STATEMENT OF QUALIFICATIONS

I-581/Valley View Interchange Phase II Project

From: ~0.240 Mi. S. Route 101 (Hershberger Road)
To: ~ 1.561 Mi. S. Route 101 (Hershberger Road)
City of Roanoke, Virginia

State Project No.: 0581-128-109, P101, RW201, C501, B627
Federal Project No.: NH-581-5(035)
Contract ID Number: CO0016595DB45

This proposal has been prepared by:

Key Construction Company, Inc.
SECTION 3.2
LETTER OF SUBMITTAL

Key Construction Company, Inc.
Key Construction Co., Inc.
P.O. Box 698 - Clarksville, Virginia 23927 - Tel. (434) 374-2125 - Fax # (434) 374-4360

December 9, 2011

Mr. Joseph A. Clarke, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: Statement of Qualifications
I-581/Valley View Interchange Phase II Project
City of Roanoke, Virginia
Design-Build (D-B) Solicitation
State Project No.: 0581-128-109,
P101, RW201, C501, B627
Federal Project No.: NH-581-5(035)
Contract ID Number: C00016595DB45

Dear Mr. Clarke:

Key Construction Company, Inc. (Key) is pleased to submit ten (10) paper copies and one CD-ROM of our Statement of Qualifications (SOQ) to the Virginia Department of Transportation (VDOT) to provide Design-Build (D-B) services for the I-581/Valley View Interchange Phase II D-B Project in the City of Roanoke, Virginia. We have carefully reviewed the Request for Qualifications (RFQ), RFQ Information Package, and RFQ Questions and Answers; attended the Project Information Meeting; and visited the project site multiple times.

PROJECT TEAM

Key is a wholly-owned subsidiary of Utility Services Associates, Inc. (USA). USA is a 100% employee-owned and operated Virginia corporation that serves as the holding company of the USA family of companies, including Key Construction Company, Inc. and their subsidiaries Key Constructors, Inc. and D.W. Lyle Corporation, each of whom provides construction related services.

Key, based in Clarksville, VA, employs qualified personnel delivering projects throughout the Mid-Atlantic Region. Key is a company with shared values focusing on customer needs, employee-owner satisfaction, and strong vendor relationships. Our wealth of expertise allows us to construct or repair complex highway infrastructures under extreme conditions and areas. With our shared values and many past successful projects, we are confident we will deliver the I-581/Valley View Interchange Phase II Project to the satisfaction of VDOT and the City of Roanoke.

Key has selected Johnson, Mirmiran & Thompson (JMT) as our lead design firm to provide all engineering services for this project. Key and JMT have excellent reputations in the design and construction of similar projects, with proven prior experience in delivering quality design-build projects. Our vast experience directly benefits VDOT, by incorporating the team’s familiarity with pre-design constructability assessments and requirements, effective communication procedures, and the ability to react and adapt quickly to dynamic design and construction realities. Other members of our team include Anderson & Associates, Inc.; Hassan Water Resources, PLC; Schnabel Engineering Consultants, Inc.; T3 Design, PC; McCormick Taylor, Inc.; Volkert, Inc.; S&ME, Inc.; and Froehling & Robertson, Inc.

KEY PERSONNEL

Key has committed one of their most seasoned managers, Mr. Timothy Nunn, to serve as the D-B Project Manager (PM). Mr. Nunn has more than 30 years experience planning, managing and assisting in the design and construction of heavy civil projects. His specific expertise is in Virginia transportation construction projects. He is thoroughly familiar with VDOT processes, policies, and procedures. This knowledge, combined with his experience and uncompromising commitment to quality and professionalism, ensure that Mr. Nunn has the ability to capably fulfill D-B PM responsibilities for this project. JMT’s Design Manager, Mr. Robert Gallagher, P.E., will provide day-to-day management of the design team’s efforts. Key’s Construction Manager, Mr. Patrick Newton, will be on site for the duration of the project to manage the construction process including all Quality Control (QC) activities. The Lead Structural Engineer, Mr. Trip Phaup, P.E. will be responsible for all structural design services for the project.
These four key individuals will work closely with the independent Construction Quality Assurance Manager, *Mr. William McDowall, P.E. of Volkert, Inc.* to provide the highest levels of project Construction Quality Assurance (QA) services in all phases from design to completion.

### Section 3.2.1 Official Representative and Point of Contact

Key's official representative and designated point-of-contact for all project-related communications is Key's Vice President, *Timothy B. Nunn*. Mr. Nunn can be reached as follows:

<table>
<thead>
<tr>
<th>Address</th>
<th>Direct</th>
<th>Mobile</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. O. Box 698, 11453 Highway 15 South</td>
<td>434-374-2125</td>
<td>804-314-0046</td>
<td>434-374-4360</td>
<td><a href="mailto:tim.nunn@key-construction.com">tim.nunn@key-construction.com</a></td>
</tr>
<tr>
<td>Clarksville, VA 23927</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 3.2.2 Principal Officer

The principal officer of Key with whom a D-B contract would be written is Key's principal officer and President, *Mr. David W. Lyle*. Mr. Lyle can be reached as follows:

<table>
<thead>
<tr>
<th>Address</th>
<th>Direct</th>
<th>Mobile</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. O. Box 698, 11453 Highway 15 South</td>
<td>434-374-2125</td>
<td>804-731-3707</td>
<td>434-374-4360</td>
<td><a href="mailto:david.lyle@key-construction.com">david.lyle@key-construction.com</a></td>
</tr>
<tr>
<td>Clarksville, VA 23927</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 3.2.3 Structure of Offeror

Key is a 100% employee-owned and operated Virginia corporation and will take financial responsibility for the project through bonding, insurance, etc. as required by VDOT. Key will manage the companies as a single, integrated design-build entity. Key will provide VDOT with performance and payment bonds for the project's construction costs in its entirety. At this time, there are no limits, qualifications, or caps for Key's liability and indemnification for VDOT.

### Section 3.2.4 Affiliated or Subsidiary Companies

Key is a wholly-owned subsidiary of Utility Services Associates, Inc.

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>11500 Ironbridge Road, Chester, Virginia 23831</td>
<td>804-768-1054</td>
<td>804-768-6057</td>
</tr>
</tbody>
</table>

#### Subsidiary Companies:

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.W. Lyle Corporation</td>
<td>11453 Highway 15 South, Clarksville, VA 23927</td>
<td>434-374-5095</td>
<td>434-374-4360</td>
</tr>
<tr>
<td>Key Constructors, Inc.</td>
<td>11453 Highway 15 South, Clarksville, VA 23927</td>
<td>434-374-2125</td>
<td>434-374-4360</td>
</tr>
</tbody>
</table>

#### Affiliated Companies:

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.W. Wright Construction Company, Inc.</td>
<td>11500 Ironbridge Road, Chester, VA 23831</td>
<td>804-768-1054</td>
<td>804-748-4099</td>
</tr>
<tr>
<td>Booth &amp; Associates, Inc.</td>
<td>1011 Schaub Drive, Raleigh, NC 27606</td>
<td>919-851-8770</td>
<td>919-859-5918</td>
</tr>
<tr>
<td>Seaboard Boring, LTD</td>
<td>8301 Shell Road, Richmond, VA 23237</td>
<td>804-743-7716</td>
<td>804-743-7717</td>
</tr>
<tr>
<td>USA Solutions, Inc.</td>
<td>11500 Ironbridge Road, Chester, VA 23831</td>
<td>804-768-1054</td>
<td>804-748-4099</td>
</tr>
</tbody>
</table>

### Section 3.2.5 Certification of Debarment

Signed "Certifications Regarding Debarment" forms for the D-B Team are included in the Appendix of this submission.

### Section 3.2.6 Evidence of Prequalification

Key Construction Company, Inc. is licensed by the Commonwealth of Virginia State Corporation Commission (license number 2701 021531A) and a prequalified corporation with VDOT (vendor number K006). Evidence of Key's prequalification with VDOT is included in the Appendix of this submission.

### Section 3.2.7 Surety or insurance company stating that the Offeror is capable of obtaining a performance and payment bond.

Included in this SOQ on page 5 is a letter of reference from Thomas Rutherfoord, Inc., our surety agent, stating that Key is capable of obtaining a performance and payment bond based on the current estimated contract value of $49,550,000 as stated in Section 2.1 of the RFQ.

### Section 3.2.8 Professional Services Information
The tables on the following pages indicate registration information for each team member. Our team complies with the requirements set forth in RFQ Section 3.2.8 and subsections 1 through 4, where applicable.

