,500 tons of 6" graded aggregate base, and 190,000 tons of asphalt superpave. Installed, maintained, and removed all erosion and sediment control devices during multiple phases including converting temporary basins to permanent facilities. Landscaping, signing, pavement markings, lighting, and ITS devices. <p>PROJECT CHALLENGES:</p> <ul style="list-style-type: none"> Unsuitable subsurface conditions required excessive amounts of undercut. Ongoing concurrent adjacent construction projects. Construction within existing MDTA right-of-way. Multi-phased high volume maintenance of traffic with major complex traffic switches. <p>PROJECT SOLUTIONS:</p> <ul style="list-style-type: none"> Through formal partnering and ATC to utilize soil cement in lieu of undercut and refill was utilized which saved time, cost, and minimized impacts to the traveling public. Multiple meetings held by the GEC allowed adjacent contractors to coordinate schedules and achieve corridor milestones. Extensive temporary support of excavation systems utilizing tie-backs and CHC obtained subterranean lease agreements with adjacent homeowners. Full time maintenance of traffic crews allowing day and night work including 3 major weekend traffic shifts to I-95. 	<p align="center">SIMILAR SERVICES</p> <table border="0"> <tr> <td>✓ Roadway</td> <td>✓ Noise Walls</td> </tr> <tr> <td>✓ Survey</td> <td>✓ Utilities</td> </tr> <tr> <td>✓ Structure and Bridges</td> <td>✓ Public Involvement/ Relations</td> </tr> <tr> <td>✓ Environmental</td> <td>✓ ITS Devices</td> </tr> <tr> <td>✓ Geotechnical</td> <td>✓ Project Management</td> </tr> <tr> <td>✓ Hydraulics</td> <td></td> </tr> <tr> <td>✓ Traffic Control</td> <td></td> </tr> </table>	✓ Roadway	✓ Noise Walls	✓ Survey	✓ Utilities	✓ Structure and Bridges	✓ Public Involvement/ Relations	✓ Environmental	✓ ITS Devices	✓ Geotechnical	✓ Project Management	✓ Hydraulics		✓ Traffic Control	
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✓ Environmental	✓ ITS Devices															
✓ Geotechnical	✓ Project Management															
✓ Hydraulics																
✓ Traffic Control																
	<p align="center">PROJECT RELEVANCE</p> <ul style="list-style-type: none"> Large complex highway project within a tight corridor with high volumes of traffic Multi-phased MOT Public Outreach and coordination with adjacent property owners to utilize subterranean lease agreements for the installation of SOE tiebacks under adjacent properties Soil Nail Walls utilized at the four existing bridge abutments Retaining and Noise Abatement Walls 															
	<p align="center">PROJECT HIGHLIGHTS</p> <ul style="list-style-type: none"> Through early identification of a potential impact due to unsuitable insitu soils, CHC proposed an engineered solution to perform cement stabilization of existing soils in lieu of physical undercut and replacement in the median of I-95. Exceeded MBE participation goals Received the 2011 National Asphalt Quality in Construction Award 															
	<p>*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.</p>															

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-564 Intermodal Connector Design/Build Location: Norfolk, VA	Name: Cherry Hill Construction Inc. 8211 Washington Blvd. Jessup, MD 20794	Name of Client: Federal Highway Administration – Eastern Federal Lands Highway Division Phone: 703-963-7481 Project Manager: Mr. Robert Morris Phone: 703-963-7481 Email: Robert.morris@dot.gov	10/2016	03/2016	\$92,500	\$92,500	\$2,800

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.



OVERALL PROJECT DESCRIPTION:

Jacobs is the lead designer to the Jacobs/Stantec Joint Venture with Cherry Hill Construction for the I-564 Intermodal Connector project. The project consists of design, permitting, and construction of approximately 2.8 miles of new four-lane limited access highway from existing I-564 to the Naval Station Norfolk and Norfolk International entrances. The purpose of this project is to reduce congestion through the design of a new interchange, new roadways and improvements to existing roadways and intersections. To date, the design has successfully met these operational objectives and has successfully met all schedule deadlines.

