I-64 WIDENING AND ROUTE 623 INTERCHANGE IMPROVEMENTS

A Design-Build Project

Federal Project No.: NH-064-2(150)
Contract ID Number: C00070542DB55
November 15, 2012
November 15, 2012

Commonwealth of Virginia
Department of Transportation (VDOT)
Central Office Mail Center
Loading Dock Entrance
1401 E. Broad Street
Richmond, Virginia, 23219

Attention: Brenda L. Williams

Re: Statement of Qualifications
I-64 Widening and Route 623 Interchange Improvements
RFQ Number: C00070542DB55

Dear Mrs. Williams;

Cherry Hill Construction, Inc. (CHC) is pleased to offer our Design – Build team with a proven track record of success and accomplishment in delivering a complete roadway reconstruction in a fast paced environment. The Design Build Team has a solid history of delivering projects on schedule and within budget. We offer the following:

- A Richmond District based lead design firm with current, relevant, and proven VDOT experience – The Louis Berger Group, Inc.
- A Richmond District based quality assurance team with current, relevant, and proven VDOT experience – Greenhorne & O’Mara, Inc.
- A Richmond District based materials / geotechnical engineering firm with decades of institutional knowledge – AMEC Environment & Infrastructure, Inc.
- Several Richmond District based DBE and SWaM sub-consultants with current and relevant VDOT experience – Precision Measurements, Inc. (survey); Froehling & Robertson, Inc. (QAM Testing); Accumark, Inc. (utility test holes / designations); Siddall, Inc. (public relations)

Enclosed for your evaluation is one original paper version of the Statement of Qualifications with full supporting documentation, one CD-ROM containing the entire Statement of Qualifications in a single cohesive Adobe PDF, and 10 abbreviated paper copies of the original Statement of Qualifications.

We welcome this opportunity to compete for this project and look forward to providing a safe, successful project within budget.

Cherry Hill Construction, Inc.
A Tutor Perini Company

Bernie Beauchemin, Vice President Estimating
3.2
LETTER OF SUBMITTAL
3.2 LETTER OF SUBMITTAL

INTRODUCTION TO CHERRY HILL CONSTRUCTION

Choose Cherry Hill Construction, Inc. (CHC) as your design-builder for your I-64 project, and you will be delighted with your selection. We offer you:

- A proven heavy-highway contractor with decades of Interstate construction experience
- A proven partner that excels in design-build project delivery with several recent successes to our credit
- A proven design-builder that recognizes and welcomes stakeholder involvement
- A design-build project manager with the organizational authority to back our commitment to you

Cherry Hill Construction, Inc.: Offeror, Design-Builder, Prime Contractor, Design-Build Management

CHC will be the design-builder responsible for design and construction of this project. CHC is a wholly owned subsidiary of the Tutor Perini Corporation (currently ranked No. 9 of Engineering News Record’s list of the Top 400 Contractors, No. 34 on ENR’s Top 100 Design-Build Firms, and No. 5 ENR’s Top Green Contractors) and has the support and diversified resources of one of the nation’s most experienced civil contractors. Founded in 1968, CHC is one of the largest constructors in Maryland, having delivered over $179 million design-build projects in Maryland, Washington, and Virginia over the past six years. In addition, CHC recently completed $153 million construction on I-95 Section 100 for MDTA in Baltimore, Maryland. Greenhouse & O’Mara, Inc. (G&O), our QA Manager for this project, was the Lead Joint Venture firm for the design of I-95 Section 100, Segment 1 and worked in partnership with CHC during construction to bring the project to a successful completion including receipt of a MDQI award for Partnering. Leading the CHC Team at the Senior Management Levels are Gregory Andricos, PE, a Vice President of CHC, serving as the design-build project manager; and Roger Lant, a Project Manager at CHC, serving as the construction manager on this contract.

INTRODUCTION TO THE CHERRY HILL TEAM

Choose the Cherry Hill Team for “turn-key” project delivery by a group of experts nearly all of which are based in the Richmond District. The Cherry Hill Team offers you the following experts.

The Louis Berger Group, Inc.: Lead Designer, Design Management

The Louis Berger Group, Inc. (LBG), is a national engineering, planning, and construction administration organization consistently ranked by ENR among the top design firms in the United States. In 2012, LBG ranked 25th in the Top 500 Design Firms, 9th in the Top 100 Pure Designer List, and 10th in the Top 20 Transportation firms. Founded by Dr. Louis Berger in 1953, LBG has grown
into a recognized worldwide leader in the consulting field employing over 3,000 personnel worldwide. LBG has maintained a vibrant office in downtown Richmond for over 250 years, completing projects and project assignments in nearly every county in the Commonwealth of Virginia for state agencies, local governments, and federal agencies. LBG services in Virginia have traditionally focused on transportation infrastructure projects, transportation planning, and environmental services. LBG will serve as the design manager for this project, performing structure and bridge, roadway/transportation, drainage/stormwater management, permitting and utilities engineering services.

Greenhouse & O’Mara: Quality Assurance Manager, Prime QAM
G&O is a national, full-service, multidisciplinary consulting engineering firm located in Richmond that stresses teamwork, communication, and continual quality improvement. Founded in 1950, G&O consistently ranks as one of the top engineering design firms in the U.S. Their large, diverse staff of more than 500 professionals offers a broad spectrum of expertise. G&O has provided services to the Commonwealth of Virginia since the 1960s and maintains current registration to provide engineering services.

AMEC: Geotechnical, Materials, and Pavement Engineering
AMEC Environment & Infrastructure, Inc. (AMEC) is an industry leader in engineering, geotechnical, construction materials testing, environmental and management consulting services. The firm is ranked 7th out of the top 500 design firms and 17th in the top 200 environmental firms by ENR. AMEC has completed transportation studies and designs on several transportation and design-build projects as well as construction management services. Notable projects include Route 460 Connector – Phase I; I-495 Widening (HOT Lanes); VA Route 28 Corridor Improvements; Dulles Corridor Metrorail Phase I; Richmond Airport Drive Connector; and VDOT Statewide and Northern Virginia Limited On-call Geotechnical Contracts.

Precision Measurements, Inc. (DBE/SWaM): Surveying (Plats as Necessary)
Precision Measurements, Inc. (PMI) is a full service land surveying firm established in 1995, with offices in Virginia Beach, Newport News, Richmond, and Chantilly, Virginia. PMI offers a wide range of surveying services. The firm is currently certified by the Commonwealth of Virginia Minority Business Enterprise as a SWaM and DBE firm.

Accumark (SWaM): Utility Test Holes and Designations
Accumark, located in Hanover County provides professional subsurface utility engineering services on a daily basis across Virginia and the Eastern U.S. Accumark employs a team of professionals trained in utility designation, vacuum excavation, CADD design, research and documentation. Their staff has worked on various VDOT design projects statewide and was recently ranked number one for statewide subsurface utility designating and locating services. Accumark has also worked on VDOT design-build projects in the greater Richmond area, including I-295/Meadowville Interchange, Route 60/German School Road, and Middle Ground Boulevard.

Froehling and Robertson, Inc. (SWaM): Independent QAM Materials Lab
Established in 1881, Froehling & Robertson, Inc. (F&R) is a multi-disciplinary engineering firm that provides clients with the full range of services, including – but not limited to – core competencies of construction materials testing and geotechnical and environmental engineering. In support of this mission, F&R maintains a fleet of drilling equipment as well as accredited geotechnical and construction material testing laboratories that are utilized by each of our 13 offices, including Richmond.

Siddall, Inc. (SWaM): Public Involvement
Siddall, Inc. (Siddall) is an independently owned advertising and public relations agency in Richmond founded in 1975. For over 35 years, Siddall has helped state,
regional and local agencies communicate with the public. They have worked specifically in the transportation sector communicating to the public about construction, road expansion, public meetings, and other communications efforts to inform the public. They currently hold contracts with VDOT (Central Office) and the Richmond District Office, including the I-95 bridge restoration project. Richmond clients include VDOT, VA DMV, and VA DEQ.

**CES Consulting, LLC (DBE/SWaM):**

**Construction Quality Control**

CES Consulting (CES)’s construction inspection staff is well qualified to provide exceptional service to all clients. Most of their inspectors have requisite VDOT certifications and experience to meet the needs of the design-build contract. CES was formed by its three principal partners: Avtar Singh, PE, PMP; Chowdhary Gondy, PMP, PSP; and Kumar Barakam. CES has managed and delivered numerous QC assignments from single-season projects to multiyear projects on primary, secondary, and interstate roadways. The firm is a DMBE certified DBE and SWaM.

### 3.2.2 POINT OF CONTACT

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

CHC is the offeror, a C-Corporation incorporated in the State of Maryland, Federal Tax ID #52-0890004. CHC will be signatory to the VDOT Contract and have financial responsibility for performance of the contract.

As noted in the enclosed Surety Commitment letter (Appendix E), CHC has more than sufficient bonding capacity. There are no liability limitations.

### 3.2.5 FULL LEGAL NAME OF LEAD CONTRACTOR AND LEAD DESIGNER

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### 3.2.6 AFFILIATES AND SUBSIDIARIES

Cherry Hill Construction, Inc. has no subsidiaries. For a list of affiliates and parent company, please see Attachment 3.2.6 in Appendix B.

### 3.2.7 DEBARMENT CERTIFICATIONS

Completed Attachment 3.2.7(a) and completed Attachments 3.2.7(b) may be found in Appendix C.

### 3.2.8 OFFEROR’S VDOT PREQUAL NUMBER/STATUS

Cherry Hill Construction, Inc., has been issued VDOT Prequalification Number C090; CHC’s current VDOT prequalification status is “Prequalified (Currently Inactive).” An 8.5”X11” copy of the VDOT prequalification certificate is included in Appendix D.

### 3.2.9 LETTER OF SURETY / INSURANCE

The requisite letter of surety for CHC may be found in Appendix E and indicates CHC is capable of obtaining a performance and payment bond based on the current estimated contract value.

### 3.2.10 SCC DPOR TABLE

Attachment 3.2.10 (SCC and DPOR table) and copies of DPOR and SCC licenses are provided in Appendix F.

### 3.2.11 DBE COMMITMENT

CHC confirms our commitment to achieving the DBE goal of 10% for this project. We also endeavor to include meaningful SWaM participation across all three disciplines: design, quality assurance, and construction. We have included DBE subconsultants PMI and CES. SWaM subconsultants have also been made part of our team, including PMI; Accumark; CES; and F&R.
3.3 TEAM STRUCTURE
### 3.3 TEAM STRUCTURE

#### TEAM EXPERIENCE

CHC has been exceedingly successful with our approach to design-build teaming, and CHC commits we can and will be equally successful on the I-64 project. Our teaming approach and structure centers on three important factors:

1. **CHC Selects a Lead Design Firm That is Capable, Productive, and Familiar with the Client Technical Requirements.** Whenever possible, CHC teams with a design firm that is very near to the project site. These factors help ensure responsiveness to both the needs of the project owner and of CHC. A local lead design firm also enhances budgetary competitiveness. CHC proposes LBG as lead designer for these same reasons. LBG provides a local, capable, and responsive service provider that is exceedingly familiar with project execution in the VDOT Richmond District and has demonstrated engineering capabilities with highway widening projects. LBG’s proposed design manager, John Vandergriff, has proven capabilities in the design management arena and is based in LBG’s Richmond, VA office, as well. LBG is a preferred design services provider and currently is completing project assignments in the Richmond District including: District-wide CEI, final stages of Huguenot Bridge Replacement Project (design support during construction) and multiple task orders for on-call maintenance services and inspection. LBG recently completed the final design of U.S. 29 & Gallows Road (UPC 11395) wherein widening existing pavements, engineering complex drainage strategies, and detailed constructability analysis were key to a successful design which is currently in construction.

2. **CHC Selects a Quality Assurance Management Team That is Familiar with the Operational Approaches of CHC, the Operational Approaches of Our Client, and Completely Comprehends the Culture of “Turn-Key” Quality Product Delivery.** This key role must represent the interests of the owner for your project, and CHC must be able to trust their expertise when representing our product to the owner. We selected G&O to join the Cherry Hill Team based upon a 15-year working relationship with CHC and because of the confidence G&O has built within VDOT and specifically VDOT Richmond District over the past decade wherein G&O has completed dozens CEI projects in the Richmond District. For this project G&O has assigned William Kump as the Quality Assurance Manager. Much of his personal experience in Construction Engineering & Inspection area has been on projects in the Richmond area. He understands site conditions, VDOT workflow, and the challenges faced by the owner representatives at VDOT Richmond District.

3. **CHC Selects Other Team Members Consistent with Our Meaningful Corporate Commitment to the Federal Disadvantaged Business Enterprise Program.** Additionally, some of our clients, such as VDOT, have similar state based programs. CHC understands and shares VDOT’s commitment to the SWaM / DBE programs. Our teaming structure reaches out to those potential services providers and as such CHC is pleased to report that the following DBE or SWaM providers and present team members: PMI (DBE / SWaM), Accumark (SWaM), CES (DBE / SWaM), Sidall (SWaM), and F&R (SWaM). Nearly all of these firms are local to the Richmond area, are quite capable, and known services providers to VDOT as well.

#### 3.3.1 KEY PERSONNEL

The CHC Team is composed of outstanding firms with demonstrated organizational capabilities. The personnel assigned to the I-64 project indicate the level of commitment of these member firms. Completed attachments 3.3.1 for the Design-Build Project Manager (DBPM), Quality Assurance Manager (QAM), Design Manager (DM), and Construction Manager (CM) detail their relevant experience and how their skills relate to your project needs. A brief introduction to these key individuals is shown below. Key personnel qualifications are detailed further in the resumes in Appendix G.

- **Gregory Andricos, PE | Design Build Project Manager**

  Since graduating from VMI in 1992 (BS civil engineering), Mr. Andricos has held progressively responsible positions within CHC and is now Vice President and General Manager. He currently holds PE licenses in Virginia and Maryland and is also a DCR certified Responsible Land Disturber. He has successfully managed roadway/bridge design-build projects for CHC as well as traditional construction projects for CHC clients including: FHWA Eastern Federal Lands, Maryland Department of Transportation, VDOT, U.S. Army, and Washington, D.C. DOT. As noted in his attached Key Personnel Resume his project experience on FHWA –EFHLD Fairfax County demonstrates his excellent DBPM experience while the I-95 Section 100 design-bid-build project demonstrates his personal experience with interstate widening projects and interchange reconstruction projects.

- **William Kump, PE | Quality Assurance Manager**

  Another graduate of VMI, Mr. Kump has 14 years of experience inspecting and assuring quality delivery of heavy highway and bridge construction projects that have ranged in construction value from $12 million to $120 million. He has performed work on past projects...
as a project QA inspector, a project QA manager, and a project office engineer. During the past year, he has served as project manager on multiple Locally Administered Projects for Chesterfield County. He has also worked as a subconsultant coordinator to LBG on the Huguenot Memorial Bridge Replacement project and on a Richmond District Wide CE&I Contract. Mr. Kump has complete familiarity with quality assurance and control methods, regulatory/legal constraints, construction progress reporting, pay items, and materials sampling and testing.

John Vandergriff, PE | Design Manager
With more than 20 years of experience in transportation engineering, project management, and program management, Mr. Vandergriff will serve CHC and VDOT as design manager. A registered Virginia PE, he is a former VDOT Richmond District project manager and County of Henrico resident. Mr. Vandergriff fully understands the expectations and priorities for this project. His recent project successes include – U.S. 50 Lee Jackson Highway (UPC 68757), U.S. 29 & Gallows Road (UPC 11395), Telegraph Road Widening (UPC 58453), and Huguenot Bridge Replacement over the James River.

Roger Lant | Construction Manager
CHC has assigned one of the most experienced CHC construction managers to your project, Mr. Lant. He is a 19-year veteran of the construction industry and is an exceedingly experienced construction manager with specific expertise in highway and interchange projects with compressed schedules, complex MOT phasing, stringent environmental regulations, and significant structural elements. Mr. Lant has been with CHC for 10 years of and is a Virginia Registered Land Disturber and holds a VA ESCC certification. As construction manager he recently completed the $111.5 million “Award Winning” Fairfax County Parkway, Phase I, II, and IV Design-Build project for FHWA-ELHD. Like I-64, the Fairfax County Parkway included an environmentally sensitive waterway.