1. The SCC registration information including the name, registration number, type of corporation and status of the business entity:

<table>
<thead>
<tr>
<th>Registered Name</th>
<th>Registration #</th>
<th>Type of Corporation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Construction Company, Incorporated</td>
<td>0082414-4</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Johnson, Mirmiran &amp; Thompson, Inc.</td>
<td>F149901-3</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Anderson &amp; Associates of Virginia, Inc.</td>
<td>0171262-9</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Hassan Water Resources, PLC</td>
<td>S229328-2</td>
<td>LLC</td>
<td>Active</td>
</tr>
<tr>
<td>T3 Design, P.C.</td>
<td>F0658539-2</td>
<td>S Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Schnabel Engineering Consultants, Inc.</td>
<td>0712674-1</td>
<td>S Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>F129691-4</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Froehling &amp; Robertson, Incorporated</td>
<td>0027211-2</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>Volkert, Inc.</td>
<td>F136659-2</td>
<td>Corporation</td>
<td>Active</td>
</tr>
<tr>
<td>S &amp;ME, Inc.</td>
<td>F115456-8</td>
<td>Corporation</td>
<td>Active</td>
</tr>
</tbody>
</table>

2. For this Project, the DPOR registration information for each office practicing or offering to practice any professional services in Virginia:

<table>
<thead>
<tr>
<th>Registered Name</th>
<th>Address</th>
<th>Registration Type</th>
<th>Registration # Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson Mirmiran &amp; Thompson Inc</td>
<td>9201 Arboretum Pkwy Suite 310</td>
<td>ENG/LS</td>
<td>#0411000029 2/29/12</td>
</tr>
<tr>
<td>Richmond</td>
<td>Richmond, VA 23236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herndon</td>
<td>13921 Park Center Rd Herndon, VA 20171</td>
<td>ENG</td>
<td>#0411000441 2/29/12</td>
</tr>
<tr>
<td>Sparks</td>
<td>72 Lovetown Circle Sparks, MD 21152</td>
<td>LA/ARC/ENG/LS</td>
<td>#0407001314 12/31/11</td>
</tr>
<tr>
<td>Virginia Beach</td>
<td>272 Bendix Rd Suite 260</td>
<td>ENG</td>
<td>#0411000440 2/29/12</td>
</tr>
<tr>
<td>Hassan Water Resources PLC</td>
<td>2255 Parkers Hill Drive Maidens, VA 23102-2244</td>
<td>ENG</td>
<td>#0413000299 12/31/11</td>
</tr>
<tr>
<td>Maidens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T3 Design PC</td>
<td>3927 Old Lee Highway Ste. 101-C</td>
<td>ENG</td>
<td>0405001624 12/31/11</td>
</tr>
<tr>
<td>Fairfax</td>
<td>Maidens, VA 23102-2244</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anderson &amp; Associates of Virginia, Inc.</td>
<td>100 Ardmore Street Blacksburg, VA 24060</td>
<td>ENG/LS/LA</td>
<td>#0407004805 12/31/11</td>
</tr>
<tr>
<td>Blacksburg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schnabel Engineering Consultants, Inc.</td>
<td>1901 South Main St. Suite 11</td>
<td>ENG</td>
<td>#0411000697 2/29/12</td>
</tr>
<tr>
<td>Richmond</td>
<td>Blacksburg, VA 24060</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>4951 Lake Brook Dr. North Shore Commons</td>
<td>ENG</td>
<td>#0407004111 12/31/11</td>
</tr>
<tr>
<td>Richmond</td>
<td>Suite 275 Glen Allen, VA 23060</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verona</td>
<td>113 Mill Place Parkway Unit 103</td>
<td>ENG</td>
<td>#0411000771 2/29/12</td>
</tr>
<tr>
<td>Froehling &amp; Robertson Inc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roanoke</td>
<td>1734 Seibel Dr N E Roanoke, VA 24012</td>
<td>ENG</td>
<td>#0411000053 2/29/12</td>
</tr>
<tr>
<td>Richmond</td>
<td>3015 Dumbarton Road Richmond, VA 23228</td>
<td>ENG</td>
<td>#0407000098 12/31/11</td>
</tr>
<tr>
<td>F48883 Est, Inc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For this Project, the DPOR license detailing for each of your Key Personnel practicing or offering to practice professional services in Virginia:

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>VA License Type</th>
<th>Registration# &amp; Exp Date</th>
<th>Office Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Taylor Gallagher, P.E.</td>
<td>10004 Studley Farms Drive</td>
<td>Professional Engineer</td>
<td>#0402 023016 1/31/12</td>
<td>Johnson Miririan and Thompson Richmond, VA</td>
</tr>
<tr>
<td>William McDowall II, P.E.</td>
<td>2701 Frankie Lane Hopewell, VA 23860</td>
<td>Professional Engineer</td>
<td>#0402 018236 10/31/2012</td>
<td>Volkert, Inc. Alexandria, VA</td>
</tr>
<tr>
<td>Athelius Augustus “Trip” Phauf, III, P.E.</td>
<td>402 Wavery Road Richmond, VA 23229</td>
<td>Professional Engineer</td>
<td>#0402 023335 6/30/12</td>
<td>Johnson Miririan and Thompson Richmond, VA</td>
</tr>
</tbody>
</table>

For this Project, the DPOR license detailing for those regulated services other than professional services (i.e. real estate appraisal):

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Address</th>
<th>Registration Type</th>
<th>Registration Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 3.2.9 Written statement indicating the Offeror is committed to achieving the 16% DBE participation goal.

Key formally commits to achieving VDOT’s 16% Disadvantaged Business Enterprise (DBE) participation goal for the entire value of the contract on the I-581/Valley View Interchange Phase II Project.

Key will ensure competition by structuring subcontracts to allow the largest number of DBE firms to compete. Key will continue to seek out qualified SWaM firms to provide supportive services as needed for the construction of the I-581/Valley View Interchange Phase II Project.

Why Select the Key/JMT Team

The Key/JMT Team is uniquely qualified and ideally suited for this project by virtue of the following factors:

- 100 years of combined team experience designing, constructing, and inspecting VDOT projects.
- 100 years experience designing, constructing, and inspecting similar projects.
- Team knowledge and extensive experience with roadway and bridge construction projects involving extreme sensitivity to the environment, citizens of the community and the traveling public.
- Team knowledge & experience with Urban & Interstate projects with significant traffic control (both long term & short duration components).
- Team knowledge and experience performing multi-staged roadway and bridge construction projects.
- Team cohesiveness and personnel longevity
  - Key’s President and Principal-In-Charge and JMT’s Lead Structural Engineer have a 22 year working relationship
  - Key’s President and Principal-In-Charge and JMT’s Design Manager and Lead Structural Engineer have a 10 year working relationship
  - Design Build Project Manager, Lead Structural Engineer, Lead Roadway Engineer and Construction Manager have a 5 year relationship
  - Design Build Project Manager and QA Manager have a 5 year working relationship

Key and JMT have long and successful histories of serving VDOT on countless projects such as this. Together with all of our coordinating companies, we will design and construct the I-581/Valley View Interchange Phase II Project in a manner to ensure the greatest opportunity for success. We will create a transparent working relationship with VDOT and 3rd party stakeholders to promote trust, confidence, and collaboration.

Respectfully Submitted,

Key Construction Company, Inc.

David W. Lyle
President
November 17, 2011

Virginia Department of Transportation
Mr. Joseph A. Clarke, P.E.
1221 East Broad Street
Main Building, 4th Floor
Richmond, VA 23219

RE: Key Construction Company, Inc.
RFQ: Design/Build Project – I-581 / Valley View Interchange Phase II
Contract ID Number: C00016595DB45
Estimate: $49,550,000

Dear Mrs. Lucas:

The above referenced firm is a valued client of Zurich North American Surety (Fidelity and Deposit Company of Maryland, which is listed on the United States Department of Treasury, Federal Register, Circular 570 and is licensed to transact business in the Commonwealth of Virginia). Zurich is one of the leading bonding companies in the country and has an “A” Best Rating and Financial Size Category: XV. We have committed to provide Key Construction Co., Inc. with $125,000,000 in aggregate capacity in payment and performance bonds with a single project limit of $60,000,000.

We are prepared to provide bid and 100% performance and 100% payment bonds in the amount of the anticipated cost of construction, and said bonds will cover the project and any warranty periods (Virginia standard 12 month warranty period) on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project, subject to the normal underwriting conditions at the time of award. This includes, but is not limited to work on hand, contract terms, bond forms, profitability and bid spread.

We have found their management to be seasoned, mature and proactive. Their abilities to manage the preconstruction and construction process and finance their operation are as good as any in the business. We recommend this contractor highly. If I can be of further assistance please feel free to contact me directly.