PROJECT COMPONENTS:

- Roadway Design including a new four-lane roadway thru an environmentally sensitive corridor, roadway widening along existing I-564, and an interchange upgrade at Terminal Blvd.
- Intersection Improvements including a series of ramp connections and service roads to existing secondary roadways, a railroad crossing and a connection to a security gate.
- Storm Drainage Design including stormwater management utilizing the latest Low Impact Development (LID) techniques such as Bioretention and Grass Swales with soil amendments. Efforts also include the creation of erosion and sediment control plans.
- Hydraulic and Hydrologic Analysis of three major watersheds with multiple culverts and channels.
- Floodplain and Scour Analysis for the bridge and watershed at Boush Creek.
- Structural Design including a series of retaining walls and a proposed bridge over Hampton Blvd.
- Quantity Takeoff and associated cost estimates for the contractor's use in bidding the project
- Completing Design with respect to multiple standards; VDOT, EFLHD, UFC, NAVFAC

PROJECT SOLUTIONS:

- **Schedule Savings Related to the Environmental & Stormwater Permits:** The Jacobs design team worked with the contractor and EFLHD to schedule upfront meetings with VDOT and DEQ. Although this approach was an at-risk feature for the contractor, they acknowledged the benefit of addressing permits early in the process and authorized Jacobs to hold the meetings prior to notice-to-proceed. As a result of the initial meeting, Jacobs created a document that wasn't required by the RFP but added considerable value to the project: The Stormwater Criteria and Constraints Report. This document was a carry-over from Jacobs' experience in Maryland and establishes a methodical process to meet the Maximum Extent Practicable (MEP) requirements, the new process that DEQ has adopted to meet the latest Water Quality requirements.
- **Expedited Analysis of Alignment Options:** Following notice to proceed, the Design/Build team was informed that the provided traffic counts from the RFP were too low and the number of lanes needed to meet the traffic demands. This change required the design team to quickly consider revised alignment options, additional lane requirements and provided a recommend solution to EFLHD. During the bid process, such a change would normally take 4-5 weeks to evaluate. Jacobs performed the redesign and cost estimate within 2 weeks. This expedited approach provided EFLHD enough information to make a decision regarding the alignment, saving 2-3 weeks on the overall schedule. Jacobs can provide similar accelerated services to VDOT to handle unanticipated information and maintain final submission timelines.
- **Construction Delivery** while maintaining continuous operations of Naval Port Operations at Naval Station Norfolk, Naval Flight Operations at Chambers Naval Aviation Field, and Commercial Port Activity at Norfolk International Terminal Port

SIMILAR SERVICES

- | | |
|-----------------------------------|-------------------------|
| ✓ Roadway Design | ✓ Utility Coordination |
| ✓ Multiphase MOT | ✓ Landscaping Design |
| ✓ Structure and Bridges | ✓ QA/QC |
| ✓ Hydraulics | ✓ Construction Services |
| ✓ Active Railroad in project area | ✓ Project Management |
| | ✓ Partnering |

PROJECT RELEVANCE

- Design-Build project in Norfolk, VA
- Cherry Hill Construction and Jacobs working together co-located, on-site with other team members
- Extensive design collaboration and coordination
- Coordination with 3rd Party Agencies

PROJECT HIGHLIGHTS

- **Co-located Staff:** Cherry Hill Construction Team and Jacobs Design Team are co-located on site
- **Innovative Design Solutions:** Use of pre-cast bridge components allows for rapid construction of the bridge over Hampton Blvd, minimizing disruption to traffic
- **Advanced Planning/Partnering:** A formal partnering session was held at the project start that included multiple stakeholders including FHWA, VDOT, the Navy, VPA and the City of Norfolk
- **Unique Design Characteristics:** Drainage design encompassed many unique design aspects including Low Impact Development (LID) SWM controls, BASH compliance, high water table and consideration of the Category 2 Hurricane.

*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.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: MD 200, Intercounty Connector Design-Build Contract A Location: Montgomery County, MD	Name: Tri-Venture of Granite Construction, Corman Construction and GA and FC Wagman, Inc.	Name of Client: Maryland State Highway Administration Phone: 301-586-9267 Project Manager: Mr. Mark Coblentz Phone: 301-586-9267 Email: mcoblentz@sha.state.md.us	01/2011	02/2011	\$478,000	\$478,000	\$36,800

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.