QUALIFICATIONS IN BRIEF FOR NON-KEY PERSONNEL
Several personnel listed on the CHC Team organization chart contribute to team expertise and resource availability. A detailed resume form 3.3.1 is not included as per solicitation requirements. However, certain individual qualifications are briefly outlined below and serve demonstrate that our personnel planning for your project has already begun.

Stephen Cook, PE | Structure and Bridge Design Task Manager
Our lead structural engineer, Mr. Cook, has more than 26 years of experience in bridge structure analysis, design, and detailing. His primary experience is in the area of bridge and culvert structures, including bridge rating, integral abutments and jointless bridges.

Mark McElwain, PE | Roadway / Transportation Design Task Manager
Based in LBG’s Richmond office, Mr. McElwain is an 18 year veteran of design and is a Virginia PE. He has served as design engineer, project engineer, or project manager on several interstate projects, including the I-64 Widening and Reconstruction in Chesapeake; I-69 in Monroe and Morgan County, Indiana; and I-79 Fort Henry Interchange, Fairfax County Parkway, Phase I, II, and IV Design-Build project.

Charles Smith, PE | Drainage / SWM Design Task Manager
Based in LBG’s Richmond, Mr. Smith is a 13-year veteran of design focusing on drainage, stormwater management, erosion and sediment control, and open channel flow. He holds a Virginia PE license and has served in a responsible charge position for drainage tasks on several VDOT projects and is well versed in the changing dynamics surrounding stormwater management regulation.

Dean Hatfield | Design QC
Mr. Hatfield has over 28 years of experience in transportation design, project management and construction administration. Mr. Hatfield has been involved with the design of over 30 interstate interchanges along with 55 miles of interstate widening/improvements. Notably he served as a design project engineer for the $531 million SCDOT design-build project to construct the Cooper River Bridges Replacement in Charleston, South Carolina.

Michael Kirk, PE | Technical Advisor
Mr. Kirk has over 20 years of diversified experience that includes construction management, engineering, operations and asset management. Mr. Kirk is LBG’s corporate vice-president for design-build projects and servers on DBIA committees. He will be available to assist with any change management issues that may arise related to design-build procurement.

Morteza Salehi, PhD | Technical Advisor
Dr. Salehi is a senior program director who has been involved in high-profile project development and delivery in the transportation sector. With more than 40 years of experience in transportation in the U.S. and abroad, including his role as a former NOV A district administrator, he will be accessible for policy and program issues related to VDOT’s project delivery.

W. Gene Martin | Construction QA
Mr. Martin offers extensive VDOT experience with over 41 years of experience in construction management, inspection and contract administration. With over 30 of those years serving as an employee for the VDOT, his experience included acting as an assistant resident engineer, operations manager, project engineer, and...
inspector for construction projects throughout his career. Most recently he served as project manager over the 17-mile corridor for Route 288 and PPTA projects.

William Horton | Construction QA
Mr. Horton has over 42 years’ experience in construction engineering and inspection. He has managed contracts and multiple construction projects involving structures, roadways, and other transportation facilities to assure quality of contractor compliance to the plans and specifications. Mr. Horton currently provides construction management services on the Huguenot project in the Richmond District, for which LBG served as the lead engineer on all non-bridge project elements.

Simon Simon, PE | Design QA
Mr. Simon, our proposed design QA task leader, has over 33 years of experience with transportation-related design and construction projects, particularly bridge design and the design-build method of delivery. Mr. Simon’s experience includes design and management of complex 3P/design-build projects on accelerated basis. Over the past 15 years, Mr. Simon has closely worked with CHC on a variety of design-build and design-bid-build projects. He currently serves as G&O’s project principal for the Route 1 Widening and Improvements design-build/PPTA project in Prince William County.

Robert Vester, PE | Geotechnical, Materials, and Pavement Design
Mr. Vester is experienced in providing geotechnical engineering services and management duties on previous VDOT projects similar to this proposed design-build project. He served as project manager for AMEC’s recently completed VDOT Statewide Geotechnical On-Call contract in which he served a key role in keeping the contract on task and on target.

Stanley Hite, PE | Geotechnical, Materials, Pavement Design
As an AMEC senior principal engineer, Mr. Hite has a strong background and expertise in general roadway materials, geotechnical engineering, pavement design and evaluation, and value engineering. As a previous VDOT foundations engineer, he was the primary roadway geotechnical engineer for VDOT. Mr. Hite’s function was to coordinate and supervise investigations for geotechnical work on VDOT projects throughout the Commonwealth.

Mark McGoniagle, LS | Survey Task Manager
As office manager for PMI’s Richmond office, Mr. McGoniagle has had the opportunity to work on a multitude of VDOT projects and has gained invaluable knowledge of VDOT’s standards and procedures. His 20 years’ experience as a surveyor include property line, topographic, aerial, geodetic, and construction surveys, and considerable experience with definitive subdivision requirements, Land Court survey procedures, MHD survey requirements, and Title Insurance Certifications.

William LaBaugh, PE | Utility Designations and Test Holes
Mr. LaBaugh is a professional engineer with 34 years of experience with VDOT and a thorough understanding of all aspects of construction and utility projects. Mr. LaBaugh brings a careful eye to the review of drawings, and engineering certification for subsurface utility locating and designating projects as required. He serves as the quality assurance/control manager on Accumark’s VDOT Statewide Subsurface Utility Designation and Location Contract.

Paul Burch, PE | Quality Assurance Lab
Mr. Burch’s extensive background is in construction materials testing (CMT), including field and laboratory testing procedures. His experience includes testing and inspection of soils/earthwork, cast-in-place concrete, pre-cast concrete, post-tension concrete, asphalt, reinforcing and structural steel, and fireproofing in accordance with IBC specifications and VDOT Road and Bridge Specification and Standards.

John Siddall | Public Relations Manager
Mr. Siddall has been a contributing writer to Advertising Age, selected by the Richmond chapter of the American Advertising Federation as Advertising Person of the Year and served as a judge at the AMA EFFIE awards and the One Show. Because he has worked on the VDOT account from 1994 until 2003 and again from 2008 until present, Mr. Siddall understands how communicating in the transportation sector evolves in dynamic times.

Avtar Singh, PE, CCM, PMP | Construction QC
Mr. Singh has 17 years of progressively more responsible experience in major bridge and interstate heavy civil engineering projects. For six years, Mr. Singh served as the area construction engineer for VDOT in the Northern Virginia District. As the ACE, he was the responsible charge engineer for over 28 projects with a cumulative construction value of over $230 million.

3.3.2 FUNCTIONAL RELATIONSHIPS AND TEAM COMMUNICATION
The CHC Team organization chart on page 8 depicts the requisite personnel and reporting structure of our team. Additional personnel beyond those required are also depicted, demonstrating that the CHC Team is fully assembled and organized to deliver your I-64 project.

Viewing the chart from left to right, the design manager and
3.3 TEAM STRUCTURE

**DESIGN BUILD PROJECT MANAGER**
Gregory Andricos, PE

**CONSTRUCTION MANAGER**
Roger Lant

**DESIGN MANAGER**
John Vandergriff, PE

**ENGINEERING**
- Structure and Bridge: Stephen Cook, PE
- Roadway/Transportation: Mark McElwain, PE
- Drainage/SWM: Charles Smith, PE
- Permitting/Utilities: Rana Stansell, PE

**CONSTRUCTION SUPERINTENDENT**
Ernest Musser

**MOT MANAGER**
Tim Garrison

**CONSTRUCTION CREWS**
Cherry Hill Construction

**SMALL, WOMEN, AND DISADVANTAGED BUSINESSES**
- Erosion Control
- Guide Rails
- Signage
- Lighting & Signals
- Pavement Markings
- Landscaping

**PUBLIC INVOLVEMENT**
- John Siddall
- Kim Ruth
- Jim Babb

**UTILITY DESIGNATIONS AND TEST HOLES**
- Craig Martin
- William LaBaugh, PE

**SURVEYING & R/W PLATS**
- Mark McGoniagle, LS
- Scott Lohiser, LSIT

**GEOTECHNICAL, MATERIALS, AND PAVEMENT DESIGN**
- Robert Vester, PE
- Stanley Hite, PE

**DESIGN QC**
Dean Hatfield, PE

**TECHNICAL ADVISORS**
- Mike Kirk, PE
- Morteza Salehi, PhD

**PRINCIPALS-IN-CHARGE**
- James Laing
- Cosema Crawford, PE
- Michael Retton, PE

**SITE SAFETY OFFICER**
Carlos Arriaga

**QUALITY ASSURANCE MANAGER**
William Kump, PE

**QUALITY ASSURANCE MATERIALS**
Paul Burch, PE

**CONSTRUCTION QA**
- W. Gene Martin
- William Horton

**DESIGN QA**
- Simon Simon, PE
- Bimal Patel, PE

**CONSTRUCTION QC**
- Avtar Singh, PE, CCM, PMP

**QC INSPECTION TEAM**
- John Baxter

**QC LAB**

**LEGEND**
- * DPOR Key Personnel
- † VA RLD
- ‡ VDOT ESCC
- § VDOT INT. MOT

**THIRD PARTY SHAREHOLDERS**
- Goochland & Henrico Counties
- 623 Businesses
- Short Pump Town Center
- Field Day of the Past
- Unnamed Stakeholders
3.3 TEAM STRUCTURE

The CHC Team, as shown in black, the construction manager and construction operations in blue, and the QA manager and quality assurance operations in gray. Principals-in-charge are independent of the DBPM and are shown to the right as an additional avenue of communication for you, the owner of the project. Generally, solid lines on the organization chart symbolize direct functional and contractual obligations while dashed lines indicate planned partnering and communication efforts.

Graphically, the chain of command is color coded. For example, surveying and plats; engineering, geotechnical, materials, and pavement design; and design quality control are shown in black and report directly to the DM, Mr. Vandergriff. Contractually, all design activities report to LBG. LBG will in turn be contractually obligated to CHC and Mr. Vandergriff will report to the DBPM, Mr. Andricos. Shown in blue, construction operations, QC, and quality control testing all report directly to the CM, Mr. Lant, and contractual obligations for any subcontractors will report as indicated in blue. In addition, CHC will subcontract QC inspection to CES, and these efforts will be led by Avtar Singh, PE. The QC lab is currently unidentified, but the selected lab will have no project relationship with the independent QAM lab. The design-build operations will hinge on effective and frequent communications between Roger Lant (CM) and John Vandergriff (DM), as depicted in the design-build coordination box.

The QAM is independent of all design-build operations and be led by William Kump, PE. To guarantee independent operations of QAM vs. design-build, CHC will contract directly with G&O. Mr. Kump will have no reporting or contractual obligations to the construction manager, nor will G&O have any reporting or contractual obligations the DM/LBG. The QAM has already identified the materials lab to be used for the I-64 project, F&R. This lab effort led by Paul Burch will have no involvement with the QC testing or inspection efforts performed by the CM.

Public involvement efforts extend from concept through construction completion, and will be led by Siddall. Mr. Siddall and his team will report directly to the DBPM as their duties extend across of all phases of project development. CHC anticipates a cooperative public relations effort with VDOT, as depicted via the dashed reporting line.

Mr. Andricos, as the DBPM, will be the primary point of contact for VDOT and responsible for all project delivery management activities. He will interact extensively with the VDOT project manager and manage all contractual obligations between VDOT and the CHC Team.

Effective communication depends not only on enforcing the reporting relationships identified, but the practical communication of these relationships. The CHC Team, if shortlisted, will implement Bentley ProjectWise Software. This tool promotes organized structure of communications and of all electronic data including, but not limited to: MicroStation files, GEOPAK files, MS Office data, scheduling, PDFs, submittals, etc. Similar to VDOT’s Falcon system, this software allows for real-time collaboration of design files and Microstation data, complete with version management tools. In addition, ProjectWise allows for the same data management tools for business related reporting software. The software may be web-based for non-design team users, with immersion capabilities allowing for real-time data sharing. ProjectWise will be implemented during the RFP stage, and, if selected, the CHC Team will continue its use through final construction. We implemented a similar file structure on a recent design-build project, wherein this tool was implemented to store and collaborate owner data, designs, estimates, schedules, and reports for the 55 mile, nine interchange U.S. 460 Corridor Improvement Project from Petersburg to Suffolk.

We will also implement a project communication plan which documents several aspects of our internal communications and will have these key features:

- Complete contact information for the project team, including external stakeholders;
- Chain of command reporting;
- Roles and responsibilities matrix; and
- General milestone project calendar, complete with delivery dates, review deadlines, and internal deliverable dates. This portion of the communications plan will be a living document.

A complete CPM schedule in granular format will be developed and maintained for the project from inception until completion. This schedule will be maintained via scheduling software and “published” to project participants in PDF format at no less than a monthly basis.

External communication with project stakeholders will be crucial to a successful project perception and enhance project safety. Leading these external efforts is our public relations team of John Siddall, Kim Ruth, and Jim Babb of Siddall. Currently, this team of outreach experts is providing similar services for the I-95 Bridge Replacement Project. With ADTs exceeding 100,000, complex MOT/SOC scheme, and time sensitive construction, Siddall excelled in keeping the public informed. Lessons learned will be applied to the I-64 Widening, and effective relationships with the VDOT Richmond District Public Affairs Department are already in place. The CHC Team will provide motorists with information that is clear, timely, and accurate. Social media, radio tags, internet banners, and high impact media approaches will be considered.
3.4 TEAM EXPERIENCE
3.4 TEAM EXPERIENCE

3.4.1 PROJECT EXPERIENCE OF LEAD CONTRACTOR AND LEAD DESIGNER

Our key team members have extensive experience with design-build and roadway widening projects, particularly those requiring multi-disciplinary services under strict budget and schedule requirements. Relevant project experience is provided on the Work History Forms (Attachments 3.4.1a and b) in Appendix H.

In addition, we have provided examples of our work quality straight from the source - our clients - as depicted below. Additional key project highlights and evidence of our team members’ experience working together on similar contracts are noted in the table on page 11.

THE CHERRY HILL TEAM - SERVICE AND VALUE

1. Meeting Design-Build Delivery Challenges

“The challenges in designing and building the [Fairfax County] Parkway are numerous...However, among the more serious challenges that had to be overcome included:

- Compressed schedule to ensure construction was complete in advance of NGA personnel being relocated to Fort Belvoir North
- Limited budget
- Coordination of public and private utilities
- Involvement of numerous shareholders

To date, I am extremely pleased with the performance of CHC...in meeting these challenges and overcoming obstacles that could have seriously impacted the budget and schedule for the Parkway project. They proved to be extremely responsive to our needs and concerns throughout the project.”

-Tom Fahrney, VDOT Commonwealth BRAC Coordinator

2. Working within Tight Schedule and Budget Requirements

“Fairfax County would like to acknowledge the exceptional performance of the design/build team of Cherry Hill Construction, Inc. (CHC)...on the Fairfax County Parkway Project...Faced with a number of unique challenges related to schedule to meet the BRAC timeline, funding, environmental, and intergovernmental coordination, the CHC team built this project within budget and on schedule.”

-Mark Canale, Fairfax County BRAC Coordinator

3. Coordinating Effectively with Stakeholders

“From the Army’s perspective, Cherry Hill Construction became a full partner in the efforts to cooperatively achieve what could have been competing project objectives among the various entities working within a highly confined area under pressure of time...They were proactive in issue resolution, meeting management, and documenting results of meetings;

- They were flexible in their response to the needs of the project partners, accepting reasonable levels of risk to ensure that the project stayed on schedule.
- They were reasonable in their approach to coordination with other government contractors whose work and access requirements sometimes conflicted directly with Cherry Hill’s contract requirements.

Bottom line, they completed the project on schedule to meet the Government’s needs.”