Sincerely,

[Signature]
Jessica J. Winfree
Attorney-in-Fact

RICHMOND OFFICE
1001 Hazell Point | Suite 500 | Richmond, VA 23219 | 804-780-5611 | Fax: 804-780-5944 | www.rutherford.com

Local Touch. World Class.
SECTION 3.3
OFFEROR’S TEAM STRUCTURE
3.3 Offeror’s Team Structure

Key Construction Company, Inc. (Key), operating as a single Design-Build (D-B) entity, will ultimately be responsible for the delivery of this project to VDOT. Key’s responsibilities will include coordinating all interested parties – contractors, designers, VDOT, and the public – as well as providing overall construction management. In addition, Key will serve as the lead contractor, self-performing much of the construction while managing qualified subcontractors as necessary. Other team members and their assigned roles include:

- **Johnson, Mirmiran & Thompson, Inc.** – Lead Designer
- **Anderson & Associates, Inc.** – Environmental and Utilities
- **Hassan Water Resources, PLC** – Drainage, SWM, E&SC, and Hydraulic and Hydrologic Analysis
- **Schnabel Engineering Consultants, Inc.** – Geotechnical Engineering
- **T3 Design, PC** – Traffic Analysis, Signing and Signals, Pavement Marking and Markers
- **McCormick Taylor, Inc.** – Public Participation
- **Volkert, Inc.** – Construction Quality Assurance Services
- **Froehling & Robertson, Inc.** - Construction Quality Control Materials Sampling and Testing Services
- **S&ME, Inc.** – Construction Quality Assurance Materials Sampling and Testing Services

### 3.3.1 Identity of and Information About the Key Personnel

The Key and Johnson, Mirmiran, and Thompson, Inc. JMT personnel assigned to the I-581 / Valley View Interchange Phase II D-B Project are highly qualified design and construction professionals with extensive experience on similar projects. The Key/JMT Team structure employs best management practices, emphasizes intra-team communications, and empowers team members to solve issues at the most appropriate organizational level. This Statement of Qualifications (SOQ) includes resumes providing descriptions of the qualifications and experience of the Key/JMT Team Key Personnel. Our Key Personnel and support staff have a long history working with VDOT on transportation projects and have experience working on recent D-B projects in Virginia. The Key/JMT Team will keep these Key Personnel, as well as all identified support team members, on this project for the duration of this contract. For the I-581 / Valley View Interchange Phase II D-B Project, the Key/JMT Team commits the following five Key Personnel:

#### 3.3.1.1 Design-Build Project Manager (D-B PM)

Key has committed one of their most seasoned managers, **Mr. Timothy B. Nunn**, to serve as the D-B PM. Mr. Nunn has more than 30 years of experience in planning, managing and assisting in the design and construction of heavy civil projects. His specific expertise is in Virginia transportation construction projects and, as a result, he is thoroughly familiar with VDOT processes, policies and procedures. Mr. Nunn has worked on numerous traditional bid build transportation projects in the State involving roadways and interchanges including:

- Route 41, City of Danville, VA, reconstructed 2-lane commuter route to 5-lane undivided highway
- Route 265, Franklin Turnpike Extension, Pittsylvania County, VA 300,000 cubic yards of excavation
- Route 604, Genito Road, Chesterfield County, VA, reconstructed 2-lane rural highway to 4-lane thoroughfare
- US 58 Mecklenburg County, VDOT, 3.6 miles of new & reconstructed 4 lane divided highway
- US 360 & US 58, Halifax County, VA, constructed (2) 2-lane bridges and grading roadway
- Route 61 over New River Design-Build, Narrows, VA, Bridge replacement and roadway improvement project
- Watkins Center Parkway (Route 60), Chesterfield County, 1 bridge, roadway, grading, storm drainage

His recent and on-going Virginia construction experience, combined with his knowledge and uncompromising commitment to quality and professionalism, ensure that Mr. Nunn has the ability to capably fulfill the D-B PM responsibilities for this project.

#### 3.3.1.2 Quality Assurance Manager (QAM)

Volkert, Inc. has committed one of their most experienced managers, **Mr. William “Bill” D. McDowall, II, P.E.**, to serve as the QAM. Mr. McDowall worked 11 years for VDOT, his last position being the Assistant State Construction Engineer, where he was responsible for numerous construction projects across the state. He also served as the Assistant State Contract Engineer and as the Senior Transportation Engineer in charge of VDOT’s Anti-Trust Office. His experience includes the management of roadway widening, new bridge, bridge repair and widening, and bridge replacement projects. As a former employee of McDowall & Woods Construction Company, Mr. McDowall also built numerous roadways and bridges in Virginia. The nearby Elm Avenue Interchange was constructed in the early 1960’s by McDowall & Woods, Bill’s father company. Growing up in Roanoke, Bill visited the project site often and is very familiar with the area. Mr. McDowall has experience with the following projects:
3.3 Offeror’s Team Structure

3.3.1.3 Design Manager (DM)
JMT has committed **Mr. Robert T. Gallagher, P.E.**, one of their most experienced managers, to serve as the DM. Mr. Gallagher has 25 years of extensive experience in Virginia transportation projects. He serves as JMT’s Virginia Transportation Manager and is responsible for the major transportation disciplines of roadway and bridge design, construction inspection, and right-of-way acquisition with the Commonwealth. He is thoroughly familiar with the VDOT project development and delivery process for transportation projects including public involvement policy; environmental document preparation; roadway, hydraulics, structures (bridge and retaining wall) and traffic engineering; and utility design and relocation coordination. His vast experience in the management of all pertinent design disciplines ensures his ability to responsibly manage project design and to establish and oversee an independent QA/QC program for this project. Mr. Gallagher has been instrumental in the successful design and administration of many VDOT and municipal, VDOT funded, highway projects including numerous D-B projects. He has served as the Project Manager or Principal-In-Charge on numerous VDOT “on-call” contracts and D-B projects throughout the Commonwealth including:

- Route 61 over New River, Route 460, and Old Virginia Avenue D-B Project, Town of Narrows
- Fairfax County Parkway (Phase I, II and IV) D-B Project, Fairfax County
- James Madison Highway (Route 15) Improvements D-B Project, Prince William County
- Route 288 PPTA D-B Project, VDOT Richmond District
- Route 1 (Monroe Avenue) over Potomac Yards D-B Project, City of Alexandria
- Pentagon Secure Access Road Improvements at Route 27/244 D-B Project, Arlington County
- VDOT Design Limited Services Statewide and Two Regional Contracts
- VDOT Traffic Engineering Statewide Limited Services
- VDOT NOVA Regional Quality Plan Review

Mr. Gallagher is a current member of VTCA’s Engineering Consultant Leadership Committee and previously served on VTCA’s Joint Highway Cooperative Committee.

3.3.1.4 Construction Manager (CM)
**Mr. Patrick H. Newton** will serve as the CM responsible for managing the Key and subcontractor forces. He will oversee a multi-disciplined staff of construction professionals and subcontractors. Mr. Newton brings five years of continuous experience with the construction management team consisting of bridge superintendent, highway superintendent, utility superintendent, and utility coordinator to direct and control specific tasks for each construction crew and subcontractor. Mr. Newton will also oversee all construction QC activities to ensure the materials used and the work performed meet contract requirements, plans, and specifications.

Mr. Newton worked as project manager in 2007 for Route 92 Charlotte County bridge widening project. Project consisted of 90ft of bridge widening on both sides and overlay.

Mr. Newton will hold all applicable certifications required in the performance of his duties prior to commencement of construction, including but not be limited to a Virginia Department of Conservation and Recreation (DCR) Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Contractor Certification (ESCCC).

3.3.1.5 Lead Structural Engineer (LSE)
JMT has assigned **Mr. Arthelius A. “Trip” Phaup, III, P.E.** to serve as the LSE for this project and will report directly to the DM. Mr. Phaup has 22 years of progressive experience in the analysis, design and preparation of preliminary and final bridge plans, special provisions, and construction cost estimates for a variety of highway, railway and miscellaneous structures. His experience includes projects covering a range of engineering complexity and site characteristics, including new structures, replacement structures, temporary highway structures, and railway structures. Many of these structures required staged construction design. Mr. Phaup has also provided inspection, office engineering, and consultation services during the construction of highway and railway structures. In addition, Mr. Phaup has designed temporary structures for contractors, including formwork for concrete slab bridges and sheeting, shoring, and cofferdam structures facilitating foundation and substructure construction. His experience on Virginia D-B projects includes:

- Route 61 over New River, Route 460, and Old Virginia Avenue D-B Project, Town of Narrows
3.3 Offeror’s Team Structure

- Route 288 PPTA D-B Project, VDOT Richmond District
- Route 1 (Monroe Avenue) over Potomac Yards D-B Project, City of Alexandria
- Pentagon Secure Access Road Improvements at Route 27/244 D-B Project, Arlington County

Mr. Phaup, as LSE, will review and verify all designs. If necessary, he will modify designs as field conditions and construction activities warrant and demand, such activities to include dismantling and removing portions of existing structures, installing foundation structures, handling and erecting bridge girders, and making substructure and superstructure repairs.

Mr. Phaup is a current member of VTCA’s Design-Build Committee.

3.3.2 Team Organizational Chart

The organizational chart provided at the end of this section shows the “chain of command” while identifying major functions to be performed by the Key/JMT Team. The organizational chart also shows the reporting relationships of Key Personnel responsible for the management of design, construction, and quality control/quality assurance activities.

The Key/JMT Team has clearly defined roles and relationships. The team organization is optimized to present clear, logical, reporting relationships to manage the design and construction of the I-581/Valley View Interchange Phase II D-B Project, while maintaining distinct responsibilities and project controls. The project organization is organized to facilitate timely and effective communication among all personnel, regardless of position. Practical lines of communication run between design, construction, and the independent QA/QC support staff, with the D-B PM ensuring all levels function as a team. This organization is a successful model used by Key and JMT on past and present projects.

Design-Build Project Manager

The Key/JMT Team organizational chart starts with VDOT at the pinnacle of the hierarchy. The Key/JMT Team recognizes that all final decisions rest with VDOT. The team’s primary interface with VDOT will be through the D-B PM, Mr. Tim Nunn.