  	<p>OVERALL PROJECT DESCRIPTION: Jacobs' was part of a joint venture responsible for the preparation of design documents for ICC Design-Build Contract A, 7.2-mile limited access tolled freeway. The project included the design of 3 interchanges, 18 bridges, 8 major culverts, four retaining walls and approximately 5 miles of noise barriers along the corridor. Worked closely with the owner and the contractor throughout design and construction to develop and implement cost saving measures. Project included overlay, widening and safety improvements along I-370. Modified interchanges at MD 355 and Shady Grove Road. Worked with the contractor to develop multi stage maintenance of traffic plans to accomplish the work while under traffic. Phased MOT allowed for maintained access and connections to residential and commercial properties.</p> <p>PROJECT COMPONENTS:</p> <ul style="list-style-type: none"> Roadway – All aspects of the roadway design including line and grade and section. Included local roadways, alignments for detour roadways necessary to maintain traffic and the bike path. Construction documents included plans, profiles, typical sections and details. Cross sections were provided to the contractor for reference. Structures – Design of all bridges and culverts. Construction documents included plans, sections and details for bridges, foundation plans and borings and standard details. Drainage – Development of plans for erosion and sediment control; permanent roadway drainage and stormwater management and hydraulic modeling of waterway crossings. Erosion and Sediment control plans included early activities (clearing) and each traffic control phase. Construction documents included plans and details. The permanent drainage and stormwater management facilities were incorporated into the phased erosion and sediment control plans. Construction documents included plans and details; a preliminary stormwater management report and a final stormwater management report. Drainage area maps were prepared for each report to show existing and proposed conditions. Waterway crossings were sized to keep the 100-year flood elevation within the right-of-way. Hydrology was provided for the three major waterways, hydrology was prepared by IC for the other eight crossings. A preliminary and final hydrologic and hydraulic report was prepared. Utilities – Relocation of utilities to facilitate construction. Relocations were provided for electric (Potomac Electric Power Company, PEPCO); phone (Verizon); gas (Washington Gas); water and sewer (Washington Suburban Sanitary Commission); and cable TV (Comcast). Relocation of gas transmission mains owned by Columbia Gas was done by others. Construction documents included plans, sections and details and were coordinated and approved by the utility owner. ITS/ETC – Preparation of designs for tolling and traffic monitoring equipment. Equipment included traffic monitoring cameras at a variety of locations; lane use signaling at the deckover (BR-16); Highway Advisory Radio (HAR) stations; and open road tolling equipment. Construction documents included plans and O&M manuals for equipment. A corridor-wide definitive design was developed followed by final design included in the segment finishes packages. Geotechnical and Pavement – Subsurface investigation and recommendations for fills and foundations and design of pavement. Following a program of testing including borings; rock cores and monitoring wells, the results were evaluated and reports prepared to support the designs. A separate report was prepared for each structure; roadway segment and for signing and other miscellaneous items on the project. A separate analysis and set of reports were prepared providing pavement recommendations. Traffic – Design of traffic controls for the work. Traffic control took three forms: design of MOT to support construction; design of new traffic signals and signing for the project. Traffic engineering was coordinated through the SHA Office of Traffic and Safety (OOTS) by the ICC Team. Signing and signals were developed first on a corridor-wide basis for definitive design and included in the final roadway or segment finishes packages as needed. Lighting – Lighting was required for the major interchanges at MD 355, Metro Access Road and MD 97. In addition, lighting was required in the deckover structure, BR-16. Lighting plans included tie-ins to existing lighting and noted locations where the design could salvage any existing equipment. <p>PROJECT SOLUTIONS:</p> <ul style="list-style-type: none"> Innovative Design: Jacobs used innovative designs resulting in cost savings: integrated design of ETC gantries for use in other ICC Design Segments (\$400k); coordination of conduit systems for lighting, ITS/ETC, and signing purposes (\$100k); and coordination of power sources for lighting, ITS/ETC, deckover, and sign lighting (\$100k). Environmental Commitments: The project permits contained over 200 various environmental commitments as a result of the mitigation identified in the Final Environmental Impact Statement (FEIS) the US Army Corps of Engineers permit and the Maryland Department of the Environment Permit. Construction/Reconstruction Using Innovative Designs, Methods, and Materials: Several environmentally sensitive streams required SWM to include thermal protection. Thermal protection was achieved first by placing sand infiltration trenches before each inlet to capture the first flush of water. Redundancy was added by utilizing an underground bed of stones as the SWM device with a 24 hour release. 	<p align="center">SIMILAR SERVICES</p> <table border="0"> <tr> <td>✓ Roadway Design</td> <td>✓ Utility Coordination</td> </tr> <tr> <td>✓ Multiphase MOT</td> <td>✓ Landscaping Design</td> </tr> <tr> <td>✓ Structure and Bridges</td> <td>✓ Construction Services</td> </tr> <tr> <td>✓ Hydraulics</td> <td>✓ Project Management</td> </tr> <tr> <td>✓ QA/QC</td> <td>✓ Partnering</td> </tr> <tr> <td>✓ Community Involvement</td> <td></td> </tr> </table>	✓ Roadway Design	✓ Utility Coordination	✓ Multiphase MOT	✓ Landscaping Design	✓ Structure and Bridges	✓ Construction Services	✓ Hydraulics	✓ Project Management	✓ QA/QC	✓ Partnering	✓ Community Involvement	
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✓ Hydraulics	✓ Project Management													
✓ QA/QC	✓ Partnering													
✓ Community Involvement														
	<p align="center">PROJECT RELEVANCE</p> <ul style="list-style-type: none"> • Design-Build project • Innovative Design Concepts • Extensive design collaboration and coordination • Jacobs and Schnabel Design-Build experience 													
	<p align="center">PROJECT HIGHLIGHTS</p> <ul style="list-style-type: none"> • Schedule: The project was completed within the agreed schedule. An extension was granted due to client generated delays and inclement weather. • Design and Construction Activity Interaction or Integration: All key staff, and most support staff from both design and construction were co located at a single project office. • QA and QC Plans and Programs: QA/QC was instrumental to the success of the project both during design and construction. All project staff were trained in the QA/QC procedures. • Geotechnical: When putting the proposal together, the Design Team brought Schnabel on board to provide geotechnical services. Schnabel worked first with the designers, mutually developing a somewhat extensive scope of service that provided reasonably solid information about subsurface conditions and then continued working with the contractor. • Public Involvement: Community involvement work was led by the ICC Team and supported by the contractor. 													