-James Turkel, Chief, Real Estate Division

4. Keeping the Public Informed and Involved

“CHC’s extensive public outreach and close coordination with Fairfax County was done in a commendable manner.”

-Mark Canale, Fairfax County BRAC Coordinator

5. Delivering Quality Design Products to VDOT with Professionalism

U.S. 29 and Gallows Road Consultant Evaluations:

Rated 4.5 of 5 (between Exceptional and Exceeds Expectations):
- Cooperation with VDOT
- Attitude to work
- Quality of supervision and management
- Adequacy of personnel

“LBG has exceeded in completing tasks on time and within budget”

-Arif Rahman, VDOT Project Manager

Route 147 Huguenot Road Bridge Consultant Evaluations:

Rated 5 of 5 (Exceptional):
- Cooperation with VDOT
- Attitude toward public
- Scope of work and terms of agreement followed

Rated 4 of 5 (Exceeds Expectations):
- Supervision and management
- Cooperation with other agencies
- Completeness of interim / final submissions

-Steve McNeely, VDOT Project Manager
### CHERRY HILL TEAM MEMBER COLLABORATION

<table>
<thead>
<tr>
<th>Project</th>
<th>Key Contract Information</th>
</tr>
</thead>
</table>
| **“Award Winning” Fairfax County Parkway Phases I, II, and IV Design Build** | **Client:** FHWA-ELFHD and VDOT  
**Construction cost:** $111.5 million  
**Team members:** CHC - Design-Build Contractor  
**Similarities to I-64 widening:** Reconstruction of interchanges with local and interstate ramps, survey and mapping, widening of an existing bridge, environmental permitting and compliance, formal public information and partnering programs, Contactor QA/QC Programs, coordination with adjacent contracts. |
| **“Award Winning” I-895 Express Toll Lanes** | **Client:** Maryland Transportation Authority  
**Construction cost:** $151.5 million  
**Team members:** CHC - prime contractor; G&O - lead designer  
**Similarities to I-64 widening:** 3.6 miles of roadway reconstruction and widening, reconstruction of interchange and ramps, modifications to existing bridges, multi-phase MOT, formal partnering program, coordination with adjacent contracts, and complete management of the project. |
| **“Award Winning” I-66 Improvements (200-93A & 201-93A)** | **Client:** VDOT  
**Construction cost:** $27.M (#200-93A) and $39.3M (#201-93A)  
**Team members:** CHC - prime contractor  
**Similarities to I-64 widening:** Competitively bid project for 7.52 miles of roadway widening of I-66 constructing two new travel lanes in each direction. Involved reconstruction of interchanges, multi-phase MOT coordinated with Regional TMP, and coordination with adjacent contracts. |
| **Telegraph Road Widening (UPC 96509) and New Precast Bridge** | **Client:** VDOT  
**Construction cost:** $14 million ($2 million design fee)  
**Team members:** LBG – prime consultant  
**Similarities to I-64 widening:** VDOT project, widening with existing pavement, confined area, live sensitive stream (Dogue Creek), complex MOT, SWM constraints, sub-grade reconstruction, foundation constraints. |
| **Huguenot Bridge Replacement (UPC 16519)** | **Client:** VDOT  
**Construction cost:** $35 million ($1.6 million design fee)  
**Team members:** LBG – roadway, drainage, MOT / SOC; G&O - construction management  
**Similarities to I-64 widening:** VDOT Richmond District, high visibility, high volume, bridge replacement MOT/SOC; widening constraints to use existing pavement; complex SWM; LBG and G&O working in similar roles. |
| **U.S. 29 & Gallows Road (UPC 11395)** | **Client:** VDOT  
**Construction cost:** $18 million ($3.5 million design fee)  
**Team members:** LBG – design; G&O - utility coordination for adjacent projects  
**Similarities to I-64 widening:** VDOT project; complex MOT/SOC; collaboration with three adjacent projects including I-495 Hot Lanes design-build; complex widening with varied pavements, complex utility construction. |
| **I-495 Capital Beltway HOT/HOV Lanes 3P; Fairfax County** | **Client:** Fluor-Lane, LLC c/o VDOT  
**Construction cost:** $900 million  
**Team members:** G&O – Lead ROW and utility engineer  
**Similarities to I-64 widening:** Widening and reconstruction of interstate facility; ROW, surveying, and utility relocations design and coordination services. |
| **Route 288 Reconstruction 3P Project, Richmond, VA** | **Client:** VDOT  
**Construction cost:** $212 million  
**Team members:** G&O – consultant to VDOT & QA Manager  
**Similarities to I-64 widening:** Roadway and bridge reconstruction and associated independent QA services. |
| **“Award-Winning” MD 32 / Airfield Road Interchange Design-Build** | **Client:** Cherry Hill Construction, Inc. c/o Maryland State Highway Administration  
**Construction cost:** $10 million  
**Team members:** G&O – subconsultant to CHC & Lead Designer; CHC – Design-builder  
**Similarities to I-64 widening:** Roadway and bridge reconstruction, surveying, utility relocation design and coordination services; construction phase services. |
3.5
PROJECT RISKS
3.5 PROJECT RISKS

3.5.1 CRITICAL PROJECT RISKS
Per the RFQ, the Cherry Hill Team comprehensively investigated the I-64 Widening project for multiple risk elements within a range of disciplines, activities, functions, and roles. Generally, our team concludes the project risk elements identified in this section can be properly mitigated by the Cherry Hill Team using the strategies identified herein.

Our team explored several aspects of the project to ascertain their level of associated risk; the items listed below were deemed non-critical.

- **Major crossing culvert capacity** – Our team performed conceptual drainage analysis and determined the existing culverts were of sufficient capacity to lengthen the major crossing culverts as planned by the owner.
- **Foundations** – Our team reviewed the project site and available geotechnical data and determined there are no critical risks associated with in situ materials.
- **General strategy of constructability** – CHC and LBG reviewed the site and associated RFQ plans and determined the general overarching approach to phased construction is sound.
- **Roadway geometry/roadway design** – We reviewed the RFQ plans and found some concerns, including: turning movements at 623 ramps, roadside hazard protection, waiver needs, and exception needs. However, these findings were not deemed critical risk elements and will be effectively managed.
- **Long-term operational capacity** – Our team reviewed in RFQ information packet as well as the RFQ plans. During our investigation some concerns arose surrounding the long term capacity of the interchange at I-64 and Ashland Road (Route 623), and the proposed scope of work at this interchange location. We understand the limitations on the funding and the associated spatial limitations of the 623 bridge over I-64. We also understand the programmatic funding limitations resulting from the recent reconstruction of the existing 623 bridge over I-64. Lastly, our examination yielded a known understanding and buy-in from the FHWA regarding the scope of the project. With this greater understanding of the financial, administrative, and programmatic funding limitations from the recent reconstruction of the existing 623 bridge, the long term operational capacity while present is not a critical risk to this project.

Items discussed on the following pages were deemed critical; however, the Cherry Hill Team plans to mitigate them using the specific methods outlined for each individual risk.

- **Critical Risk 1 | Stormwater Management**

The technical criteria for stormwater management (SWM) for VDOT projects continually evolves, impacting design and construction strategies across Virginia. For the I-64 project, SWM criteria pose a critical risk both during construction through associated erosion and sediment control measures and in the built condition for long term water quality and water quantity treatment. Given the particular conditions of the project, SWM poses a critical risk considering the following:

- The vast majority of the disturbed area of the project is within the median and spatially constrained for erosion and sediment control measures – silt traps, silt basins, etc.
- There are several live waterways within the project that are sensitive to erosion and sediment control during construction as well as long term pollutant discharges.
- IIM 195.7 requires treatment of all impervious pavements within the project. Given that the existing impervious pavement minimally includes four lanes and four paved shoulders, the proposed additional lanes constitute a smaller percentage of the total impervious area. However, the total impervious area with additional lanes may exceed the 16% threshold in certain areas of the project.
- The topography of the median undulates between “hill and valley” throughout the project length, complicating existing and proposed runoff patterns during construction.
- Much of the existing pavement cross slopes drain away from the median, and the median is a likely location for SWM facilities. Treating runoff of the existing pavement that drains away from the median may prove problematic.
3.5 PROJECT RISKS

CRITICAL RISK 1 | STORMWATER MANAGEMENT

<table>
<thead>
<tr>
<th>SWM Risk Impact</th>
<th>Cherry Hill Team Mitigation Strategy</th>
<th>Additional Efforts by VDOT or Other Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Project-wide Strategy</td>
<td><em>We will incorporate E&amp;S and permanent stormwater management design constraints and strategies into constructability considerations early in the design process. We will also explore measures to collect and treat runoff of pavements, some of which will likely drain away from the median, as well as opportunities to incorporate grass swales and manufactured BMPs for water quality treatment.</em></td>
<td><em>VDOT confirmation of technical criteria during RFP.</em></td>
</tr>
<tr>
<td>R/W Acquisition Along I-64</td>
<td><em>We will employ extended detention basins and extended detention basins enhanced, and design both in a more linear fashion to fit within current R/W limits.</em></td>
<td><em>None.</em></td>
</tr>
<tr>
<td>Earthwork Constructability</td>
<td><em>LBG and CHC will work collaboratively during design to develop a planned earthwork haul route strategy so as not to constrain earthmoving with E&amp;S measures or permanent BMP with median areas.</em></td>
<td><em>None.</em></td>
</tr>
<tr>
<td>Permanent Access to BMP</td>
<td><em>LBG, CHC, and VDOT will work collaboratively to establish the minimum criteria for permanent maintenance access to BMPs in the median and possibly along the outside perimeter of I-64.</em></td>
<td><em>VDOT may consider establishing project specific BMP maintenance access criteria during RFP stage for equivalent bidding.</em></td>
</tr>
</tbody>
</table>

**Impact on Project, Mitigation Strategies, & Agency Role**
The table above lists the potential impact SWM management has on the project as well as associated mitigation strategies the Cherry Hill Team will employ. The associated additional efforts by VDOT or other agencies are also shown in the table for each impact.

**Critical Risk 2 | Interstate Construction in Median**
As indicated in the RFQ information package, the vast majority of construction activities and scope of work require construction within the existing median of Interstate 64. Successfully accomplishing this work within the median poses challenges, and collectively constitutes a critical risk element. Several aspects of median construction contribute to this collective risk, namely the following:

- With an existing posted speed limit of 70 mph, the high speed traffic in close proximity to a five-mile long work zone poses risks to all occupants – passenger cars, interstate trucks, construction workers, and construction material suppliers. Over the past five years, the general project area along I-64 has had numerous work zones, including I-64/I-295 Flyover, Gayton Road Extension Bridge Construction, and Re-construction 623 Bridge over I-64. This “common” state of construction may serve to desensitize the traveling public to work zone area protection measures, and possibly contribute to driver frustration.
- Working within the median area constrains methods of construction and can challenge construction crews to work in close quarters. Close and continuous coordination of construction activities like earthwork, E&S, drainage, and SWM is imperative in these close quarters.
- Construction traffic entering and exiting the construction area poses a challenge for both the motorists and construction traffic. Additionally, working in the median requires construction traffic entrance and exit from the left of the travel way, where there is limited shoulder area for acceleration and deceleration.
- Bridge widening/reconstruction for the dual I-64 bridges over Tuckahoe Creek is constrained by the existing structures, Tuckahoe Creek itself, and intermittent streams in the vicinity. Furthermore, the scope of bridge work includes superstructure replacement of the existing structures, thus adding activities outside the median construction area and requiring additional MOT / SOC phases.
- Unlike many widening projects wherein the median is a graded “v” between opposing travel directions, the existing profile of the median along the project varies from “valley” to “hill” along the project length. Hence, the widening of I-64 in the median will require significant cut/fill and earthmoving within a confined space and constrained by high speed traffic on either side of the median.
- Having existing I-64 westbound and I-64 eastbound facilities fully operational on each side of the construction area also constrains design and
3.5 PROJECT RISKS

CRITICAL RISK 2 | INTERSTATE CONSTRUCTION IN MEDIAN

<table>
<thead>
<tr>
<th>Interstate Median Construction Risk Impact</th>
<th>Cherry Hill Team Mitigation Strategy</th>
<th>Additional Efforts by VDOT or Other Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Zone Safety – Public and Builder</td>
<td>• Implement an assertive safety program requiring participation and MOT/SOC debriefs for workforce, suppliers, and operators. &lt;br&gt;• Implement an assertive public outreach program during construction to share MOT/SOC strategies, project updates, 511 information, and safe driving tips. &lt;br&gt;• Implement appropriate work zone signage, barrier systems, and use of changeable messages. &lt;br&gt;• Implement a MOT/SOC design to limit conflicts with exiting entering construction traffic.</td>
<td>• Request Richmond District Public Affairs participation in connecting with public – 511, media outreach. &lt;br&gt;• Request coordination with VDOT Ashland residency maintenance operations.</td>
</tr>
<tr>
<td>Design-Build – Means &amp; Methods Strategy</td>
<td>• Implement a true design-build effort wherein the team collaborates on means and methods of approach to drainage, E&amp;S, earthwork hauling, and MOT/SOC. &lt;br&gt;• Explore and confirm detailed means and methods approach prior to completing final design.</td>
<td>None.</td>
</tr>
<tr>
<td>Project Budget</td>
<td>• Implement a project budgetary impact analysis as related to the methods of approach to project design and construction. &lt;br&gt;• Iterate design adjustments to provide an optimal project budget while exploring details associated to construction in median. &lt;br&gt;• Implement concerted effort to incorporate local material suppliers and subcontractors to reduce costs. &lt;br&gt;• Implement design teaming effort to use local surveyors and design subconsultants to reduce costs.</td>
<td>During RFP stage, confirmation of uniform design criteria as related to long-term needs by the owner.</td>
</tr>
<tr>
<td>Stream Protection</td>
<td>• Implement a detailed construction phasing plan identifying E&amp;S measures of a particular phase of construction. In locations of particular concern/risk to a stream, identify on plans more detailed E&amp;S features required during construction including methods for bridge widening/reconstruction over Tuckahoe Creek. &lt;br&gt;• Employ QC overview of these detailed E&amp;S measures prior to construction, and verification by QAM as to legitimacy.</td>
<td>Review and confirmation of environmental controls shown on the plan.</td>
</tr>
</tbody>
</table>

construction options with regard to traditional storm drainage. Designing and building cost effective outfalls of ditches, culverts, and graded medians are impacted by the existing interstate on either side of the construction area, as well as the undulating existing profile of the median.

For this project, there are more than 15 different drainage elements within or crossing the median, including named streams, wet weather intermittent streams, lined ditches, or pronounced ditches. Accommodating these drainages can exacerbate construction sequencing, erosion and sediment control strategy, earthwork hauling strategies, and long term SWM.

Critical Risk 3 | Public Outreach/Public Relations/Stakeholder Project Awareness

An additional critical risk element associated with the project is not of a technical design-build nature, but rather how the public will interact with this project during delivery. In addition to the I-64 traffic through the project corridor, the Route 623/I-64 interchange area is a true hub of activity. We consider this risk critical for a number of reasons:

Safety – It is critical to the safety of the motoring public and the build team that the traveling public is aware of the MOT features and specific impacts to travel patterns. This is of critical importance along the high speed mainline portions of the project, as well as at the ramp intersections with Route 623.

Trucking Related Businesses – There are several businesses along the Route 623 corridor that have significant truck travel needs, including: C&D Landfill, Branscome Contractors, Branscome Asphalt Plant, River City Concrete, and Luck Stone. Keeping the trucking needs of these stakeholders aware of

Impact on Project, Mitigation Strategies, & Agency Role

The table above lists the risk impact for construction in the median interstate, the associated mitigation strategy, and additional efforts by VDOT or other agencies.
construction activities and assessing stakeholder needs during the design phase will be critical.

- **Park and Ride** – A park and ride lot is nearly adjacent to the I-64 WB exit to Route 623. Keeping commuters abreast of evolving construction conditions and possible travel limitations will be critical to public perception of the project.