In accordance with sound management practice and VDOT guidance, the D-B PM serves in the most crucial role, one that defines success for all aspects of the project. The D-B PM is the principal conduit for communication with VDOT, and also directly controls the design, construction, and quality assurance functions. One feature of the Key/JMT Team proposal is the independence of the key support staff of specialty professionals whose role is to assure that the highest levels of quality and safety is maintained in both the design and construction phases of the project.

The organizational chart further depicts that the main production staff interfaces with the D-B PM will be the DM, the CM, and the QAM allowing effective communication among the Key Personnel. The DM, the CM, and the QAM will support the D-B PM as points of contact with VDOT in their respective areas of expertise. The D-B PM will rely on the DM, the CM, and the QAM to effectively coordinate their individual Team elements and will use these Key Personnel to communicate to all Team members during design and construction.

Mr. Nunn will also coordinate directly with those shown in the roles of Principal-In-Charge, Safety Director, Environmental Compliance Monitor, and Public Participation. These personnel serve important support roles for the project team and provide specific areas of expertise to benefit the entire project.

Principal-In-Charge:
David W. Lyle, President, Key Construction Company, will provide executive oversight for Key. He will ensure that all necessary resources are made available to successfully complete the project. Mr. Lyle reports directly to the board of directors for Utility Services Associates, Inc. and has the ability to assemble additional labor, equipment, and expertise from this extensive enterprise.

Safety Director:
Joseph F. Kucera, Key Construction Company, will be the Safety Director for this project. He will be responsible for planning, executing, evaluating, and monitoring all aspects of the Safety Program in close coordination with the D-B PM, the CM, and field staff.

Environmental Compliance Monitor:
Anderson & Associates, Inc. will provide independent environmental compliance monitoring and oversight during construction and will ensure that all requirements of the environmental document and environmental permits are met.
The I-581/Valley View Interchange Phase II D-B Project will greatly improve access to the Valley View Mall Retail Business District east of the interchange and will provide for future connectivity to residential communities and future business development west of the interchange. As a result, 3rd party stakeholders such as the Valley View Mall retail businesses, Roanoke Regional Airport, Valley Metro (public transportation), business owners and residents of the surrounding community, local schools, emergency responder agencies, public and private utility companies, and Lick Run Greenway users will be very interested in the project. The CM, superintendents, and QA Team will provide the daily, front line interaction with 3rd party stakeholders. In addition, the Team acknowledges the importance of stakeholder coordination and public participation and has included a firm to assist with this effort.

**Public Participation:**
McCormick Taylor, Inc. will assist the Team’s stakeholder coordination and public participation activities for the project. Mr. Fred Altizer, P.E, will lead McCormick Taylor’s public participation and communications effort. Mr. Altizer, a retired Salem District Administrator and Route I-81 Program Manager, brings experience in coordination and community outreach initiatives on projects such as the I-73 Corridor Study and the Route 460 Bypass in Montgomery County. Mr. Altizer’s knowledge and understanding of the stakeholder’s demands and their interest in traffic patterns will help provide a seamless project delivery.

The DB-PM, in conjunction with McCormick Taylor, will work with VDOT to develop and implement a public participation program including conducting both public information meetings and individual one-on-one meetings, developing and updating a project web site, preparing monthly project mailers, and securing media coverage through newspapers, radio, and television.

**Design Manager**
The Key/JMT organizational chart clearly defines that all design disciplines for the project will report to the DM, Mr. Robert Gallagher, P.E. The approach to staffing these disciplines hinges on the concept of matching the requirements of this project to the experience and depth of knowledge of staff best suited to fulfill these specific requirements. While the majority of the disciplines will be covered by JMT professionals, the team does include several specialty subconsultants who will augment the Team and report directly to the DM. The DM will report directly to the D-B PM.

**Lead Structural Engineer**
The Lead Structural Engineer (LSE), Trip Phaup, P.E., a licensed Professional Engineer in the Commonwealth of Virginia, will report directly to the DM. Additional Structures staff working on the project will report to the LSE.

During the design phase of the project, Mr. Gallagher will interface directly with each of the discipline leaders, whether that individual is a JMT staff member or a subconsultant contracted with JMT.

In addition, JMT, a VDOT prequalified right-of-way contracting consultant, will manage and provide all right-of-way acquisition services for the project. During the appraisal and appraisal review process, JMT will engage the services of a VDOT prequalified fee appraiser and VDOT prequalified review appraiser.

Mr. Gallagher will also establish and oversee the QA/QC program for design. The responsibilities of the QA/QC team will be separated between the Design QA Manager and the Design QC Managers.

The Design QA Manager will operate independent of the design team and will evaluate and compare the design to the established design criteria and ensure that the design QC process is complete. In general, the Design QA Manager will evaluate whether the designer appropriately assessed design issues and problems, applied the correct analysis techniques, and assigned qualified personnel to the task. The Design QA Manager will address whether the solution is practical and cost effective and whether the design is appropriate. JMT has identified Mr. Dick Asbury, P.E. to serve as the Design QA Manager. He will interface and report directly to the DM. Mr. Asbury has provided design quality assurance services on numerous projects during his 40 year engineering career.

The Design QC Team will be staffed with individual Design QC Managers that are not involved in the design process and will report directly to the DM. Reviewers that are independent from day-to-day design activities ensures that the QC Team is truly providing a fresh set of eyes to plan development. The independent QC reviews will determine whether the design and plans conform to the established design criteria and design processes. In general, the QC Team will review math and engineering computations; check technical accuracy; verify conformance with contract requirements; review form, content, and spelling; and verify coordination with other design disciplines and the project sequence of construction.
The following subconsultants will provide specialty services and will report directly to the DM.

A&A will be responsible for obtaining all necessary state and federal water quality permits for the project. A&A will also be responsible for performing utility design work including preparing utility relocation plans for public (water and sewer) facilities and performing utility coordination for public and private utilities within the project limits.

**Hassan Water Resources, PLC (HWR)**
HWR will provide all hydraulic drainage design for the project including conventional roadway drainage, stormwater management, and erosion and sediment control design services. HWR will also perform the required hydraulic and hydrologic analysis of Lick Run and associated flood plain that will be required for the stream relocation and construction activities in the southwest quadrant of the project.

**Schnabel Engineering Consultants, Inc. (Schnabel)**
Schnabel will provide geotechnical services for the project including geotechnical investigations, borings and analysis, materials analysis, and geotechnical recommendations for design and construction. In addition, Schnabel will validate the suitability of the minimum pavement sections anticipated for the project.

**T3 Design, PC (T3)**
T3 will provide all traffic related design services for the project including obtaining and analyzing traffic data, preparing signing and signal plans, and preparing pavement marking and marker plans.

**Construction Manager**
The Key/JMT Team organizational chart identifies Mr. Patrick H. Newton as the CM for the project who will oversee all major construction activities. The bridge superintendent, highway superintendent, utility superintendent, and utility coordinator will all report directly to the CM. His responsibilities will include CPM schedule development and updating, resource planning and allocation (materials, labor, and equipment), budgetary and cost control, subcontractor scheduling, maintenance of traffic, E&SC, and shop drawing review. The CM will report directly to the D-B PM.

Since the project will involve a number of utility relocations, the Team has included two construction phase roles specific to utilities. The utility superintendent will be responsible for the construction activities related to the physical relocation of all utilities. The utility coordinator will be responsible for the post-design phase, pre-construction phase activities necessary to ensure public and private utilities are on-board and ready to move when scheduled. The utility coordinator will aggressively and persistently monitor the utility’s progress, will assist with coordination between Team and utility, and will serve as the physical conduit for information between the Team and utility.

In addition, the CM will be responsible for Construction Quality Control activities including construction quality control testing and off-site materials sampling and testing. The **Construction QC Manager** will report directly to the CM.

**Froehling & Robertson, Inc. (F&R)**
F&R will provide QC testing technicians as well as services for the off-site materials sampling and testing.

**Quality Assurance Manager**
The Key/JMT Team organizational chart identifies Volkert, Inc. as the independent firm to provide the Construction Quality Assurance services for this project. Volkert commits Mr. William McDowall, II, P.E. to serve as the QAM in a leadership capacity for the project’s construction quality assurance program. He will oversee a QA staff including a lead senior inspector, project inspectors, and a records administrator, as well as oversee the activities of the independent off-site materials sampling and testing laboratory. The QAM will report directly to the D-B PM.

**Volkert, Inc. (Volkert)**
Volkert will provide all Construction Quality Assurance services for this project including inspection and administration activities.