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ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: BRAC-related Roadway/Highway and Infrastructure/Site Improvements Location: Fort Belvoir, VA	Name: AKHI, IKBI, TMG, Shirley	Name of Client: US Army Corps of Engineers, Baltimore District Phone: 410-962-4363 Project Manager: Mr. Dave Roberts, PE Phone: 410-962-4363 Email: david.i.roberts@usace.army.mil	10/2010	10/2010	\$152,000	\$152,000	\$10,000

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.



OVERALL PROJECT DESCRIPTION:

Jacobs managed and provided design services for several transportation and infrastructure improvements for Fort Belvoir at the Engineer Proving Ground (EPG) and Main Post.

Jacobs was responsible for the coordination and design of roads, bridges, utilities and other infrastructure improvements related to the 2005 Base Realignment and Closure Act (BRAC). Our responsibilities included management and coordination of work, preparation of preliminary and final designs; development of project funding requirements and project cost estimates, site logistics plans and design schedules; engineering technical assistance during construction and VDOT LUP permits for construction entrances. The project demanded extensive coordination with VDOT, EFLHD, US Army, NGA, VDEQ, VDH, various utility companies, and other design and contractor firms.

Our tasks included feasibility studies/analyses; preliminary and final engineering design for new and widened roadways, intersection improvements, interchange ramps, a new roundabout, and multi-purpose trails; structures design, including alternatives analysis (bridge vs. arch culvert in two locations), a new bridge over waterway/wetlands, alternatives analysis and final design for a new bridge over Route 1, retaining walls, and arch culvert; hydraulics and drainage design including culverts, open channels, storm sewers, erosion and sediment control, stormwater management, analysis of bridged waterways and scour potential, development of a staged construction approach to mitigate sediment in sensitive downstream areas with anadromous fish a wetland control structure, and multiple culvert crossings including two wildlife culverts; and permit drawings. Our services also included traffic engineering design, including signing, signal, lighting, pavement marking, ITS; temporary traffic control plans; utility design and coordination utilizing Army and local utility agency standards, landscape architecture planning and design; transportation security analysis, recommendations and implementation; topographical survey, including land acquisition plats and subsurface utility investigation; multiple sanitary, water, gas, electric, and steam lines design and coordination; and geotechnical analysis and recommendations.

Jacobs' work at the EPG site included direct design and general project coordination with the adjacent Fairfax County Parkway project from Rolling Road to Fullerton Road, administered as a Design-Build project by EFLHD and constructed by Cherry Hill Construction (CHC). There was direct interface and coordination of these two projects at two connection points from Fairfax County Parkway (FCP) interchange ramps and associated roadways onto the EPG site. Jacobs also coordinated with CHC and EFLHD during development and construction of a temporary construction entrance for the EPG at the future FCP bridge over Fullerton Road.

PROJECT COMPONENTS:

- This project included widening along four (4) roadway corridors to provide additional capacity for the Fort Belvoir Main Post transportation network. Our work included coordination of multiple tasks and construction packages, including the oversight of multiple concurrent design plans packages and technical design assistance tasks, requiring quick turnaround of studies and deliverables

PROJECT SOLUTIONS:

- Aesthetic Retaining Walls & Abutments:** To meet the aesthetic needs of the base, Jacobs implemented a series of cost effective surface treatments for the retaining walls and abutments on the project. Near the Route 1 corridor, there were three types of retaining walls: A VDOT std. RW-3 wall, a MSE Wall and a pair of bridge abutments. All were specified to have a matching simulated stone masonry architectural finish to match the color pallet of the rest of the base. Near the historic amphitheater, a terrace block wall was designed and constructed to better blend in with the forested area adjacent to the wall and within site of the amphitheater's stage.
- Stormwater Wetland Control Structure:** Jacobs worked with Fort Belvoir DPW to perform multiple site visits and assess the intended scope. The control structure served to preserve an existing upstream wetland elevation via a series of weirs, allowing for natural sediment transport. For larger events (10-year/ 100-year), the structure contains larger overflow weirs to assist in reducing the flow to the downstream stream restoration project. Finally, the structure was designed with multiple openings on all sides to address maintenance concerns due to the heavy amount of debris from the upstream forested area. In September 2011, Tropical Storm Lee brought a 100-year storm event to the area. The wetland control structure handled considerable debris from upstream and operated as expected, protecting the downstream stream restoration project. After the storm, the water level returned to the seasonal level of the upstream wetland.

*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

SIMILAR SERVICES

- | | |
|-------------------------|-------------------------|
| ✓ Roadway Design | ✓ Utility Design |
| ✓ Multiphase MOT | ✓ Landscaping Design |
| ✓ Structure and Bridges | ✓ QA/QC |
| ✓ Traffic Signal Design | ✓ Construction Services |
| ✓ Hydraulics | ✓ Project Management |
| | ✓ Partnering |

PROJECT RELEVANCE

- Multi-Phased MOT to handle high volume traffic and not impact peak rush-hour
- Plans developed to VDOT standards
- Extensive design collaboration and coordination
- Incorporation of environmental elements
- Flexible and adaptable design for evolving future requirements
- Collaborative environment among user groups, USACE and Jacobs led to innovative solutions for project
- Coordination with 3rd Party Agencies

PROJECT HIGHLIGHTS

- Accelerated Design Schedule:** Jacobs met all deadlines on the accelerated 18 month design schedule, even with discovery of contaminated soil that altered the horizontal alignment of one of the roadways at 90% design stage.
- Full Service Team** providing: planning, designing and managing the execution of much needed infrastructure improvements required to support these agencies moving into their new facilities. Our role includes site logistics planning, wetland permitting, technical support, on-call surveying support, project cost validation, detailed design and construction administration support for new infrastructure projects.



VDOT



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