- **Local Government Stakeholder Awareness** – Two local governments, the County of Henrico and Goochland County, are served by the project. The County of Henrico recently completed the Gayton Road Extension across I-64 via a PPTA/design-build contract, but may still be sensitive to design-build delivery methods. Additionally, it is critical that the selected design-build team offer a similar level of local government service as VDOT Richmond District provides. VDOT has a stellar reputation with these government entities, and they would anticipate this level of service for a project owned by VDOT.

- **Short Pump Town Center** – This retail shopping center is a major traffic attractor along the corridor and located very near the project eastern termini; it is also a major economic engine in the County of Henrico. Assuring that this stakeholder will not be adversely impacted will be a critical component of the public outreach efforts.

- **Special Event - Field Days of the Past** – This event in Goochland County is a multi-day event located along Route 623 and very near the western project termini. The event attracts 35,000 visitors over a very short period each year in September. It will be critical to incorporate the needs of this stakeholder into our design-build strategy as well as provide information to the visitors of the event regarding construction conditions and possible alternate routing.

- **Thru-Trip Motorists** – I-64 is a major east-west corridor in Virginia, and while the project area serves commuters and repeat truck traffic, sharing construction phase MOT information with the once per year thru trip motorists can be a challenge.

### Impact on Project, Mitigation Strategies, & Agency Role

The table below lists the risk impact for public outreach and stakeholder project awareness, associated mitigation strategies, and additional efforts by VDOT or other agencies.

<table>
<thead>
<tr>
<th>CRITICAL RISK 3</th>
<th>PUBLIC OUTREACH/PUBLIC RELATIONS/STAKEHOLDER PROJECT AWARENESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Awareness/Relations Risk Impact</strong></td>
<td>Cherry Hill Team Mitigation Strategy</td>
</tr>
<tr>
<td>Work Zone Safety – Public and Builder</td>
<td>Implement an assertive public outreach program to alert drivers, commuters, and the trucking-related businesses about work zone conditions and limitations using a local public relations firm. The public outreach program will target businesses along the Route 623 corridor and park and ride lot users via several methods, including flyers, information meetings, and personnel contacts with businesses. More global outreach will be accomplished via web and 511.</td>
</tr>
<tr>
<td>Trucking Related Business on 623</td>
<td>Implement an assertive outreach program for trucking-related businesses along Route 623 to inform these businesses and truck drivers of changing travel patterns, construction operations, and any limitations to movements. Implement a quarterly information session focused on keeping them abreast of construction activities. Use this outreach effort to solicit input into SOC/MOT design-build strategies.</td>
</tr>
<tr>
<td>Local Government Stakeholder Buy-In</td>
<td>Implement outreach initiatives to keep both Goochland and Henrico County local officials aware of the project development and construction.</td>
</tr>
<tr>
<td>Negative Feedback to Owner</td>
<td>Implement stakeholder outreach approach to understand particular stakeholder needs to be incorporated into design-build strategy, including Short Pump Town Center, Field Days of Past, and the like. Implement public outreach/relations program to keep stakeholders abreast of construction activities and impacts to traveling public.</td>
</tr>
</tbody>
</table>
APPENDICES
ATTACHMENT 3.1.2
Addendum No. 1
Project: 0064-964-110, P101, C501, RW201
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<tr>
<td>Statement of Qualifications Checklist and Contents</td>
<td>Attachment 3.1.2</td>
<td>Section 3.1.2</td>
<td>no</td>
<td>Appendix A</td>
</tr>
<tr>
<td>Acknowledgement of RFQ, Revision and/or Addenda</td>
<td>Attachment 2.10 (Form C-78-RFQ)</td>
<td>Section 2.10</td>
<td>no</td>
<td>Appendix A</td>
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<tr>
<td>Letter of Submittal (on Offeror's letterhead)</td>
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<tr>
<td>Authorized Representative’s signature</td>
<td>NA</td>
<td>Section 3.2.1</td>
<td>yes</td>
<td>Page 1</td>
</tr>
<tr>
<td>Offeror’s point of contact information</td>
<td>NA</td>
<td>Section 3.2.2</td>
<td>yes</td>
<td>Page 4</td>
</tr>
<tr>
<td>Principal officer information</td>
<td>NA</td>
<td>Section 3.2.3</td>
<td>yes</td>
<td>Page 4</td>
</tr>
<tr>
<td>Offeror’s Corporate Structure</td>
<td>NA</td>
<td>Section 3.2.4</td>
<td>yes</td>
<td>Page 4</td>
</tr>
<tr>
<td>Identity of Lead Contractor and Lead Designer</td>
<td>NA</td>
<td>Section 3.2.5</td>
<td>yes</td>
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<tr>
<td>Affiliated/subsidiary companies</td>
<td>Attachment 3.2.6</td>
<td>Section 3.2.6</td>
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<tr>
<td>Debarment forms</td>
<td>Attachment 3.2.7(a) Attachment 3.2.7(b)</td>
<td>Section 3.2.7</td>
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<td>Offeror’s VDOT prequalification evidence</td>
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<td>Section 3.2.8</td>
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<td>Evidence of obtaining bonding</td>
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<td>Section 3.2.9</td>
<td>no</td>
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## ATTACHMENT 3.1.2

### Addendum No. 1

**Project:** 0064-964-110, P101, C501, RW201  
**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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<th>SOQ Page Reference</th>
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<tbody>
<tr>
<td>Full size copies of SCC and DPOR registration documentation (appendix)</td>
<td>NA</td>
<td>Section 3.2.10</td>
<td>no</td>
<td>Appendix F</td>
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<td>Section 3.2.10.1</td>
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<td>Appendix F</td>
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<td>DPOR Registration (Offices)</td>
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<td>Appendix F</td>
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<td>DPOR Registration (Non-APELSCIDLA)</td>
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<td>Section 3.2.10.4</td>
<td>no</td>
<td>Appendix F</td>
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<tr>
<td>DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal</td>
<td>NA</td>
<td>Section 3.2.11</td>
<td>yes</td>
<td>Page 4</td>
</tr>
</tbody>
</table>

**Offeror's Team Structure**

| Identity of and qualifications of Key Personnel | NA | Section 3.3.1 | yes | Page 5 |
| Key Personnel Resume – DB Project Manager | Attachment 3.3.1 | Section 3.3.1.1 | no | Appendix G |
| Key Personnel Resume – Quality Assurance Manager | Attachment 3.3.1 | Section 3.3.1.2 | no | Appendix G |
| Key Personnel Resume – Design Manager | Attachment 3.3.1 | Section 3.3.1.3 | no | Appendix G |
| Key Personnel Resume – Construction Manager | Attachment 3.3.1 | Section 3.3.1.4 | no | Appendix G |
| Organizational chart | NA | Section 3.3.2 | yes | Page 8 |
| Organizational chart narrative | NA | Section 3.3.2 | yes | Pages 7-9 |
### Statement of Qualifications Checklist and Contents

#### Experience of Offeror’s Team

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
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<td>Lead Contractor Work History Form</td>
<td>Attachment 3.4.1(a)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix H</td>
</tr>
<tr>
<td>Lead Designer Work History Form</td>
<td>Attachment 3.4.1(b)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix H</td>
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#### Project Risk

<table>
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<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<tbody>
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<td>Identify and discuss three critical risks for the Project</td>
<td>NA</td>
<td>Section 3.5.1</td>
<td>yes</td>
<td>Page 12</td>
</tr>
</tbody>
</table>
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00070542DB55
PROJECT NO.: 0064-964-110, P101, C501, RW201

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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

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

1. Cover letter of RFQ 09/25/2012 (Date)
2. Cover letter of Addendum #1 - 11/01/2012 (Date)
3. Cover letter of (Date)

[Signature]

Bernard P. Beauchemin, V.P. Estimating

11/5/12
Appendix B: Offeror’s Subsidiaries and Affiliates
**ATTACHMENT 3.2.6**

**State Project No. 0064-964-110, P101, C501, RW201**

**Affiliated and Subsidiary Companies of the Offeror**

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

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

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>AirTech Systems Inc.</td>
<td>1125 Close Avenue Bronx, NY 10472</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Anderson Companies, Inc.</td>
<td>(f/k/a Roy Anderson Holding Corp.) 11400 Reichold Rd. Gulfport, MS 39503</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Becho, Inc.</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Black Construction Corporation</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Black Construction Investments, Inc.</td>
<td>(f/k/a Tutor Investments, Inc. 15901 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Black Micro Corporation</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Bow Equipment Leasing Company, Inc.</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Brice Building Company, LLC</td>
<td>201 Sunbelt Parkway Birmingham, Alabama 35211</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Cherry Hill Construction, Inc.</td>
<td>8211 Washington Blvd. Jessup, Maryland 20794</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Daniel J. Keating Construction Company, LLC</td>
<td>d/b/a Keating Building Company 1600 Arch Street, Suite 300 Philadelphia, PA 19103</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Desert Mechanical, Inc.</td>
<td>(f/k/a Desert Plumbing &amp; Heating Company, Inc. 15870 Olden Street Sylmar, CA 91342</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>E.E. Black, Limited</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
</tr>
</tbody>
</table>
## ATTACHMENT 3.2.6
### State Project No. 0064-964-110, P101, C501, RW201
### Affiliated and Subsidiary Companies of the Offeror

| Subsidiary of Tutor Perini Corporation | Fisk Acquisition, Inc. | 111 T C Jester Boulevard
| | | Houston, TX 77007-3142 |
| Subsidiary of Tutor Perini Corporation | Fisk Electric Company | 111 T C Jester Boulevard
| | | Houston, TX 77007-3142 |
| Subsidiary of Tutor Perini Corporation | Fisk International, Ltd. | 111 T C Jester Boulevard
| | | Houston, TX 77007-3142 |
| Subsidiary of Tutor Perini Corporation | Five Star Electric Corp. | 101-32 101st Street
| | | Ozone Park, NY 11416 |
| Subsidiary of Tutor Perini Corporation | FK Management Services, Inc. | 1695 Allen Road
| | | P.O. Box 6690
| | | Evansville, IN 47719-0690 |
| Subsidiary of Tutor Perini Corporation | FKC, LLC | 1695 Allen Road
| | | P.O. Box 6690
| | | Evansville, IN 47719-0690 |
| Subsidiary of Tutor Perini Corporation | Frontier-Kemper Constructors ULC | 1695 Allen Road
| | | P.O. Box 6690
| | | Evansville, IN 47719-0690 |
| Subsidiary of Tutor Perini Corporation | Frontier-Kemper Constructors, Inc. | 1695 Allen Road
| | | P.O. Box 6690
| | | Evansville, IN 47719-0690 |
| Subsidiary of Tutor Perini Corporation | G.W. Murphy Construction Company, Inc. | 15901 Olden Street
| | | Sylmar, CA 91342 |
| Subsidiary of Tutor Perini Corporation | GreenStar Services Corporation | 30 North MacQuesten Parkway
| | | Mount Vernon, NY 10550 |
| Subsidiary of Tutor Perini Corporation | Harrell Contracting Group, LLC | 368 Highland Colony Parkway
| | | Ridgeland, MS 39157 |
| Subsidiary of Tutor Perini Corporation | International Construction Management Services, Inc. | 73 Mt. Wayte Avenue
| | | Framingham, MA 01701 |
| Subsidiary of Tutor Perini Corporation | James A. Cummings, Inc. | 3575 NW 53rd Street
| | | Fort Lauderdale, FL 33309 |
| Subsidiary of Tutor Perini Corporation | Johnson Western Constructors, Inc. | 940 Doolittle Drive
| | | San Leandro, CA 94577 |
| Subsidiary of Tutor Perini Corporation | Johnson Western Gunite Company | 940 Doolittle Drive
| | | San Leandro, CA 94577 |
| Subsidiary of Tutor Perini Corporation | Keating Project Development, Inc. | 1600 Arch Street, Suite 300
| | | Philadelphia, PA 19103 |
| Subsidiary of Tutor Perini Corporation | Lunda Construction Company | 620 Gebhardt Rd, PO Box 669
| | | Black River Falls, WI 54615-0699 |
## ATTACHMENT 3.2.6

### State Project No. 0064-964-110, P101, C501, RW201

#### Affiliated and Subsidiary Companies of the Offeror

<table>
<thead>
<tr>
<th>Subsidiary of Tutor Perini Corporation</th>
<th>Company Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Mt. Wayte Realty, LLC</td>
<td>73 Mt. Wayte Avenue Framingham, MA 02701</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Nagelbush Mechanical, Inc.</td>
<td>1800 NW 49th Street STE 110 Fort Lauderdale, FL 33309</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Paramount Development Associates, Inc.</td>
<td>73 Mt. Wayte Avenue Framingham, MA 01701</td>
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<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>PCR Insurance Company</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Percon Constructors, Inc.</td>
<td>73 Mt. Wayte Avenue Framingham, MA 01701</td>
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<td>Perini Environmental Services, Inc.</td>
<td>73 Mt. Wayte Avenue Framingham, MA 01701</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Perini Holding Company Cayman Islands</td>
<td>73 Mt. Wayte Avenue Framingham, MA 01701</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Perini International Corporation</td>
<td>73 Mt. Wayte Avenue Framingham, MA 01701</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Perini Land and Development Company, Inc.</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Perini Management Services, Inc.</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Perland Construction, Inc.</td>
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<td>R. E. Dailey &amp; Co.</td>
<td>73 Mt. Wayte Avenue Framingham, MA 02701</td>
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<td>RA Properties, LLC</td>
<td>11400 Reichold Rd. Gulfport, MS 39503</td>
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<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Roy Anderson Corp</td>
<td>(f/k/a Roy Anderson, Jr., Inc.) 11400 Reichold Rd. Gulfport, MS 39503</td>
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<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Rudolph and Sletten, Inc.</td>
<td>1600 Seaport Boulevard, Suite 350 Redwood City, CA 94063-5575</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
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<td>Superior Gunite LLC</td>
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<td>Superior Gunite</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>TPC Aggregates, LLC</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
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<tr>
<td>---------------------------------------</td>
<td>---------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Subsidiary of Tutor Perini Corporation</td>
<td>Tutor Asia, Ltd.</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Tutor Holdings, LLC</td>
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<td>Tutor International, Ltd.</td>
<td>15901 Olden Street Sylmar, CA 91342</td>
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<td>Subsidiary of Tutor Perini Corporation</td>
<td>Tutor Perini Building Corp.</td>
<td>f/k/a Perini Building Company, Inc. 5055 E. Washington Street, Suite 210 Phoenix, AZ 85034</td>
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<td>f/k/a Perini Corporation 15901 Olden Street Sylmar, CA 91342</td>
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<td>Tutor-Saliba Corporation</td>
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<td>Valley Concrete &amp; Framing, Inc.</td>
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<td>WDF/Nagelbush Holding Corp.</td>
<td>1800 NW 49th Street STE 110 Fort Lauderdale, FL 33309</td>
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Appendix C:
Debarment Forms
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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; Yes - See Attachment

   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: ____________________________  Date: 11.15.12  Vice President Estimating
Bernard P. Beauchemin
Cherry Hill Construction, Inc.