**S&ME, Inc. (SME)**
S&ME will provide QA Services for the off-site materials sampling and testing.
Organizational Chart for I-581/Valley View Interchange Phase II Design-Build Project City of Roanoke, Virginia
SECTION 3.4
EXPERIENCE OF OFFEROR’S TEAM
3.4 Experience of Offeror’s Team

Key Construction Company, Inc. (Key) is a heavy-highway construction contractor specializing in public and private infrastructure projects including bridges, overpasses, channels, roadways, and highways. During the past five decades, Key has served as a prime contractor for multiple clients including departments of transportation, counties, federal, state, and local governmental authorities, municipalities, investor-owned utilities, and other private market owners in the states of Virginia, Maryland, North Carolina, and South Carolina. These projects have been successfully completed by a variety of project delivery methods including design-build, prime contracting, subcontracting, and construction management. In 2006, Key acquired D.W. Lyle Corporation in a strategic move to add strength and market share to its organization. D.W. Lyle Corporation operated for over 50 years as a heavy-highway contractor focused primarily on new bridge, bridge replacement, and bridge widening projects throughout Virginia, North Carolina, and South Carolina.

Key’s philosophy is to safely deliver the highest level of quality within the industry both on time and within budget and to assure that the standards of construction meet VDOT requirements. Key’s employee-owners are dedicated to meeting commitments and to giving back to the communities in which its employees live and work. Key is further committed to meeting the needs of VDOT on every front, from the initial stages of project development through construction completion.

Key has maintained an average C-36 rating over 90 points, as well as a 95 CQIP performance score.

The projects listed below showcase Key and D. W. Lyle Corporation experience with projects that are similar in size and scope to the I-581/Valley View Interchange Phase II D-B Project. Project similarities include interstate interchange; bridge overpass; bridge and road construction; utility construction, relocation and coordination; phased construction; maintenance of traffic; environmental compliance; and stakeholder coordination.

- VDOT, 2005, Stony Run Parkway over I-64, Henrico County
- VDOT, 2007, Route 29 Business over Route 29 Bypass, Town of Chatham
- VDOT, 2008, Watkins Center Parkway over Route 288 Design-Build, Chesterfield County
- VDOT, 2009, US 460 at exit 194, Franklin County
- VDOT, 2011, Route 265 Franklin Turnpike Extension, Pittsylvania County

Johnson, Mirmiran & Thompson, Inc. (JMT) is a full service ENR top 500 design firm (#96 in 2011) and is #30 among ENR’s Top 50 Transportation Design Firms. JMT has offices in Richmond, Herndon and Virginia Beach, Virginia as well as in Maryland, West Virginia, Pennsylvania, Washington DC, Delaware, New Jersey, New York and Florida. JMT has continuously provided road and bridge design and surveying services to VDOT from our Virginia offices for over 25 years. With more than 40 years of experience in the design of highway projects, JMT has total staff of over 700 professionals including a staff of over 80 in the Commonwealth of Virginia.

JMT has designed major projects for VDOT, Maryland State Highway Administration (MD SHA), Maryland Transportation Authority (MdTA), Pennsylvania Department of Transportation (PennDOT) and the Metropolitan Washington Airports Authority (MWAA). JMT’s transportation design capabilities have been recognized numerous times in the recent past by virtue of the many awards our projects have received. The Woodrow Wilson Bridge Project won “The 2008 America’s Transportation Award Grand Prize” February 24, 2009. JMT was a Section Designer for I-95/I-495/L-295 Interchange for this award winning project. The American Society of Civil Engineers (ASCE) honored the Woodrow Wilson Bridge Project as its Outstanding Civil Engineering Achievement for 2008. In 2003, JMT was awarded the Award of Excellence, Partnering-Major Project by the Maryland Quality Initiative, Maryland State Highway Administration for the Elkton Main Street (MD 7D) Detail/Build project in Cecil County, MD. In 2010 American Council of Engineering Companies of VA (ACEC of VA) awarded the Leesburg Park and Ride in Loudoun County, VA and the Fairfax County Parkway D-B Project in Fairfax County, VA Merit Awards. Details of these and other award winning projects can be found on JMT’s website at www.jmt.com/awards.

JMT’s Relevant Experience Includes:
- FHWA-EFLHD: Fairfax County Parkway (D-B), Fairfax County
- FHWA-EFLHD: 9th Street Bridge Replacement (D-B), Washington, DC
- FHWA-EFLHD: Taylor Street Bridge Replacement (D-B), Washington, DC
- VDOT: Route 61 (MacArthur Avenue) over New River, Route 460, and Old Virginia Avenue (D-B), Town of Narrows
- VDOT: 3rd Street (Route 15/460) over Buffalo Creek (D-B), Town of Farmville
- VDOT: Route 7 Fairfax County
- VDOT: Route 105, City of Newport News and York County
- Prince William County: USMC Heritage Center Roadway Improvements
- Prince William County: Route 1 Improvements (Joplin Road to Brady’s Hill Road)
- Prince William County: James Madison Highway (Route 15) Improvements (D-B)
- MWAA: North Area Roads Improvements, Washington Dulles International Airport, Loudon and Fairfax County

3rd Street
(Route 15/460)
over Buffalo Creek
D-B
3.4 Experience of Offeror’s Team

Relationship of Key and JMT

Key and JMT and the individual staff members of Key and JMT have a solid, long term, work history of teaming and partnering on transportation projects and, in particular, bridge and structure projects. The successful completion of these projects demonstrates that the Team possesses the skills and knowledge to provide VDOT with an exceptional team for the design and construction of the I-581/Valley View Interchange Phase II D-B Project. In addition, Key and JMT’s focus on process, planning, and scheduling make them an excellent team for this project. Both organizations are very experienced with the design-build process and have a proven cooperative work history.

The Key/JMT Team has success with VDOT as the D-B Team selected to provide the design and construction of the Route 61 Bridge Replacement over the New River, Route 460, and Old Virginia Avenue D-B Project in the Town of Narrows, Giles County located in VDOT’s Salem District. The I-581/Valley View Interchange Phase II D-B Team will use many of the same design, construction, and quality assurance staff including Design Manager and Lead Structural Engineer, as on the Route 61 D-B Team. The uninterrupted continuation of this experienced D-B Team will prove to be a valuable asset to the success of this project.

Key’s President and Principal-In-Charge, David Lyle, and JMT’s Lead Structural Engineer, Trip Phaup, PE have a 22 year relationship working together on bridge and structure related projects including design-build projects, design-bid-build projects, value engineering (VE) redesigns, and construction engineering assignments for cofferdams, sheeting and shoring, crane lifting beams, and other miscellaneous structures. David and Trip first met at Virginia Tech while taking classes in Civil Engineering and Building Construction. They first worked together as Contractor’s project superintendent and Engineer’s construction inspector on the Pungo Ferry Road Bridge in the City of Virginia Beach which was completed in 1991 and have worked hand-in-hand since then on the following projects in Virginia:

- Route 15 Bridge over Rivanna River, VE Foundation Redesign, Fluvanna County
- Southpoint Parkway Bridge over Massaponax Creek, Total Bridge Design, Spotsylvania County
- I-95 (NBL and SBL) over CSX Railroad, Superstructure Jacking Plans, Caroline County
- Jefferson Street Retaining Wall and Culvert Repairs, Total Retaining Wall Design, City of Petersburg
- Route 606 (Blenheim Road) Bridge over Deep Creek, VE Total Bridge Redesign, Powhatan County
- Route 54 over South Anna River, Temporary Bridge Foundation Design, Hanover County
- Route 58 (WBL) over Nottoway River, Deep Cofferdam Design, Southampton County
- Pungo Ferry Road Bridge, Construction and Construction Inspection, City of Virginia Beach

Key’s President and Principal-In-Charge, David Lyle; JMT’s Design Manager, Bob Gallagher; and JMT’s Lead Structural Engineer, Trip Phaup, PE have a 10 year relationship working together on bridge and roadway projects in Virginia including:

- Route 288 PPTA D-B, Goochland County including bridges on
  - Route 650 (River Road) over Route 288
  - Route 288 (NBL and SBL) over West Creek Parkway
  - Route 6 (Patterson Avenue) over Route 288
- Route 642 (Salem Church Road) over Reedy Creek, Chesterfield County
As companies, Key and JMT have worked successfully on a number of recent projects in Virginia including:

- Route 61 over New River, Route 460, and Old Virginia Avenue (D-B), Town of Narrows (under design)
- James Madison Highway (Route 15) Improvements PPTA D-B, Prince William County
- Watkins Center Parkway Design-Build, Chesterfield County

The project examples described above demonstrate that Key and JMT and the individual staff members of Key and JMT have a solid, long term, work history involving transportation projects in Virginia and will be able to successfully deliver the I-581/Valley View Interchange Phase II D-B Project.

**Subconsultants and Major Subcontractors**

The Key and JMT have developed and organized a team in order to provide VDOT with sufficient, knowlegable, and qualified staff to successfully complete this project. Based on the project size, we selected a number of qualified subconsultant firms to provide the expertise, experience, qualifications, and staff resources to accomplish the anticipated work. The Key/JMT Team members were selected for the following reasons:

- their reputation for providing excellent service,
- their excellent working relationship with each other,
- their successful past and continued working relationship with VDOT and Virginia localities, and
- their ability and experience to provide all the services required by VDOT and this project.

Brief descriptions of the qualifications of each subconsultant are provided below.