Name of Firm
Tutor-Saliba-Perini, Joint Venture ("TSP") v. Los Angeles County Metropolitan Transportation Authority ("LAMTA") (LASC Case No. BC123559)

In 1995 TSP brought suit on behalf of it and its subcontractors against the Los Angeles Metropolitan Transit Authority (LAMTA) to recover for added costs for extra work and delays. In 1998 when TSP’s case was past the original date set for trial, the case was assigned to a new judge and the LAMTA for the first time filed a cross-complaint against TSP alleging among other things, false claims. A trial resulted in a verdict for the LAMTA after TSP’s case was in effect terminated for discovery issues during litigation. TSP appealed and the original judgment in favor of LAMTA was overturned on appeal. The case was remanded to a new judge for handling and trial. In 2006, a jury returned a verdict against TSP for 2 false claims arising out of a subcontractor change order that had been approved by the LAMTA after a favorable decision by the LAMTA’s Disputes Review Board. That change order was for approximately $111,000, which was approved in 1994, approximately seventeen (17) years ago. The remainder of the TSP’s claims resulted in a net recovery in favor of TSP and against LAMTA in the amount of $3,015,362.36, which was included in a judgment signed by the court in 2011. Both parties have appealed prior rulings on the case including an appeal by TSP of the tunnel handrail verdict. MTA’s withdrawals of its claims are permanent and are not subject to appeal by MTA. The appeal remains pending.
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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]

November 6, 2012

[Date]

[Signature]  [Date]

Cosema (Connie) Crawford, PE, Senior Vice President

[TITLE]

The Louis Berger Group, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

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

Signature       Date       Title

Sr. Vice President

GREENHORNE & O’MARA, INC.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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[Signature] [Date] [Title]

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

Signature: Paul Baginski
Date: October 29, 2012
Title: Area Manager

AMEC Environment & Infrastructure
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

[Signature] 11/06/12 [Vice President] Title

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

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

[Signature] 11/5/2012 [Name of Firm]

President [Title]
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

[Signature] 10/30/12

[Name of Firm]

[Title]
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-964-110, P101, C501, RW201

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

[Signature] [Date] [Chairman]

[Name of Firm]
Appendix D:
Prequalification Certificate
This Rating and Classification will expire: 03/31/2013
Issue Date: 04/30/2012

Structures: Underground Utilities
Grading; Major Structures; Portland Cement Concrete; Paving; Minor

Prequalified (Currently Inactive)

Assigned to your firm:
You are hereby notified that the following Rating and Classifications have been
In accordance with the Regulations of the Virginia Department of Transportation,

Vendor Number: C090
CHERRY HILL CONSTRUCTION, INC.

CERTIFICATION OF QUALIFICATION

COMONWEALTH OF VIRGINIA
VDOt
Appendix E:
Surety Letter
October 24, 2012

Mr. Stephen D. Kindy
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Annex Building, 8th Floor
Richmond, VA 23219

Re: Cherry Hill Construction, Inc.
Contractor’s Prequalification
A Design Build Project – I-64 Widening and Route 623 Interchange Improvements

Dear Mr. Kindy,

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, 2012.

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 $500,000,000 with an aggregate backlog approaching $5,000,000,000. 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 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

[Signature]

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. 225311
Certificate No. 005227613

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 Conyes, Donald H. McCarter, Sandra C. Lopes, and Jean M. Feeley

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 hereunto affixed, this 11th day of October, 2012.

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 11th day of October, 2012, 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.

[Notary Seal]

58440-8-12 Printed in U.S.A.
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 appointees 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 at 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 24th day of October, 2022.

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 JAMES M. CARROLL, 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 and Jean M. FEENEY, 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 27th day of July, A.D. 2012.

ATTEST:

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

By: [Signature]

Assistant Secretary
Eric D. Barnes

[Vice President]

James M. Carroll

State of Maryland
City of Baltimore

On this 27th day of July, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, JAMES M. CARROLL, 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.

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

POA-F 063-0073A
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 of 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 hereto subscribed my name and affixed the corporate seals of the said Companies, this 24th day of October, 2012.

[Seals]

[Signature]

Geoffrey Delisio, Vice President
THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

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

American Fire and Casualty Company
The Ohio Casualty Insurance Company
West American Insurance Company
Liberty Mutual Insurance Company
Peerless 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 Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, 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 hereinafter set forth, does hereby name, constitute and appoint: Donald H. McCarter; Jean M. Feeney; John J. Gangle; Kathleen M. Flanagan; Michael J. Cusack; Natalie Cowsby; Nicole Roy; Richard A. LeVario; 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, 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 5th day of October, 2012.

By: Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KINGS

On this 5th day of October, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, Peerless Insurance Company and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes herein set forth by signing on behalf of the corporations by himself as a duly authorized officer.

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

By: KD Riley, 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, Liberty Mutual Insurance Company, The Ohio Casualty Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company, which resolutions are now in full force and effect as 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 of the Board, 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 G. 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 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 by the secretary.

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

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

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless 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 24th day of October, 2012.

By: David M. Carey, Assistant Secretary
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, Jean M. Feeney, John J. Gambino, Sandra C. Lopes, Donald H. McCarter 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 9th day of July, 2012.

Kenneth C. Wendel, Assistant Secretary

STATE OF NEW JERSEY

as

County of Somerset

On this 9th day of July, 2012 before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, 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 Kenneth C. Wendel, being by me duly sworn, did depose and say that he 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 he signed said Power of Attorney as Assistant Secretary of said Companies by authority thereof; and that he 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
Commission Expires July 14, 2014

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 or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, 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 Vignale are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, 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 24th day of October, 2012

Kenneth C. Wendel, 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) 903-3556
e-mail: surely@chubb.com

Form 15-10-0225B-U (Ed. 5-03) CONSENT
Appendix F:
SCC and DPOR Data and Certificates
**ATTACHMENT 3.2.10**

**State Project No. 0064-964-110, P101, C501, RW201**

**SCC and DPOR Information**

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

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>SCC Address</th>
<th>DPOR Registered Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
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<td>The Louis Berger Group, Inc.</td>
<td>F1393679</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>801 E. Main Street Suite 500 Richmond, VA 23219</td>
<td>ENG</td>
<td>0407003926</td>
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<td>12/31/2013</td>
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<tr>
<td>Greenhorne &amp; O’Mara</td>
<td>F051099-2</td>
<td>C, Corporation</td>
<td>Active, In Good Standing</td>
<td>10800 Midlothian Turnpike, Suite 310 Richmond, VA 23235</td>
<td>ENG</td>
<td>0411000611</td>
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<td>2/28/2014</td>
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<td>AMEC Environment &amp; Infrastructure, Inc.</td>
<td>F1441981</td>
<td>Foreign Corporation</td>
<td>Active, In Good Standing</td>
<td>3705 Saunders Avenue Richmond, VA 23227</td>
<td>ENG</td>
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<td>2/28/2014</td>
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<td>Precision Measurements, Inc.</td>
<td>0450436-1</td>
<td>Corporation</td>
<td>Active</td>
<td>4215 Lafayette Center Dr Suite 2A Chantilly, VA 20151</td>
<td>LS</td>
<td>041100562</td>
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<td>2/28/2014</td>
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<td>Accumark, Inc.</td>
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<td>Corporation</td>
<td>Active, Good Standing</td>
<td>9500 King Air Court Ashland, VA 23005</td>
<td>ENG</td>
<td>0407005172</td>
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<td>12/31/2013</td>
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<td>Froehling &amp; Robertson, Inc.</td>
<td>0027211-2</td>
<td>Corporation</td>
<td>Current</td>
<td>3015 Dumbarton Rd. Richmond, VA 23228</td>
<td>ENG</td>
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<td>Siddall Inc.</td>
<td>0161902-2</td>
<td>Corporation</td>
<td>Active</td>
<td>830 E Main Street, 24th Fl 700 Ross Building Richmond, VA 23219</td>
<td>N/A (business license provided)</td>
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<td>CES Consulting, LLC</td>
<td>S3416007</td>
<td>LLC</td>
<td>Active</td>
<td>15709 Spyglass Hill Loop, Gainesville, VA 20155</td>
<td>Engineering</td>
<td>0407005783</td>
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<td>Business Name</td>
<td>Individual's Name</td>
<td>Office Location Where Professional Services will be Provided (City/State)</td>
<td>Individual's DPOR Address</td>
<td>DPOR Type</td>
<td>DPOR Registration Number</td>
<td>DPOR Expiration Date</td>
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<td>Cherry Hill Construction, Inc.</td>
<td>Gregory Michael Andricos</td>
<td>Jessup, Maryland</td>
<td>4202 Kilbourne Drive, Fairfax, VA 22032</td>
<td>Professional Engineer</td>
<td>0402032211</td>
<td>7/31/2014</td>
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<td>The Louis Berger Group, Inc.</td>
<td>John Andrew Vandergriff</td>
<td>Richmond, Virginia</td>
<td>3329 White Chimneys Court, Glen Allen, VA 23060</td>
<td>Professional Engineer</td>
<td>0402031149</td>
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<td>The Louis Berger Group, Inc.</td>
<td>Stephen Darryl Cook</td>
<td>Raleigh, North Carolina</td>
<td>6129 Countryview Ln, Raleigh, NC 27606</td>
<td>Professional Engineer</td>
<td>0402042771</td>
<td>9/20/2014</td>
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<td>The Louis Berger Group, Inc.</td>
<td>Dean Douglas Hatfield</td>
<td>Raleigh, North Carolina</td>
<td>1509 Oakboro Drive, Raleigh, NC 27614</td>
<td>Professional Engineer</td>
<td>0402018960</td>
<td>11/30/2014</td>
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<td>The Louis Berger Group, Inc.</td>
<td>Michael Kirk</td>
<td>Richmond, Virginia</td>
<td>15712 Fire Light Place, Moseley, VA 23120</td>
<td>Professional Engineer</td>
<td>0402038648</td>
<td>07-31-2013</td>
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<tr>
<td>The Louis Berger Group, Inc.</td>
<td>Mark Daniel McElwain</td>
<td>Richmond, Virginia</td>
<td>11341 Long Meadow Drive, Glen Allen, VA 23059</td>
<td>Professional Engineer</td>
<td>0402033041</td>
<td>7/31/2013</td>
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<tr>
<td>The Louis Berger Group, Inc.</td>
<td>Charles Bradford Smith</td>
<td>Richmond, Virginia</td>
<td>3413 Hunton Ridge Road, Glen Allen, VA 23059</td>
<td>Professional Engineer</td>
<td>0402038210</td>
<td>7/31/2013</td>
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<tr>
<td>Greenhorne &amp; O’Mara</td>
<td>William Aldrich Kump</td>
<td>Richmond, Virginia</td>
<td>244 Summit Dr, Moorefield, WV 26836</td>
<td>Professional Engineer</td>
<td>0402050233</td>
<td>1/31/2014</td>
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<td>AMEC Environment &amp; Infrastructure</td>
<td>Stanley Lewis Hite</td>
<td>Richmond, Virginia</td>
<td>437 Evarrude Lane, Sandston, VA 23150</td>
<td>Professional Engineer</td>
<td>0402017597</td>
<td>7/31/2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMEC Environment &amp; Infrastructure</td>
<td>Robert Harrison Vester, Jr.</td>
<td>Richmond, Virginia</td>
<td>7907 Kentucky Derby Drive, Midlothian, VA 23112</td>
<td>Professional Engineer</td>
<td>0402037748</td>
<td>12/31/2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision Measurements, Inc.</td>
<td>Mark Douglas McGoniagle</td>
<td>Glen Allen, Virginia</td>
<td>525 Aldengate Terrace, Midlothian, VA 23114</td>
<td>Land Surveyor License</td>
<td>0403002506</td>
<td>6/30/2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## ATTACHMENT 3.2.10

State Project No. 0064-964-110, P101, C501, RW201

### SCC and DPOR Information

<table>
<thead>
<tr>
<th>Company</th>
<th>Name</th>
<th>City, State</th>
<th>Address</th>
<th>Role</th>
<th>License Number</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumark, Inc.</td>
<td>W C LaBaugh III</td>
<td>Ashland, Virginia</td>
<td>2418 Mountainbrook Drive Richmond, VA 23233</td>
<td>Professional Engineer</td>
<td>0402010372</td>
<td>8/31/2013</td>
</tr>
<tr>
<td>Froehling &amp; Robertson, Inc.</td>
<td>Paul William Burch</td>
<td>Richmond, Virginia</td>
<td>3015 Dumbarton Rd. Richmond, VA 23228</td>
<td>Professional Engineer</td>
<td>040201273</td>
<td>4/30/2013</td>
</tr>
<tr>
<td>CES Consulting, LLC</td>
<td>Avtar Sigh</td>
<td>Haymarket, Virginia</td>
<td>5771 Janneys Mill Circle Haymarket, VA 20169</td>
<td>Professional Engineer</td>
<td>0402035169</td>
<td>1/31/2013</td>
</tr>
</tbody>
</table>
CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That CHERRY HILL CONSTRUCTION, INC., a corporation incorporated under the law of MARYLAND, 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 March 04, 1975; 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:
March 30, 2012

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

State Corporation Commission

I Certify the Following from the Records of the Commission:

The Louis Berger Group, Inc., a corporation existing under the laws of NEW JERSEY, holds a certificate of authority to transact business in Virginia, and is in good standing.

The certificate was issued on September 20, 1999.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
August 7, 2009

Joel H. Peck, Clerk of the Commission
Richmond, September 20, 1999

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

The Louis Berger Group, Inc.

a corporation organized under the laws of NEW JERSEY 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:

Clerk of the Commission
CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:
That GREENHORNE & O’MARA, INC., a corporation incorporated under the law of Maryland, 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 May 30, 1986; 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:
June 7, 2012

Joel H. Peck, Clerk of the Commission
CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That AMEC Environment & Infrastructure, Inc., a corporation incorporated under the law of Nevada, 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 September 20, 2000; 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:
November 15, 2011

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

State Corporation Commission

I Certify the Following from the Records of the Commission:

PRECISION MEASUREMENTS, INC. (ID #0450436-1), is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is July 24, 1995.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
August 24, 2009

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

State Corporation Commission

I Certify the Following from the Records of the Commission:

ACCUMARK, INC. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is January 30, 1995.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
August 7, 2009

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

State Corporation Commission

I certify the following from the records of the Commission:

FROEHLING & ROBERTSON, INCORPORATED, (Entity ID# 0027211-2), is a stock corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is October 11, 1924.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
August 13, 2009

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

State Corporation Commission

I Certify the Following from the Records of the Commission:

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

The date of incorporation is September 30, 1975.

I further certify that the following is a list of all documents constituting the charter of Siddall, Inc. as of this date.

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTICLES OF INCORPORATION</td>
<td>September 30, 1975</td>
</tr>
<tr>
<td>ARTICLES OF AMENDMENT</td>
<td>January 09, 1976</td>
</tr>
<tr>
<td>ARTICLES OF AMENDMENT</td>
<td>October 18, 1984</td>
</tr>
<tr>
<td>ARTICLES OF MERGER</td>
<td>March 30, 1988</td>
</tr>
<tr>
<td>ARTICLES OF AMENDMENT</td>
<td>August 10, 1998</td>
</tr>
<tr>
<td>ARTICLES OF AMENDMENT</td>
<td>February 26, 2001</td>
</tr>
</tbody>
</table>

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
May 10, 2001

Joel H. Peck
Clerk of the Commission
CES Consulting, LLC

General

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

Principal Office

- 5771 JANNEYS MILL
  HAYMARKET VA 20169

Registered Agent/Registered Office

- AVTAR SINGH
  15709 SPYGLASS HILL LOOP
  GAINESVILLE VA 20155
  PRINCE WILLIAM COUNTY 176
- Status: Active
- Effective Date: 12/28/2011

Select an action

- File a registered agent change
- File a registered office address change
- Remove as registered agent
- Pay annual registration fee
- Order a certificate of fact of existence
- Submit a PDF for processing (What can I submit?)
- View eFile transaction history
The State Corporation Commission has found the accompanying articles submitted on behalf of CES Consulting, LLC (formerly known as Construction Engineering & Scheduling Consulting Engineers, PLC) to comply with the requirements of law, and confirms payment of all required fees. Therefore, it is ORDERED that this CERTIFICATE OF AMENDMENT be issued and admitted to record with the articles of amendment in the Office of the Clerk of the Commission, effective October 26, 2010.