**Anderson & Associates, Inc. (A&A)** has been providing quality engineering, surveying, planning, and landscape architecture services since the firm was founded in 1968. A&A has cultivated an operating philosophy driven by the employee-owners’ commitment to client satisfaction and dedication to innovation. From municipal and environmental engineering to land development, utilities, surveying, and GIS development, A&A delivers comprehensive solutions, not just designs. A&A has experience in performing environmental assessments for water and wastewater projects, site development, coal mine reclamation projects, and stone quarry operations. A&A remains well versed in the changing permit and mitigation regulations and can assist with stream and wetland issues from the initial delineation through the final mitigation monitoring for unavoidable impacts. A&A also performs environmental studies, site reviews, subsurface investigations, and coordinates soil and groundwater sampling for storage containment areas. A&A has completed over 250 utility adjustment/relocation projects for municipalities and the Virginia Department of Transportation. This experience, combined with their utility planning and design experience for water, sewer, underground and overhead utilities, power, telecommunications, pump stations and appurtenances, and gas lines, gives A&A the experience needed to manage the utility conflicts that may be encountered on the project.

**Froehling & Robertson, Inc. (F&R)**, established in 1881, is a multi-disciplinary engineering firm that provides a full range of services including construction management, construction materials testing, and environmental and geotechnical engineering. Not only does F&R have some of the most advanced testing facilities and equipment in the industry, but their engineers and technicians are among the most highly trained. F&R’s specialists are examined and certified by technical groups including WACEL, NICET, ACI, AWS, and ASNT, and constantly take new training to ensure that they are up-to-date on the latest procedures and techniques.

**Hassan Water Resources (HWR)** is a Virginia certified DBE and SWaM professional limited liability company specializing in water resources, environmental impact consulting, and engineering services. HWR’s technical expertise is in the fields of hydrology, hydraulic analysis, and river mechanics using state-of-the-art complex waterway and sediment transport modeling simulations. HWR is specialized in GIS integrated hydraulic analyses to deliver practical solutions to roadway drainage and storm water management system designs, watershed and floodplain modeling and studies, flood hazard and FEMA flood studies, and river mechanics and scour depth analysis. HWR has experience in sediment transport and sediment control analyses, river training and scour countermeasure designs, erosion and sediment control studies, and water quality, NPDES and MS4 analysis and studies. HWR is currently providing VDOT professional engineering services related to river mechanics and scour analysis under a Statewide Drainage Design and River
Mechanics Engineering Term Contract and services related to water resources and sediment transport modeling under the Municipal Separate Storm Sewer System (MS4) Permit Term Contract. Also, HWR is providing hydraulic and hydraulic analysis, and scour analysis services to JMT on the Route 61 over New River, Route 460, and Old Virginia Avenue Project in the Town of Narrows.

McCormick Taylor (MT), is a full service professional consulting engineering and environmental planning firm of over 390 employees. They have 10 offices that provide services to various planning and transportation clients throughout Virginia, Pennsylvania, Maryland, Delaware, Ohio and New Jersey. The Virginia offices are located in the metro Richmond and Staunton areas. MT’s staff diverse strengths are in the areas of highway and bridge design, traffic studies and design, public involvement and communication, environmental planning and analyses, and land use planning.

S&ME, Inc. (S&ME), provides a broad range of geotechnical engineering, environmental, and construction services to public and private clients. S&ME is an award winning engineering and environmental services firm employing 1,000 professional and support staff working from 25 offices in Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee and Virginia. The firm is annually ranked in Engineering News-Record (ENR) magazine’s Top 500 Design Firms and Top 200 Environmental Firms. S&ME maintains technically advanced in-house materials testing facilities, accredited by AASHTO. The facilities are managed by a professional engineering staff and certified engineering technicians. They participate in a number of national QC programs for materials testing laboratories, including the Cement and Concrete Reference Laboratory and the Asphalt Materials Reference Laboratory proficiency programs.

Schnabel Engineering Consultants, Inc. (Schnabel), founded in 1956, is an employee-owned company offering highly specialized services in geotechnical engineering, geosstructural design, dam engineering, tunnel and underground engineering, environmental, geophysical and geosciences, construction monitoring, and resident engineering from locations throughout the United States. Schnabel’s wide variety of projects includes buildings, dams, airports, highways and bridges, subways, tunnels, port facilities, and government facilities. Schnabel provides a full range of geotechnical and dam engineering services including subsurface exploration, soil laboratory testing, engineering analysis, design recommendations, and construction phase services. Schnabel’s multi-disciplinary staff of more than 300 includes geotechnical, geosstructural, dam, mining, tunnel, and civil engineers; hydrogeologists; hydrologists; geophysicists and geologists; wetlands specialists; vibration analysts; construction inspectors; and grouting specialists. More than 100 of their employees are registered professional engineers, geologists, or scientists. Schnabel has provided geotechnical engineering services on over 75 bridge and roadway projects throughout Virginia located in a wide variety of geologic settings. Also, Schnabel has a long history of providing geotechnical services to JMT spanning the last 10 years.

T3 Design, PLC (T3) is a certified Woman Business Enterprise (WBE) engineering consulting firm providing traffic engineering, transportation planning and ITS services to agencies throughout Virginia and Maryland, including the Virginia Department of Transportation, Arlington County, Montgomery County, Prince William County, Loudoun County, Franklin County, City of Alexandria, City of Fairfax, and City of Roanoke. T3 is currently providing traffic related engineering services to JMT on a VDOT Statewide Traffic Engineering Term Contract and on a VDOT Statewide Location and Design Term Contract.

Volkert, Inc. (Volkert), founded in 1925, is a multi-disciplinary, full-service engineering and environmental firm that provides services to state departments of transportation, federal agencies, local and municipal governments, as well as private industry. Volkert’s Virginia based staff of construction managers and inspectors are very knowledgeable of VDOT road and bridge construction methods, materials, standards, and specifications. They have the proven ability to work collaboratively with engineers, VDOT officials, elected officials and residents to resolve field issues and to make sure VDOT’s goals for time, budget and quality are met. Volkert is currently providing construction management and inspection services to VDOT’s Salem District on the Route 11/460 widening project and the Route 221 project. Volkert has recently established a full time office at 12A Union Street in Salem to provide more, comprehensive services to the region. Volkert’s quality assurance experience includes significant design-build projects, as well as construction engineering services for traditional design-bid-build projects. Volkert will be providing the quality assurance and QAM services for Key on the Route 61 (MacArthur Avenue) over New River, Route 460, and Old Virginia Avenue Project in the Town of Narrows.

As an established member of the Heavy Highway and Construction Industry for 50 years, Key has developed long standing relationships with reputable subcontractors and material suppliers and will utilize these relationships to identify and secure the most qualified firms to support our project goals. Key is currently working with a number of subcontractors and materials suppliers, prequalified with VDOT, performing similar scope of services and quantities of work that this project demands. When selecting subcontractors and material suppliers, Key evaluates them during the procurement process as follows:
3.4 Experience of Offeror’s Team

- Review VDOT experience track record and qualifications.
- Define the scope of work with associated quantities and project expectations.
- Prepare bid quote packages including expected performance time table and estimated quantities.
- Solicit quotes from subcontractors and vendors including all DBE and SWaM firms.
- Check performance data, EMR Ratings, OSHA, and Safety Records.
- Analyze and select subcontractors based on price, performance, products, methods, and firm capacity.

The interaction of all these participants is managed by both design and construction staffs from start to finish, and performance is audited by the D-B PM. Subconsultants, subcontractors, and material suppliers are included in various phases of design and constructability reviews to ensure specific key components and factors are addressed. Selected participants are required to meet the terms of the project contract requirements and specifications.

3.4.1 Work History

Key and JMT have each provided three work history forms describing relevant projects of similar scope and complexity as the I-581/Valley View Interchange Phase II D-B Project. The project descriptions can be found in Attachment No. 3.4.1 (a) Lead Contractor Work History Form and Attachment 3.4.1(b) Lead Designer Work History Form of this SOQ.

The projects Key has chosen for their work history experience were selected because they are similar in nature to the I-581/Valley View Interchange Phase II D-B project and best demonstrate our qualifications. The projects were constructed for VDOT, involved bridges or bridge replacements in environmentally sensitive sites, carried high volumes of traffic in a mix of urban and rural settings, and contained a heavy concentration of public and private utilities. These projects had various stakeholders, such as private property owners, city and town officials, business owners and government administrators which required extensive communication to present project goals and schedules. These projects were all completed ahead of schedule and within budget.