STATE CORPORATION COMMISSION

By

James C. Dimitri
Commissioner
Richmond, October 14, 2010

This is to certify that the certificate of organization of

Construction Engineering & Scheduling Consulting Engineers, PLC

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: October 14, 2010

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-28-2014

NUMBER
0411000655

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

PROFESSIONS: ENG

THE LOUIS BERGER GROUP INC
1001 WADE AVE.
SUITE 400
RALEIGH, NC 27605

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

(POCKET CARD)

COMMONWEALTH OF VIRGINIA

BOARD FOR APESCIOLDA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000655 EXPIRES: 02-28-2014
PROFESSIONS: ENG
THE LOUIS BERGER GROUP INC
1001 WADE AVE.
SUITE 400
RALEIGH, NC 27605

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-28-2014

NUMBER
0411000611

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

PROFESSIONS: ENG

GREENHORNE & O'MARA, INC.
10800 MIDLOTHIAN TNPK STE 310
RICHMOND, VA 23235

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

(POCKET CARD)

COMMONWEALTH OF VIRGINIA

BOARD FOR APESCIOLDA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000611 EXPIRES: 02-28-2014
PROFESSIONS: ENG
GREENHORNE & O'MARA, INC.
10800 MIDLOTHIAN TNPK STE 310
RICHMOND, VA 23235

ALTERNATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233.
Telephone: (804) 367-8500

NUMBER
0411000909

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

PROFESSIONS: ENG

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.
3705 SAUNDERS AVENUE
RICHMOND, VA 23227

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

COMMONWEALTH OF VIRGINIA
BOARD FOR APPLSCDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000909 EXPIRES: 02-28-2014
PROFESSIONS: ENG
AMEC ENVIRONMENT & INFRASTRUCTURE, INC.
3705 SAUNDERS AVENUE
RICHMOND, VA 23227

(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

NUMBER
0411000562

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

PROFESSIONS: LS

PRECISION MEASUREMENTS INC
4215 LAFAYETTE CENTER DR
SUITE 2A
CHANTILLY, VA 20151

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

EXPIRES ON
12-31-2013

NUMBER
0407005172

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

PROFESSIONS: ENG

ACCUMARK INC
9500 KING AIR CT
ASHLAND, VA 23005

Gordon N. Dixon, Director

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

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

COMMONWEALTH OF VIRGINIA

BOARD FOR APELSIDOLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407000098 EXPIRES: 12-31-2013
PROFESSIONS: ENG
FROEHLING & ROBERTSON, INC
3015 DUMBARTON ROAD
RICHMOND, VA 23228

Gordon N. Dixon, Director

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

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
2012 BUSINESS LICENSE

CITY OF RICHMOND
CITY HALL, ROOM 103
RICHMOND VA 23219
(804) 646-7000

SIDDALL INC
830 E MAIN ST 24TH FL
700 ROSS BLDG
RICHMOND, VA 23219

ACCOUNT NO. 1014387

BUSINESS LOCAL ADDRESS:
830 E MAIN ST 24FL
RICHMOND, VA 23219

VALID BUSINESS LICENSE(S)
BUSINESS TYPE DESCRIPTION   CAT   TYPE   LICENSE #
ADVERTISING                15     1801   18457

LICENSE(S) MUST BE RENEWED BY MARCH 1, 2013
THIS LICENSE CERTIFICATE MUST BE SURRENDERED UPON DEMAND

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9860 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-9500

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

PROFESSIONS: ENG

CES CONSULTING LLC
15709 SPYGLASS HILL LOOP
GAINESVILLE, VA 20155
PERSONNEL DPOR REGISTRATION CERTIFICATES

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

PERSONNEL DPOR REGISTRATION CERTIFICATES

PERSONNEL DPOR REGISTRATION CERTIFICATES

PERSONNEL DPOR REGISTRATION CERTIFICATES
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

STEPHEN DARRYL COOK
6129 COUNTRYVIEW LN
RALEIGH, NC 27606

DEAN DOUGLAS HATFIELD
1509 OAKBORO DR
RALEIGH, NC 27614

MARK DANIEL MCELWAIN
11341 LONG MEADOW DRIVE
GLEN ALLEN, VA 23059

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR PARTIES OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

.expires on
07-31-2013

number
0402038210

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

CHARLES BRADFORD SMITH
3413 HUNTON RIDGE RD
GLEN ALLEN, VA 23059

(See reverse side for name and/or address changes)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

expires on
07-31-2013

number
0402038648

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

MICHAEL LAWRENCE KIRK
15712 FIRE LIGHT PLACE
MOSELEY, VA 23120

(See reverse side for name and/or address changes)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

expires on
07-31-2013

number
0402017597

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

STANLEY LEWIS HITE
437 EVANRUDE LANE
SANDSTON, VA 23150
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

ROBERT HARRISON VESTER JR
7907 KENTUCKY DERBY DRIVE
MIDLOTHIAN, VA 23112

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

MARK DOUGLAS MCGONIAGLE
525 ALDENGATE TERRACE
MIDLOTHIAN, VA 23114

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

W. C. I. ARAUGH III
2418 MOUNTAINBROOK DRIVE
RICHMOND, VA 23233
Appendix G:
Key Personnel Resumes
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregory M. Andricos, PE, Design-Build Project Manager</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Project Assignment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Project Manager</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Name of Firm with which you are now associated:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Hill Construction, Inc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Years experience:</th>
</tr>
</thead>
<tbody>
<tr>
<td>With this Firm: 20 Years with Other Firms 0 Years</td>
</tr>
<tr>
<td>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.):</td>
</tr>
</tbody>
</table>

| Cherry Hill Construction, A Tutor Perini Corporation, Jessup, MD, Civil Engineer. 1992-Current |

<table>
<thead>
<tr>
<th>e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Military Institute/Lexington, Virginia/BS/1992/Civil Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/Discipline/DC Registration #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998/Professional Engineer/VA #032211</td>
</tr>
<tr>
<td>2007/Professional Engineer/MD #34022</td>
</tr>
<tr>
<td>2009 / VA Registered Land Disturber / #31805</td>
</tr>
<tr>
<td>2008 / VA Erosion and Sediment Control Certification / #4541C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g. Document the extent and depth of your experience and qualifications relevant to the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
</tr>
<tr>
<td>(List at least three (3) but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>

FHWA – Eastern Federal Lands Highway Division, “Award Winning” Fairfax County Parkway, Phases I, II & IV D/B, Springfield, Virginia. Current firm - Cherry Hill Construction. D/B project manager responsible for coordinated efforts of numerous engineering and construction disciplines on the $111.5M competitively bid project that provided design for seven bridge structures, two noise and multiple retaining walls, roadways, signing and lighting, SWM, multi-use trails, ESC measures and devices, and utilities. Also directed efforts of the construction forces to ensure safety, quality, and timeliness of all elements. The project included special considerations for Hazardous and/or Contaminated Materials identification and removal, and plans and contingencies for Unexploded Ordnance and MEC. The project also included widening of I-95 to accommodate a new exit lane that provides direct access to the NGA via West South Loop Road and provided coordination to address concerns of property owners and the traveling public through attendance at Citizen Information Meetings. Directly oversaw the independent QA program and QAM to ensure all aspects of design and construction met project specifications inclusive of a low impact crossing of environmentally sensitive Accotink Creek. All design submission milestones were achieved, final design and permits were received, physical construction started on schedule, and the Phase I and II main line roadway opened on September 20, 2010, nearly a month ahead of schedule. Project Duration: Phase I and II – 2008-2010, Phase IV – 2008-2011.

FHWA – Eastern Federal Lands Highway Division, 9th Bridge Replacement Design-Build, Washington, DC. Current firm - Cherry Hill Construction. D/B project manager and primary point of contact and supervising a staff consisting of engineers, P.R. professionals, context sensitive artisans, R/W specialists, utility
coordinators, inspectors, managers and field personnel for this $58.4M project. Responsible for managing this project from the proposal that provided the overall best value through all phases of permitting, design and construction. Project required multi-disciplined design efforts to facilitate the phased removal and complete reconstruction of an existing structure spanning N.Y. Ave as well as active CSXT and AMTRAK Railroads and related interchange and infrastructure improvements. 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. This project involved LID components, including bioretention stormwater management facilities. The 100% design submission of this project was made approximately three months ahead of schedule due to a partnership established between all project shareholders including the FHWA-EFLHD, DDOT, AMTRAK, CSXT, USPS and JMT. Project Duration: 2006-2011

FHWA – Eastern Federal Lands Highway Division, Taylor Street Bridge Replacement D/B, Washington, DC. Current firm - Cherry Hill Construction. D/B project manager and primary point of contact for $10.9M D/B Project. Responsible for overseeing the estimate, design, construction, and QA/QC efforts. Worked to develop a cost-efficient design that used state-of-the-art means and methods, including HPC and fabricated structural steel girders using Grade 50 webs and Grade 70 flanges to provide the overall best value to the FHWA-EFLHD. A formal partnering program was instrumental to the successful completion of this bridge replacement and interchange reconstruction project within the allotted contract duration and budget while working over two railroad entities. Project Duration: 2003-2006.

GSA, FDA Consolidation, East Access Road, White Oak, MD Current firm - Cherry Hill Construction. Operations manager. Prepared the cost competitive proposal and oversaw all elements required for the fast track construction of the three-span, 580-ft. long bridge spanning environmentally sensitive Paint Branch. The completed bridge showcased numerous context sensitive design elements, inclusive of gateway entry columns, ornamental lighting, and architectural concrete treatments. Project Duration: 2008-2009.

GEC Partners, MDTA, I-95, Section 100 KH1501-00-006, Baltimore, Maryland. Current firm - Cherry Hill Construction. Operations manager for $151.5M of construction requiring the reconstruction and widening of 3.6 miles of I-95/I-895, the I-95/I-895 Interchange, replacement of three bridges, partial reconstruction of Chesaco Avenue Bridge, and more than five miles of retaining/noise walls. These projects involved complex MOT (dealing with 178,000 ADT), use of best managed erosion and sediment control practices, coordination with impacted utilities, adjacent contracts, and negotiating temporary easements with impacted homeowners. Project Duration: 2006-2011.
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title:</td>
</tr>
<tr>
<td>Roger Lant, Project Manager</td>
</tr>
<tr>
<td>b. Project Assignment:</td>
</tr>
<tr>
<td>Construction Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>Cherry Hill Construction, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 10 Years with Other Firms 9 Years</td>
</tr>
<tr>
<td>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.):</td>
</tr>
<tr>
<td>Cherry Hill Construction, A Tutor Perini Corporation, Jessup, MD, Civil Engineer. 1992-Current</td>
</tr>
<tr>
<td>e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>Herriot Watt University, Edinburg, United Kingdom / Bachelor’s Degree Eng/1998/Civil Engineering with Honors</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/Discipline/DC Registration #:</td>
</tr>
<tr>
<td>2008 / VA Registered Land Disturber / #37622</td>
</tr>
<tr>
<td>2008 / VA Erosion and Sediment Control Certification / #4543C</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
</tr>
<tr>
<td>(List at least three (3) but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>

**FHWA – Eastern Federal Lands Highway Division, “Award Winning” Fairfax County Parkway, Phases I, II & IV D/B, Springfield, Virginia. Current firm - Cherry Hill Construction.** Construction manager responsible for the design, permitting and construction of the Fairfax County Parkway from I-95 to Hooes Road, which include 1.8 miles of 6-lane divided Fairfax County Parkway, 0.7 miles of Barta Road, and 1-mile of I-95 improvements with a duration of 750 calendar days. The improvements included design and construction of 2 grade separated interchanges, widening of I-95 ramps, and construction of 6 new bridges, 1 bridge widening and extensive MSE Walls. Through design the planned disposal of 1.1 million yards of excess material was eliminated, methods of eliminating export included blasting, crushing and processing rock for beneficial use, which eliminated approximately 750,000 truck axles from the areas roads. In addition six storm water management ponds, 20,000 feet of storm drain, 500 feet of 48” diameter sewer lining, which included a 17MGD temporary pump around and 1200 feet of waterline was installed. Project Duration: Phase I and II – 2008-2010, Phase IV – 2008-2011.

**MDSHA, MD 5 Branch Avenue Metro Access Phase I, Prince Georges County, Maryland. Current firm - Cherry Hill Construction.** Project manager responsible for the reconstruction and relocation of major ramps connecting I495/I95 and MD 5, which included improvements of 1.75 miles of MD 5 and I495/I95. The project included the import of 300,000CY of borrow, placement of a 65ft tall reinforced earth slope, which were constructed adjacent to major wetlands and waters of the US, with access from existing Ramps. Embankment construction included settlement and inclinometer monitoring programs that permitted reductions of the quarantine periods. The ramp scheme required construction of 5 new bridges, which included the construction
of 2 two-span bridges over I-495/I-95 and MD 5 that included full shutdowns of I-495/I-95 and MD 5 for accelerated steel erections. Deep storm drain installation was value engineered to mitigate traffic impacts, reduce environmental impacts and assist the schedule. Cherry Hill Partnered with MDSHA to minimize the Projects impact environmentally and to the public, while finishing 9 months early. Project Duration: 2006 - 2008

MD-MTA, “Award Winning” MTA Light Rail Double Track, Baltimore, Maryland. Current firm - Cherry Hill Construction. Project manager responsible for the installation of 5.4 miles of ballasted track adjacent to existing single track, which included installation of all underground electrical facilities. Through acceleration, Cherry Hill worked directly alongside and coordinated track possession with MASS Electric, who was performing the catenary and traction power installation. The project was undertaken to allow MTA to provide a higher frequency of trains and allow for scheduled maintenance with minimal disruptions to service. Cherry Hill worked with PRW Consultants and MTA to schedule an extended shut down of the live rail, which accelerated Project completion by 9 Months. Project Duration: 2003-2005.

MDSHA, MD 450 from MD 193 to East of Stoneybrook Drive, Prince Georges County, Maryland. Current firm - Cherry Hill Construction. Project manager responsible for the construction of 3.6 miles of divided highway, which included major MOT phasing, mass excavation of 270,000CY through significant wetlands, demolition of 3.1 miles of existing roadway, extensive utility relocations, and electrical/signal systems, extensive MSE Walls and a bridge over CSXT Rail Road. Project Duration: 2002-2005

MDSHA, MD 5 Hughesville Bypass – Hughesville, Maryland. Current firm - Cherry Hill Construction. Project superintendent responsible for the final phase of this $33.4M project which was performed in 20007. This 3.2 mile divided highway relocation formally partnered project required; multiphase MOT, approximately 800,000 CY of excavation and embankment, storm drain improvements, full depth pavement construction, signing and pavement markings, two new multi-span bridge structures, noise walls, and roadway lighting. Project Duration 2004-2007.
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title:</td>
</tr>
<tr>
<td>William Kump, PE, Project Manager</td>
</tr>
<tr>
<td>b. Project Assignment:</td>
</tr>
<tr>
<td>Quality Assurance Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>Greenhorne &amp; O’Mara, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 1 Years with Other Firms 13 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment History, position and general experience or field of practice for the last five (5) years. (NOTE: If you have less than 5 years of experience, please list all of your experience for those you have worked.):</td>
</tr>
<tr>
<td><strong>Greenhorne &amp; O’Mara</strong> - Richmond, Virginia; Project/QA Manager;  <strong>September 2011-Present</strong></td>
</tr>
<tr>
<td><strong>Rummel, Klepper &amp; Kahl, LLP</strong> - Fairfax, Virginia; Lead Inspector;  <strong>May 2011 – August 2011</strong></td>
</tr>
<tr>
<td><strong>Thrasher Engineering Inc.</strong> – WV; Senior Inspector/QA Manager;  <strong>September 2008 – January 2011</strong></td>
</tr>
<tr>
<td><strong>HNTB Corporation</strong> - Parkersburg, WV; Senior Inspector/Office Engineer;  <strong>June 2005 – August 2008</strong></td>
</tr>
<tr>
<td>e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>Virginia Military Institute/Lexington, VA/BS/1998/Civil Engineering</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/Discipline/VA Registration #:</td>
</tr>
<tr>
<td>2012/Professional Engineer/VA #0402050233</td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
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</tr>
<tr>
<td>(List at least three (3) but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
<tr>
<td>Virginia Department of Transportation, Richmond District, Huguenot Memorial Bridge Replacement, Richmond, Virginia.  <strong>Current firm - Greenhorne &amp; O’Mara</strong>. This $35M project involves phased construction of the 2,984 LF bridge over the James River and the demolition of the original structure. The project also includes the relocations of a 48” dia. sanitary force main, a 42” dia. gravity sanitary sewer, a gas main, and water main work. Other elements of the project includes asphalt roadway construction, excavation and embankment, MSE retaining walls, pipe and drainage structures, erosion and sediment control, and pavement markings. Mr. Kump is responsible for construction coordination activities including supervision of two field inspectors (G&amp;O as subconsultant to another firm). He was also responsible for coordination of work related to the hydraulic analysis performed on the James River adjacent to the construction causeway. Project duration:  <strong>September 2011 –Present</strong>.</td>
</tr>
<tr>
<td>Chesterfield County Department of Transportation, Chesterfield County, Virginia.  <strong>Current firm - Greenhorne &amp; O’Mara</strong>. Mr. Kump has served as QA Manager or lead inspector for various transportation improvement projects for the county under this open-ended contract. Representative task included:  <strong>Robious Road Widening</strong> - QA Manager; $2.1M construction project consisted of widening Robious Road from 2 lanes to 4 lanes. The project consists of excavation and embankment, pipe and drainage structures, erosion and sediment control, signals, asphalt pavement, and pavement markings (September 2012 –Present).  <strong>Powhite Parkway Extension</strong> - QA Manager; $5.8M construction project consisting of widening the Powhite Parkway...</td>
</tr>
</tbody>
</table>
from 2 lanes to 4 lanes. The project consists of excavation and embankment, pipe and drainage structures, triple 54” pipe culvert extension, quadruple 84” dia. pipe culvert extension, quadruple 10’ x 10’ box culvert extension, erosion and sediment control, signage, signals, guardrail, asphalt pavement, and pavement markings (April 2012 – Present). Chalkley Road Wet Curve Realignment – Senior Inspector; $600k construction project consisted of 1,000 LF of grade work through a swamp. The roadway embankment work included the placement of 2,500 tons of rip-rap rock and separation fabric to stabilize the area. The project had wetland areas on both sides of the construction. The project also included gas transmission line improvements, pipe and drainage structures, erosion and sediment control, asphalt pavement, and pavement markings.