The projects JMT has chosen for their work history experiences were selected because each involved similar aspects of work that will be required for the I-581/Valley View Interchange Phase II D-B project. All projects are Design-Build projects designed and constructed to FHWA or VDOT Standards and Specifications involving roadway improvements and new, replacement, or widened bridges. The Fairfax County Parkway project was a major Design-Build project with FHWA-EFLHD with extensive review and oversight from VDOT, NOVA Mega Projects GEC, U.S. Army Garrison Fort Belvoir, and the I-95 HOT Lanes P3 team. The project includes design of 7 bridge structures, including 3 structures over the environmentally sensitive Accotink Creek and the widening of an existing bridge. The 3rd Street (Route 15/460) Bridge over Buffalo Creek project was one of the first VDOT Design-Build projects involving a bridge replacement over waterway in the Town of Farmville that required critical MOT plans to accommodate traffic through the work zone during construction including maintaining access for emergency response and fire department vehicles. The 9th Street Bridge Replacement D-B project in Washington D.C. required construction of a four span bridge over CSXT and AMTRAK rail facilities for New York Avenue and included 1,700 feet of realignment and construction of New York Avenue including three new signalized intersections. The project and project Owner concerns mandated a community outreach program to address and minimize impacts and construction time, and address concerns with aesthetic design of the project. Along with the community and users of the project, major stakeholders included the DDOT, CSXT, AMTRAK, U.S. Post Office and Utility Companies.
SECTION 3.5
PROJECT RISK
3.5 Project Risk

3.5.1 Identify and Discuss Three Critical Risks for this Project

The Key/JMT Team has evaluated the existing project information contained in the RFQ documents including existing plans, RFQ plans, and reports; has visited the project site on numerous occasions; and has met with local individual familiar with the project. Based on this research, the Key/JMT Team has identified a number of potential project risks including –

- Designing and constructing bridge foundations in a karst environment
- Completing noise analysis and soundwall design and obtaining approval VDOT, FHWA, and public
- Obtaining water quality permits, mitigating wetland impacts, and developing a stream relocation plan
- Performing utility relocation and coordination in a timely manner
- Developing a maintenance of traffic plan that is constructable and provides access to Valley View Mall
- Understanding and coordinating final interchange design with proposed development on south side of I-581
- Developing a good public participation and involvement plan
- Overcoming the challenge in obtaining the full DBE requirement of 16% for the entire project
- Overcoming the challenge in obtaining enough fill material
- Performing right-of-way acquisition in a timely manner
- Ensuring that the finished project design solves the traffic issues at the interchange
- Overcoming the challenge in obtaining the full DBE requirement of 16% for the entire project
- Ensuring that the finished project implements context sensitive solution within available project budget

The Key/JMT Team has weighed each potential risk described above and has identified three critical risks that the Team considers most relevant and critical to the success of the project. A narrative for each risk is provided below that describes why the risk is critical, indicates the impact the risk may have on the project, discusses the mitigation strategies that the Team may implement to address the risk, and describes the role that the Team expects VDOT or other agencies may have in addressing the risk.

**Critical Risk 1 - Performing design, obtaining approvals, and acquiring right-of-way in a timely manner for work in the southwest quadrant will be a critical risk for the project.** Work in the southwest quadrant of the project includes relocating Lick Run, relocating the shared use path, and constructing improvements to the interchange. In addition to receiving normal design approvals for construction plans, the following activities will need to be complete prior to beginning construction -

- Hydraulic and hydrologic analysis of the stream
  - Requires obtaining the existing model from FEMA if available
  - Requires confirming input variables of the model and modifying for current conditions
  - Requires running model for proposed condition and evaluating floodplain and floodway impacts
  - Requires coordination with FEMA for confirmation of analysis technique
  - Requires preparation of Letter of Map Revision, submitting to FEMA, and receiving approval
- Water quality permits, wetland impacts, and stream relocation plan
  - Requires field work to determine wetland and stream impacts
  - Requires identification and delineation of wetlands and streams
  - Requires surveying to location areas
  - Requires coordination with USACE to obtain confirmation of the delineation
  - Requires preparation of permits for USACE, VDEQ, VMRC, and other regulatory agencies
- Right-of-way acquisition
  - Requires relocation and demolition of 5 residential properties
  - Demolition requires that asbestos inspections be performed and if detected to be remediated
  - Public has a distrust associated with acquisitions and relocations since they feel they were not treated fairly when I-581 was constructed which may make ROW activities difficult

**Why the risk is critical and the impact the risk will have on the Project.** The risk is critical from a scheduling perspective because construction of the project needs to begin in the southwest quadrant and the Team will need to complete design and receive approvals prior to beginning field work. The risk is critical because all three activities require extensive coordination and approvals from agencies and parties outside of VDOT and outside of the...
Mitigation strategies the Team may implement to address the risk. The mitigation strategies that the Team may implement include assigning experienced, knowledgeable staff; initiating communication with the outside agencies and parties; and developing a logical, feasible schedule to complete the work. The Team has assigned the hydraulic and hydrologic analysis of the stream to a special subconsultant with extensive VDOT and FEMA experience – Hassan Water Resources (HWR). HWR fully understands the unique nature of design-build projects and is currently providing similar services to Key/JMT on the Route 61 Design-Build Project in the Town of Narrows. The Team has also assigned the water quality permit activities to a special subconsultant with a long history of working in Roanoke and surrounding areas and working for VDOT – Anderson and Associates (A&A). JMT will rely on their in-house capability to perform ROW acquisition services for the project. JMT is currently performing similar services for VDOT on other transportation projects including the Route 61 Design-Build Project in the Town of Narrows. The Team will initiate early coordination with the outside agencies and parties immediately after project award with email and phone call notification of the project, on-site field visits, and follow up correspondence and meetings. The Key/JMT Team used this process on the Route 61 Design-Build Project to successfully coordinate utility relocations and obtain water quality permits. The Key/JMT Team will develop a project schedule during the technical proposal phase of the project and will engage all members of the team to determine the required activity sequencing, the identify the required resources, and to estimate the duration of each activity. The Team will engage the outside agencies during this process in order to fully understand the time requirements for successfully completing each activity.

Role that the Team expects VDOT or other agencies may have in addressing these project risks. The Team expects that VDOT will provide timely reviews of submittals for plans, permits, and studies as outlined in the Contract Documents. The Team expects that VDOT will provide assistance when possible in dealing with outside agencies and parties. An example where this worked extremely well is during the water quality permit acquisition process on the Route 61 Design-Build Project. The Key/JMT Team engaged the USACOE early during project design to resolve the unexpected discovery of regulated ephemeral channels. VDOT Salem District Environmental staff provided valuable assistance in working through this challenge and continued to provide assistance during the permitting process with extremely quick reviews of the permit application and guidance and recommendations during outside agency review periods.

Critical Risk 2 – Ensuring safety through the work zone during construction while minimizing impacts to the traveling public will be a critical risk for the project. A multi-phase, maintenance of traffic plan will need to be developed that safely conveys traffic, bicyclists, and pedestrians through the work zone while minimizing impacts and providing access to Valley View Mall and adjacent commercial and retail businesses.

Why the risk is critical and the impact the risk will have on the Project. This risk is critical because providing a safe work zone and minimizing impacts to the traveling public are core values and goals on projects design and constructed by VDOT. In general, there are two approaches to building the project. The first approach is to construct the project using a minimum number of phases by working concurrently in multiple areas to construct the project in the shortest period of time. The result of this approach will be a larger impact to traveling public but for a short time period. The second approach is to construct project using multiple phases by working in only one area at a time to construct the project requiring a longer construction time. The results of this approach will be a smaller impact to traveling public over a longer time period. We understand that the three signaled intersections around the mall are currently MAJOR choke points for access in and out of the mall. In addition, construction at the interchange will affect at least two (2) major Christmas shopping seasons for Valley View Mall and adjacent business and providing an accessible safe work zone will not only result in happier stakeholders but will provide a direct economic benefit to businesses and the City of Roanoke.

Mitigation strategies the Team may implement to address the risk. Similar to the mitigation strategies described above, mitigation strategies that the Team may implement include developing feasible, constructable maintenance of traffic (MOT) plans and assigning experienced, knowledgeable staff. Construction activities need to progress in an order that provides immediate improvements to the interchange in an incremental fashion – i.e. construct northbound on ramp first, improve first signal on east side, construct southbound offramp, etc… The
MOT plans need to be developed to allow work in concurrent areas where possible and need to be founded on solid traffic analysis for each phase with the plans geared to match the need for each phase. The entire project team and 3rd party stakeholders will need to work together during development of the MOT plans. The Engineer needs to prepare safe, feasible, and constructable MOT plans. The Contractor needs to work with the Engineer to develop the MOT plans, needs to sequence work in a logical order, and needs to perform work in accordance with the plans in a safe manner. The Public needs the ability to provide input into construction hours of operations and needs to be aware of the construction activities, the hours of work, the roadways affected, and alternate routes.

JMT’s lead roadway designer, Rodney Hayzlett, PE, has extensive experience in preparing MOT plans. He has prepared transportation management and MOT plans for all three types of projects (Type A, B, and C) defined in VDOT L&D IIM-LD-241.5 and TED-351.3 and holds an Advanced Work Zone Traffic Control Training Certificate issued through ATSSA. The Team has assigned the traffic data collection and analysis services to a special subconsultant with extensive VDOT experience – T3 Design (T3). T3 is currently providing traffic related engineering services to JMT on a VDOT Statewide Traffic Engineering Term Contract and on a VDOT Statewide Location and Design Term Contract. In addition, the Team has established an independent Safety Director assigned to the project. The Safety Director is not a member of Key’s day to day construction forces but an independent entity providing unbiased safety reviews on the project. The Fairfax County Parkway project, the 3rd Street (Route 15/460) Bridge over Buffalo Creek, and the Route 360 Bridge over the Dan River provided the Team with excellent opportunities to develop and hone MOT plan skills including evaluating all possible MOT scenarios, conducting citizens meetings, issuing public notices, and updating the project website to keep all project stakeholders informed of project activities.