Chesterfield County Department of Transportation, Route 10 at I-95, Chesterfield County, Virginia. Current firm - Greenhorne & O’Mara. QA Manager; $12.8M construction project for widening Route 10 from I-95 to Ware Bottom Spring from 4 lanes to 8 lanes. The project consists of bridge construction and demolition, excavation and embankment, pipe and drainage structures, erosion and sediment control, signage, signals, asphalt pavement, and pavement markings (September 2011 – Present).

Virginia Department of Transportation, NOVA District, Fairfax County Parkway / Fair Lakes Parkway Intersection Reconstruction, Fairfax County, Virginia. Previous firm - Rummel, Klepper & Kahl, LLP. Served as the Senior Inspector for this $45M project that consisted of 2.0 miles of roadway construction with three bridge structures. The roadway work included excavation and embankment, MSE retaining walls, soldier pile retaining walls, sound walls, pipe and drainage structures, utility relocation, erosion and sediment control, landscaping, signage, signals, asphalt pavement, and pavement markings. Project duration: May 2011 – August 2011.

Appalachian Corridor H, West Virginia Division of Highways, District 5, Grant County, West Virginia. Previous firm - Thrasher Engineering, Inc. Served as the QA Manager for this $55M construction project that consisted of 2.5 miles of grade work and five bridge structures. The roadway work included three million CY of excavation, pipe and drainage structures, erosion and sediment control, landscaping, signage, and asphalt pavement for a section of four lane divided highway. Four of the bridge structures on the project were twin structures, 1,100 feet in length. The fifth bridge structure was 60 feet in length carrying a two lane relocated county road. Project duration: September 2008 - January 2011.
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <strong>Name &amp; Title:</strong> John Vandergriff, PE, Director Virginia Engineering Operations</td>
</tr>
<tr>
<td>b. <strong>Project Assignment:</strong> Design Manager</td>
</tr>
<tr>
<td>c. <strong>Name of Firm with which you are now associated:</strong> The Louis Berger Group, Inc.</td>
</tr>
<tr>
<td>d. <strong>Years experience:</strong> With this Firm 6.5 Years with Other Firms 14 Years</td>
</tr>
</tbody>
</table>

**Current to 2/06; The Louis Berger Group, Inc.; Senior Transportation Project Manager / Design Section Manager:** Lead and manage design of transportation projects, highway design, drainage design, SWM, E&S, traffic, MOT/SOC; responsible charge duties included; managing the engineering design section.

**2/06 to 4/04; VDOT Richmond District; Engineer II / Project Manager:** Led Project Management Office, Managed a selection of the most risky and regionally significant projects; managed/supervised/led group of PM’s in the Project Management Office (PMO); responsible for pre-advertisement design projects.

**4/04 to 1/98; Michael Baker Jr., Inc.; Senior Transportation Engineer:** Progressively responsible position including all aspects of design of transportation projects (roadway, drainage, MOT, SOC, etc.); responsible charge duties and project manager duties.

**12/97 to 8/95; Wilbur Smith Associates; Transportation EIT then Transportation Engineer:** Staff engineer designed and assisted with design of roadways / highways.

**8/95 to 1/92; West Virginia Division of Highways; EIT 1, 2, Staff engineer designed and assisted with design of various transportation projects and construction inspection.**

<table>
<thead>
<tr>
<th>e. <strong>Education:</strong> Name and Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Tech, Blacksburg, VA /BS/1991/Civil Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>f. <strong>Active Registration:</strong> Year First Registered/Discipline/VA Registration #: 1997/Professional Engineer/VA #0402031149</td>
</tr>
</tbody>
</table>

| 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.)**

**Huguenot Memorial Bridge, Richmond, Virginia**

*Virginia Department of Transportation Richmond District (sub-consultant).* (Current Firm) (April 2006 – Present – Under Construction) Roadway/Drainage Project Manager. Managed final design engineering for roadway & drainage tasks including complete roadway plans, stormwater management, erosion and sediment control, signing / pavement marking, SOC / MOT /TMP, right of way plans, construction plans and construction documents, and public hearing responsibilities. Mr. Vandergriff was in charge of the project design exclusive of the James River Bridge and in-plan utilities, and was responsible for associated scope, schedule, and budget as well as engineer in responsible charge duties. Worked interactively with Ammann & Whitney (bridge
designer) throughout the project life cycle including development of key construction special provisions. Project included roadway reconstruction, realignment, and urban intersection reconstruction for this urban arterial crossing the James River. Project is currently under construction, and Mr. Vandergriff continues to supply design support during construction for the contractor and construction management team (Skanska / MBP / Greenhorne & O’Mara). (VDOT UPC 16519)

U.S. 29 at Gallows Road, Fairfax County Virginia.

Virginia Department of Transportation NOVA District. (Current Firm) (April 2006 – Presently Under Construction). Managed final design activities, right of way plan production, and construction plans & documents for widening and reconstructing this urban principle arterial. The project includes multiple lane widening, raised medians, shared use paths, extensive utility coordination, and the complete reconstruction of portions of U.S. 29 and Gallows Road in the vicinity of I-495. Mr. Vandergriff served as engineer in responsible charge for roadway, MOT/SOC and served as manager as the prime consultant for the project in charge of scope schedule and budget. Mr. Vandergriff led services covering the breadth and depth of technical & developmental transportation engineering issues on the project and including the more unique items of: meeting with the VDOT R/W and individual property owners to develop design modifications to assist in R/W negotiations, reviewing and advising VDOT on private development plans including proffer language, partnering meetings with advanced in-plan utility contractor, depicting private, public, existing, proposed, and as-built utility information in cross sections; depicting over 250 utility test holes on the cross sections, coordinating and developing interim designs to allow for I-495 Hot Lane project construction. Mr. Vandergriff continues to directly participate in design support during construction and continually coordinates with VDOT construction management staff and contractor (A&W). The project was advertised for construction in 2011 and design support during construction is scheduled thru 2013. (VDOT UPC 11395)

Lee Jackson Highway U.S. 50, Fairfax and Loudoun Counties Virginia

Virginia Department of Transportation. (Current Firm) (January 2007 – Present) Project Manager / Design Manager. Managed consultant engineering design team activities including four sub-consultant team members in the preparation of PFI, VE plans, public hearing plans, D-B RFQ, and D-B RFP Plans for widening and reconstructing 3.5 miles of this urban principle arterial. Project began as Design-bid-build. Included within the project boundaries are three major waterway crossings, six existing at-grade intersections, and several private development projects that affect the proposed roadway design. Mr. Vandergriff was in responsible charge of the project design, and was responsible for scope, schedule, and budget; and he was responsible for leading design efforts on roadway, drainage, SWM, MOT/SOC, traffic. Managed internal design team members and sub-consultants including DBE traffic, bridge, survey, and SUE. Worked creatively and confidentially to develop design-build RFQ and RFP plans, identify and limit risk to VDOT for the design-build project. Under a confidentiality agreement with VDOT NOVA District, Mr. Vandergriff reviewed D-B offerors’ submissions including pricing elements and advised VDOT NOVA District accordingly (VDOT UPC 68757)


Owner: Virginia Department of Transportation & Office of Transportation Public-Private Partnerships, Client: Multi-Modal Solutions, LLC Joint Venture Kiewit Infrastructure South Co. / Shirley Contracting Company, LLC (Current Firm) (May 2010 – September 2012) Design Manager. Served as design manager thru 3 phases of procurement over 2 year period; Multi-Modal Solutions Team was not selected as the offeror requiring the least public subsidy. The selected offeror proposed price was $1.396B, and the range of prices submitted to the owner was ± 6%. Project extended from Petersburg Virginia to Suffolk Virginia for 55 miles of limited access principle arterial and included two system-system interchanges and 7 intermediate interchanges. Mr. Vandergriff led a design (pre-construction) team numbering over 60 engineers across 5 major sub-consultants including geotechnical and environmental services. Technical proposal deliverable included design to level consistent with a VDOT public hearing including major elements such as roadway with construction limits, major drainage, bridge layouts, stormwater management, and R/W for the entire 55 mile project. Mr. Vandergriff and his design team worked directly and in partnership with contractors, finance team members,
and bonding agency reviewers throughout this two year procurement in addition to providing a tiered level of design for Wall Street bonding. John was responsible for the management and development of key submission requirements including: written technical proposal, technical proposal plans, design iterations to limit costs, design iterations to reduce schedule, design iterations to reduce environmental impacts. Mr. Vandergriff led design activities and development of global design goals & strategies to optimize project price, minimize schedule constraints, and minimize environmental constraints.

I-64 Widening and Reconstruction, Chesapeake Virginia
Virginia Department of Transportation (Previous Firm – Michael Baker Jr., Inc.) (1998 – 2001) Directly designed significant portions for 9.5 km six-lane divided interstate widening and interchange reconstruction. Prepared Field Inspection level construction plans for the addition of an outside lane and inside HOV lanes, designed portions of two interchanges with collector-distributor roadways. Prepared advanced R/W acquisition plans, designed bridge approaches for bridge spanning Elizabeth River.
Appendix H:
Work History Forms
### ATTACHMENT 3.4.1
#### LEAD CONTRACTOR – WORK HISTORY FORM

<table>
<thead>
<tr>
<th>Name:</th>
<th>Fairfax County Parkway (FCP) Phase I/II and IV Design – Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Springfield, VA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>a. Project Name and Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design</th>
<th>c. Contract information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities</th>
<th>d. Contract Completion date (Original)</th>
<th>e. Contract Completion date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the lead contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairfax County Parkway (FCP)</td>
<td>Design-Bid-Build, etc.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

### Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement:

The EFLHD, as the representative for VDOT/US Army Garrison Fort Belvoir, selected Tutor Perini Corporation’s (TPC) wholly-owned subsidiary Cherry Hill Construction (CHC) as providing overall best value for this D-B project. The TPC D/B Team used innovative construction and design methods during the Phase I/II bid procurement that resulted in savings to VDOT of approximately $20M when compared to design and construction cost submitted by other bidders on their less innovative designs. Our team provided full QA/QC Services for this Project. The 4-lane divided limited access highway completed the missing connection of the Fairfax County Parkway to I-95 and provides critical access to the National Geospatial-Intelligence Agency’s (NGA) facility at Fort Belvoir (EPC). To meet the requirements of BRAC the Fairfax County Parkway project had an extremely aggressive schedule of 750 calendar days to design, permit, relocate utilities, characterize and dispose of contaminated materials, and construct the parkway. The TPC D/B Team initiated design upon notice of award beginning in Oct. 2008 and delivered approval for construction plans that allowed the eastern portion of the project to commence in April 2009. Full plan approval for the remainder of the project was received on August 2009, approximately 3 months ahead of schedule. This accelerated design expedited the initial construction operations, enabling the opening of Phases I/II on September 20, 2010, nearly a month ahead of scheduled.

The project corridor began at Rolling Road/Franconia-Springfield Parkway and proceeded southeasterward on a new alignment and ends just east of Fullerton Road. The design included a new interchange at Fairfax County Parkway and Bart Road for access to West North Loop Rd (NGA interior roadway network) within the new NGA facility.

Extensive design collaboration/coordination with the U.S. Army for this access point was required and included coordination for security lighting, over height vehicle detection, geometry/utility connections. A majority of this roadway was located on the southern portion of the EPG. The work involved in the Parkway included: grading, drainage and paving, six new bridges, one bridge widening, two noise walls, lighting, traffic signals, signing/signing/striping and extensive environmental services.

The environmental challenges were further complicated by the fast-track schedule, involvement of multiple stakeholders, and complex environmental and regulatory issues. The Fairfax County Parkway alignment cut through EPG and crossed five former firing ranges and testing sites including three Resource Conservation and Recovery Act (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. Design services included a comprehensive investigation of the nature and extent of the contamination on several of these areas, including groundwater modeling to evaluate the impact of construction on the fate and transport of multiple contaminated groundwater plumes. The project also included widening of I-95 to accommodate a new exit lane designed as a certified Defense Access Road (DAR) that provides direct access to the NGA. The TPC D/B Team completed the following work, as directed by the EFLHD:

#### Base Option
- Design of a 4-lane divided, limited access highway, designed to facilitate future widening to 6-lanes within the project ROW; Relocation of portions of Rolling Rd; Interchange at Fairfax County Parkway with Bart Road; New Bridges at Fullerton Road, Accotin Creek/Barta Road; and multipurpose trail alongside a portion of the road.

#### Option No. 1
- Construction of Ramp A/Loop D at the Barta Road Interchange.

#### Option No. 2
- Provided an access road 1 mile in length beginning at the existing exit ramp connecting Southbound I-95 to Westbound Fairfax County Parkway to a new alignment to the West South Loop Road, included widening of existing Bridge 675.

#### Option No. 3
- Consisted of constructing Ramp C of the Boudinot Drive interchange. This ramp was approximately 0.3 miles long and provides access from Fullerton Road to Southbound Fairfax County Parkway.

Phase IV was completed in July 2011 and provides access to Northbound Fairfax County Parkway from Boudinot Drive by extending Boudinot Drive beneath the Parkway and constructing Loop B. This project also provides a connection from Fairfax County Parkway Northbound to Boudinot Drive via Ramp B; and access from Southbound Fairfax County Parkway to Boudinot Drive via Ramp D and a new bridge crossing Accotin Creek. It is important to note that our change management systems enabled our D-B Team to expediently provide VDOT and the EFLHD the necessary information (designs, cost estimates, and schedule analysis) that resulted in the project to securing $22.8 M of ARRA funds to add Phase IV.

Throughout the performance of this project, the TPC D/B Team gained significant experience that will be relevant to the St. Elizabeths East Campus Project including but not limited to: using over the shoulder meetings with utility owners to expedite submission and approvals, coordination of designs where interfacing I-95 with FHWA, obtaining DCR waiver for construction access of regulated waterway, performing public outreach including working with VDOT and impacted communities to resolve sensitive issues (such as revising a planned detour routes), coordination of design, construction, and MOT closures with the regional traffic master plan, coordination for the relocation of impacted utilities, and participated in VDOT Mega Projects Community Resource Board. This project required our team to provide full QA/QC services. As a part of lessons learned, our QA/QC program for St. Elizabeths East Campus Project will include appropriate hold points including interim inspections of underground improvements prior to installation of permanent road way surface. Additionally the TPC D/B exceeded all the VDOT DBE and SWaM goals for the project by ultimately awarding over 40% of all subcontract dollars to such certified firms.
LEAD CONTRACTOR – WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name and 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).

Name: “Award Winning” I-95 Express Toll Lanes Section 100 – KH 1501 and KH 1503
Location: Baltimore City and County, MD

Name: Greenhorne & O’Mara JV with Century Engineering
Name of Client/Owner: Maryland Transportation Authority - I-95 GEC Partners
Project Manager: Gradon Togher
Phone: 410.931.0808
Email: Gradon.togher@stvinc.com

2010
July 2011
$140,559
$150,885

$150,885
(These were unit price contracts and time was extended and overall value was increased due to increased quantities of work measured and performed)

Cherry Hill Construction, Inc. was the prime contractor for the these I-95 Express Toll Lanes Section 100 Corridor Projects reconstructing over 3.2 miles of interstate roadway from 1.2 miles south of the I-895 Moravia Road Interchange through the I-895/I-95 Interchange to Kenwood Avenue. This work required the following major operations: Multi-Phase MOT to allow continuous peak traffic on I-895, I-95 (178,000 ADT), I-895 (69,000 ADT) and 4 existing overpasses, coordination of multi-phase Erosion and Sediment Control and Storm Water Management with MDE and Independent Monitor, construction and maintenance of 5 new storm water management facilities, over 430,000 CY of excavation and embankment, 3 new bridge structures (including a 1,400 LF six span flyover bridge spanning environmentally sensitive Moore’s Run and I-95), 1 modified bridge structure (jacking and extension of Chesaco Ave Bridge over I-95), over 87,000 SF of temporary and permanent support of excavation systems (including design build top-down single sided tieback walls, soldier pile and lagging walls, and soil nail walls), 9 new noise walls (requiring over 360,000 SF architectural concrete and over 19,700 LF drilled shafts), over 31,700 LF of various dia. (15”-66”) storm drain and associated structures including a jack and bore under I-95, full depth PCCP pavement, over 260,000 TNs of bituminous pavement, utility improvements including the relocation of a bridge mounted 12” waterline, signage (including overhead DMS), pavement markings, lighting (including high-mast), and landscaping.

These projects were constructed adjacent over and adjacent to active I-95 and I-895 requiring around the clock MOT including 4 major weekend traffic shifts. Through a formal partnership with the Owner, Cherry Hill Construction, Inc. worked with TLB Associates to develop and alternate technical concept using cement to stabilize over 53,000 SY of existing subgrade soil in lieu of over-excavation to waste and import backfill to correct unsatisfactory soils in the median of I-95. This eliminated over 4,800 individual dump truck transits that would have had to ingress and egress the median of I-95 from the high speed lanes. Cherry Hill Construction performed around the clock MOT and to place and/or reset over 104,000 LF of temporary traffic barrier on I-895 and I-95 including night-time weekend detours to erect structural steel in limited operational windows.

This work was based on unit pricing and due to overrun in quantities of work performed the aggregate contract value grew 7.8 % and the aggregate schedule extended by 11 % due winter calendar restrictions.

These projects were performed through a formal partnering program and both received the MDQI Award for Excellence in Partnering.
<table>
<thead>
<tr>
<th>a. Project Name and Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities</th>
<th>d. Contract Completion date (Original)</th>
<th>d. Contract Completion date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>Original Contract Value</th>
<th>Final or Estimated Contract Value</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the lead Contractor for this procurement (in thousands).</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-66 Improvements From Compton Road to Waples Mill Rd VDOT Project No.’s 200-93A and 201-93A</td>
<td>Wilbur Smith and Associates, Falls Church, VA</td>
<td>VDOT / Fairfax Residency Phone: (703) 259-2759 Project Manager: Venugopal Eagala / Mahmod Hussain Phone: (703) 259-2759 Email: <a href="mailto:mahmod.hussain@dot.virginia.gov">mahmod.hussain@dot.virginia.gov</a></td>
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CHC completed widening of Interstate 66 in Fairfax County Virginia as the Prime Contractor on this design-bid-build project. Programmed as two adjacent projects (Reference VDOT Project Number 0066-029-F19, Sections 200-93A and 20193A), the total length of the widening along this heavily traveled interstate in Fairfax County was 7.52 miles. The scope of the project(s) included addition of two new travel lanes in each direction beginning near Compton Road (Rt. 658) thru Stringfellow Road (Route 645) and ending near Waples Mill Road (Rt. 665). The project included complex maintenance of traffic & sequence of construction as well as standard widening work activities such as E&S, clearing, substantial grading, and storm drainage. CHC self-performed on-site batching of and placement of hydraulic cement concrete paving. CHC also constructed sound walls, performed utility relocations, signage, signalization, and lighting. An open graded asphalt drainage layer as well as cement treated aggregate base was required and constructed by CHC. CHC also widened the following bridges: B682, B683, B684, B685, B686, and B687.

These projects had the following similarities to the I-64 Widening: Competitively bid project for roadway widening of I-66 constructing two new travel lanes in each direction. Involved reconstruction of interchanges, survey, bridges, environmental compliance, installation of storm water management facilities (ponds, storm piping, box culverts, and roadway under-drain), roadway section (comprised of aggregate base, open graded asphalt drainage layer, and finish paving), multi-phase MOT coordinated with Regional TMP, utility identification and relocation, MBE participation, coordination with adjacent contracts, and complete management of the project. In addition to an early completion award, these projects won the ACRA National Award for Excellence – Divided Highways in 1995.
Ammann & Whitney (A&W) was selected as the Prime consultant for engineering services for the reconstruction of Huguenot Bridge over the James River. A & W selected The Louis Berger Group, Inc. (LBG) as a sub-consultant to this contract to perform all the engineering services exclusive of the structure itself. LBG provided all engineering services beyond the limits of the proposed reconstruction of the Huguenot Bridge including: roadway engineering, traffic engineering, stormwater management, E&S control, MOT / SOC / TMP plans, and public involvement. The original contract was intentionally set up as a multi-phased contract to include (1) preliminary alternative development in a planning stage for the Bridge Feasibility Study, (2) initial plan development thru public hearing, and (3) final plan development thru R/W and construction, and (4) design support during construction.

Part (1) - LBG performed a multi-phase alternatives analysis and provided design services for the rehabilitation/replacement of the Huguenot Memorial Bridge. Built in 1949, the 3,000 foot long curved steel structure spans a river, railroad tracks, James River Parks, and a historic barge canal. For the alternatives study portion of the project, services included: aerial and ground surveys; traffic data acquisition and analyses; hydraulic, hydrologic and scour analyses; cost estimates; maintenance and protection of traffic plans; detour route assessments; existing bridge evaluations; replacement structures and span optimization design; repair and replacement alternatives evaluations; roadway design; and public participation. A significant feature of the project included provisions for pedestrian bike facilities on the bridge to riverside parks. The bridge is located in a residential community on the scenic James River; therefore, mitigating construction and aesthetic impacts on the area was a key project concern.

Part (2) – LBG developed the initial plan development for the project including all roadway and hydraulic design for the roadway approaches, reconstructed Riverside Interchange and local access road connections. This project required extensive study of stormwater management issues and environmental impacts. During the initial plan development, LBG developed a compensatory SWM strategy to treat the new impervious surface from the bridge structure with a combination of extended detention ponds and underground water quality structure. This design phase also included a comprehensive erosion and sediment control design developed in phase with the proposed conceptual plans for the construction of the project. LBG completed plan development thru public hearing including: preparation of public hearing displays, renderings, official plan submittals, and VDOT’s Public Hearing Team Meeting deliverables and coordination. LBG also attended the Public Hearing in official capacity to work with the public under the VDOT PM’s direction.

Part (3) – LBG completed the Right of Way Plans in February 2010 which included establishment of all proposed right of way, permanent easements and temporary construction easements for the project. Plan development included collaboration with both in-plan and private utilities companies and their designers to settle any potential conflicts and set permanent utility easements. Final Construction Plans were finished in May 2010. LBG assisted the DEPARTMENT with development of necessary items for the Advertisement Package including special provisions and transport estimates including innovative measures to accomplish widening while salvaging existing pavement along the corridor. Worked collaboratively with VDOT Richmond District utilities, materials division, and R/W during completion of pre-construction activities.

Part (4) - LBG is currently providing design support during construction for this $35 million dollar construction project on an as-needed basis. LBG participates in regular partnering meetings with the selected contractor and the construction management team. LBG also assists contractor, the owner, and the construction management team with design support during construction.

Lessons learned: proper methods to design, depict, specify and estimate construction access for structure construction so as to not limit contractor means and methods while balancing environmental constraints are public park impacts; workflow for phased construction including all construction activities such as public utilities, bridge, retaining walls, and roadway operations – contractor has not proposed significant changes to SOC / MOT strategies; involving construction manager early in process to ascertain appropriate level of detail of design elements for a contractor / builder. G&O (I-64 CHC Team Partner) is providing construction management & quality control services during CN, and LBG coordinates almost weekly with G&O supplying design support during construction.
a. Project Name & Location

Name: I-295 Connector Design-Build Project, Connector Road Bridge over Mercy Access Road/GRS Railroad
Location: Portland, Maine

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

Name: Cianbro Construction Corporation
Phone: 207.624.3359
Project Manager: Brad Foley
Phone: 207.624.3359
Email: Brad.Foley@maine.gov

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

Name of Client: MaineDOT
Phone: 207.624.3359
Project Manager: Brad Foley
Phone: 207.624.3359
Email: Brad.Foley@maine.gov

d. Construction Contract Completion Date

2005
November 2005

e. Construction Contract Completion Date (Actual or Estimated)

Construction Contract Value (Original)
$18,000

Construction Contract Value (Actual or Estimated)
$23,500

f. Contract Value (in thousands)

Scope change - see below for explanation

$1,600 (fee)

7.5% of the total Cost

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.

LBG was the lead design consultant to Cianbro Corporation for the I-295 Commercial Street Connector Design-Build project for the Maine Department of Transportation (MaineDOT). This $23M project included the design and construction of 1.8 miles of new and reconstructed roadways, three new bridges and the rehabilitation of an existing concrete arch bridge over the existing railroads and a stormwater treatment area. The project begins at the I-295 Congress Street Interchange, parallels the waterfront and included the reconstruction of Veteran’s Circle. LBG also assisted the design-build team during its extensive public participation/partnering sessions and worked closely with Cianbro Corporation to provide Quality Assurance Management of the project design and construction. The construction quality program included full-time inspection, testing, material compliance, shop drawing reviews, etc.

LBG designed three bridges as part of the connector project. Bridge 1 and Bridge 2 are 106-foot and 127-foot spans respectively, with steel girder and cast-in-place deck superstructures on pile supported integral abutments. Bridge 3 is a four-span 380-foot steel girder with cast-in-place deck superstructure on pile pipe supported MSE wrapped abutments. LBG was responsible for pre-construction monitoring and design of a wetland creation site to offset unavoidable wetland impacts from roadway construction. The created wetland is designed to enhance flood storage capacity, water quality enhancement and habitat functions within the adjacent wetland.

Critical issues affecting the construction and design schedules included utility relocations, utility construction (including 8,000lf of eight and 12 duct electric banks and 5000lf of 12-foot high pressure gas main), coordination with the railroad (including four overpass crossing of active lines; three new bridges and one bridge rehab; an at-grade crossing on one of the reconstructed streets; and relocation of a 115kv within the railroad right-of-way), maintenance of traffic at Veteran’s Circle and construction staging of embankments for consolidation of marine clays.

During design development, the project team recommended the relocation of one the project’s structures to improve the overall soil stability in the marine clays. This project change was approved by the MaineDOT.

This fast-track project was designed in 12 months with substantial completion of the project occurring in one season. The project was completed on schedule with no extensions, despite increases in project scope. Project scope increases resulted in the contract total increasing from $18M to $23.5M. LBG’s design fee was 7.5% of the total cost.

This project was awarded the Build Maine Award in 2006 and also finished in first place in the American Council of Engineering Companies National Engineering Excellence Award in New Hampshire in 2007.
The Louis Berger Group, Inc. (LBG) was selected as the Prime consultant for this principle urban arterial project. The VDOT developed a phased contract approach with LBG beginning with an alternative development phase to select appropriate designs to improve capacity and safety along the U.S. 29 corridor. LBG completed several phases of this project including: (1) Concept alternative phases, (2) Initial design thru public hearing, (3) Field Inspection (4) Approved R/W Plans (5) Advanced Water Main Utilities Construction Plan (6) Final Roadway Plan and Construction documents for advertisement. In November 2010, LBG submitted final construction plans to VDOT for advertisement. The project is currently under construction with an anticipated completion date of spring 2013.

During the Concept alternative phase, LBG developed an array of grade separated urban interchanges and at-grade intersection alternatives for the Gallows Road and Route 29 intersection. LBG developed a traffic simulation model to determine the operational characteristics of the existing corridor, as well as those expected to occur following the improvements. Utilizing geometric, volume, and signal timing characteristics of the study corridor, a comprehensive simulation model was constructed using the Traffic Software Integrated System (TSIS ver.4.32) and framework of the CORSIM family of models and its surface street component NETSIM. The design was developed to allow for the seamless incorporation of future improvements to the project corridor. An at-grade intersection alternative was selected at the end of the concept alternative phase to improve the operational capacity of Route 29 thru the Merrifield Area of Fairfax County. With a forecasted ADT of 55,000 vehicles, the project consists of reconstruction and widening of 1.5 miles of Route 29 and Gallows Road from a four-lane roadway to a six-lane divided roadway with curb and gutter, a raised grass median, and enclosed storm sewer systems. The LBG design includes 5 reconfigured intersections along the project corridor with improved turn lane capacity and signal replacements. Access management principles were applied on the design included elimination of full access control at certain areas with the construction of raised medians. The project design also includes pedestrian and bicycle improvements to the Merrifield Area with the construction of “shared roadways” for bicycles, sidewalks, shared use paths, improved pedestrian crossings with push button signalization and pedestrian sidewalk ramps.

There were 3 adjacent projects affecting the development of the plans including DB-I-495 HOT Lanes, a Merrifield Town Center development valued near $100M, and a second private development project valued in the tens of millions of dollars. The coordination between R/W, in-plan utilities, private utilities and adjacent projects was exceedingly extensive. Extensive participation in public meetings, hearings and various informal meetings with Fairfax County officials and a 30-person Citizen/Business Task Force was required.

Due to several project constraints including funding, intense adjacent private development, exorbitant utility relocation costs and exorbitant R/W costs - just prior to R/W plan submission (phase 4) - LBG redesigned the project to accommodate the changing project visions resulting from these constraints. In 2009, LBG continued these adaptive design approaches and prepared portions of a unique construction plan product wherein a “child” advanced in-plan utility contract was let to relocate several water mains and laterals prior to the letting of the roadway construction project in 2011. LBG has strived to provide flexible solutions to VDOT throughout the life of this project, and we are proud of the partnering role we have maintained with VDOT and team members on this project. LBG services have covered the breadth and depth of technical and developmental transportation engineering issues on the project and the following is a sampling of the more unique items: meeting with VDOT R/W and individual property owners to develop design modifications to assist in R/W negotiations, reviewing and advising VDOT on private development plans including proffer language, partnering meetings with advanced in-plan utility contractor, depicting private, public, existing, proposed, and as-built utility information in cross sections; depicting over 250 utility test holes on the cross sections, coordinating and developing interim designs to allow for I-495 Hot Lane project construction, and developing intricate & iterative widening designs to salvage existing pavement in widening areas. LBG currently supplies design support during construction on this $18 million dollar construction project on an as-needed basis and continues to be part of the partnering effort on the project. Lessons learned: Workflow for phase acquisition of R/W – project design divided into quadrants for early R/W appraisal activities; importance of the “utility picture” – keeping track of existing, proposed, and as-built utilities on the cross sections; communication workflow and design for incorporating multiple private and public sector designs wherein existing conditions, interim proposed conditions, and ultimate proposed conditions are balanced. G&O (I-64 CHC Team Partner) represented the DB I-495 Hot lanes project, and LBG & G&O directly coordinated with each other thru the project design.