Role that the Team expects VDOT or other agencies may have in addressing these project risks. The Team expects that VDOT will provide timely reviews of MOT plans as outlined in the Contract Documents. The Team also expects that VDOT will provide assistance when possible in dealing with 3rd party stakeholders.

Critical Risk 3 – Ensuring that input received during the public participation and involvement process is incorporated into the project design will be a critical risk for the project. The I-581/Valley View Interchange Phase II D-B Project will greatly improve access to the Valley View Mall Retail Business District east of the interchange and will provide for future connectivity to residential communities and future business development west of the interchange. As a result, 3rd party stakeholders such as the Valley View Mall retail businesses, Roanoke Regional Airport, Valley Metro (public transportation), business owners and residents of the surrounding community, local schools, emergency responder agencies, public and private utility companies, and Lick Run Greenway users will be very interested in the project.

Why the risk is critical and the impact the risk will have on the Project. The risk is critical because input from the final users of the project need to be considered and implemented when possible into the final project design. According to the City of Roanoke, the public has not expressed either a like or dislike for the proposed interchange with the configuration depicting future expansion to the southwest so receiving input and concurrence from the public will be critical for VDOT to achieve success with this project. In addition, the public needs to be aware of the construction activities, the hours of work, the roadways affected, and alternate routes during construction. For example, during discussions with local interested parties, the Team learned the following that may affect final design -

- The City of Roanoke is beginning to study the connectivity of the street system in the residential neighborhoods adjacent to the southwest quadrant of the project including how a connection to the Valley View Boulevard Interchange can be made.
- The City of Roanoke envisions that a mixed use development could occupy the vacant land in the southwest quadrant of the project
- The City of Roanoke has long term plans to connect the Greenway from Lick Run to Country Way.
- For bicyclist, the Target parking lot and points further north are major destinations.
- For pedestrians, Valley View Mall is the major destination for kids, mall workers, and shoppers with the major difficulty being crossing I-581.
- The proposed interchange will improve traffic exiting I-581 from the north and exiting Valley View Mall to points north and south.
The proposed interchange will also provide future access and will open the way for future development in the southwest quadrant of the project site adjacent to the residential neighborhoods.

Mitigation strategies the Team may implement to address the risk. The mitigation strategies that the Team may implement focus on providing information to and communicating with the public. The Team acknowledges the importance of understanding and engaging 3rd party stakeholders by assigning public participation activities to Mr. Fred Altizer, PE of McCormick Taylor. Mr. Altizer will lead all public participation and communication efforts including informing and engaging the public using a combination of formal and informal meetings, radio announcements, newspaper notices, email, and project website updates. Mr. Altizer, a retired Salem District Administrator and Route I-81 Program Manager, brings experience in coordination and community outreach initiatives on projects such as the I-73 Corridor Study and the Route 460 Bypass in Montgomery County. Mr. Altizer’s knowledge and understanding of the stakeholder’s demands and their interest in traffic patterns will greatly help the team.

A key component of any public participation plan is to meet early with the 3rd party stakeholders to understand project needs and concerns. The Key/JMT Team has already initiated these meetings including meeting with Ralph Williams of Thalhimer’s Commercial Sales and Leasing group in Roanoke to learn about surrounding properties and past and current plans for development and growth of areas around the Valley View Boulevard Interchange. The Team also met with Chris Chittum of the City of Roanoke’s Planning Department to learn about the City’s plans for development in the area and to understand the City’s expected outcome upon completion of the new interchange.

The DB-PM, in conjunction with Mr. Altizer, will work with VDOT to develop and implement a public participation program including conducting both public information meetings and individual one-on-one meetings, developing and updating a project website, preparing monthly project mailers, and securing media coverage through newspapers, radio, and television. In addition, the CM, superintendents, and QA Team will provide the daily, front line interaction with 3rd party stakeholders.

Role that the Team expects VDOT or other agencies may have in addressing these project risks. The Team expects that VDOT will provide timely reviews of submittals for public outreach communications as outlined in the Contract Documents. The Team expects that VDOT will provide assistance when possible in dealing with the 3rd party stakeholders.
ATTACHMENT 3.1.2

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Key Construction Company, Inc.
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 20-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<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>Tab Attachment 3.1.2</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>Tab Attachment 2.10</td>
</tr>
<tr>
<td>Letter of Submittal (on Offeror's letterhead)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offeror's point of contact information</td>
<td>NA</td>
<td>Section 3.2.1</td>
<td>yes</td>
<td>2</td>
</tr>
<tr>
<td>Authorized Representative’s signature</td>
<td>NA</td>
<td>Section 3.2.1</td>
<td>yes</td>
<td>4</td>
</tr>
<tr>
<td>Principal officer information</td>
<td>NA</td>
<td>Section 3.2.2</td>
<td>yes</td>
<td>2</td>
</tr>
<tr>
<td>Offeror’s Corporate Structure</td>
<td>NA</td>
<td>Section 3.2.3</td>
<td>yes</td>
<td>2</td>
</tr>
<tr>
<td>Affiliated/subsidiary companies</td>
<td>NA</td>
<td>Section 3.2.4</td>
<td>yes</td>
<td>2</td>
</tr>
<tr>
<td>Debarment forms</td>
<td>Attachment 3.2.5(a) Attachment 3.2.5(b)</td>
<td>Section 3.2.5</td>
<td>no</td>
<td>Appendix Attachment 3.2.5(a) &amp; 3.2.5(b)</td>
</tr>
<tr>
<td>Offeror’s VDOT prequalification evidence</td>
<td>NA</td>
<td>Section 3.2.6</td>
<td>no</td>
<td>Appendix Tab Prequalification Certificate</td>
</tr>
</tbody>
</table>
## STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

(Revised December 05, 2011)

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 20-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of obtaining bonding</td>
<td>NA</td>
<td>Section 3.2.7</td>
<td>yes</td>
<td>2 &amp; 5</td>
</tr>
<tr>
<td><strong>Professional Services Evidence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full size copies of SCC and DPOR registration documentation (appendix)</td>
<td>NA</td>
<td>Section 3.2.8</td>
<td>no</td>
<td>Appendix Tab SCC/DPOR</td>
</tr>
<tr>
<td>SCC Registration</td>
<td>NA</td>
<td>Section 3.2.8.1</td>
<td>yes</td>
<td>3</td>
</tr>
<tr>
<td>DPOR Registration (Offices)</td>
<td>NA</td>
<td>Section 3.2.8.2</td>
<td>yes</td>
<td>3 &amp;4</td>
</tr>
<tr>
<td>DPOR Registration (Key Personnel)</td>
<td>NA</td>
<td>Section 3.2.8.3</td>
<td>yes</td>
<td>4</td>
</tr>
<tr>
<td>DPOR Registration (Non-APELSCIDLA)</td>
<td>NA</td>
<td>Section 3.2.8.4</td>
<td>yes</td>
<td>4 (n/a)</td>
</tr>
<tr>
<td><strong>DBE statement within Letter of Submittal</strong> confirming Offeror is committed to achieving the required DBE goal</td>
<td>NA</td>
<td>Section 3.2.9</td>
<td>yes</td>
<td>4</td>
</tr>
<tr>
<td><strong>Offeror’s Team Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity of and qualifications of Key Personnel</td>
<td>NA</td>
<td>Section 3.3.1</td>
<td>yes</td>
<td>6</td>
</tr>
<tr>
<td>Key Personnel Resume – DB Project Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.1</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
<tr>
<td>Key Personnel Resume – Quality Assurance Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.2</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
<tr>
<td>Key Personnel Resume – Design Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.3</td>
<td>no</td>
<td>Appendix Attachment</td>
</tr>
</tbody>
</table>
## STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

(Revised December 05, 2011)

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 20-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Personnel Resume – Construction Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.4</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
<tr>
<td>Key Personnel Resume – Lead Structural Engineer</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.5</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
<tr>
<td>Organizational chart</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>11</td>
</tr>
<tr>
<td>Organizational chart narrative</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>8-10</td>
</tr>
<tr>
<td>Experience of Offeror’s Team</td>
<td>NA</td>
<td>Section 3.4</td>
<td>yes</td>
<td>12-16</td>
</tr>
<tr>
<td>Lead Contractor Work History Form</td>
<td>Attachment 3.4.1(a)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix Tab 3.4.1(a)</td>
</tr>
<tr>
<td>Lead Designer Work History Form</td>
<td>Attachment 3.4.1(b)</td>
<td>Section 3.4</td>
<td>no</td>
<td>Appendix Tab 3.4.1(b)</td>
</tr>
<tr>
<td>Project Risk</td>
<td>NA</td>
<td>Section 3.5.1</td>
<td>yes</td>
<td>17-20</td>
</tr>
</tbody>
</table>

Identify and discuss three critical risks for the Project
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO.: C00016595DB45
PROJECT NO.: 0581-128-109, P101, RW201, C501, B627

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 10/11/2011 (Date)
2. Cover letter of (Date)
3. Cover letter of (Date)

[Signature] December 9, 2011
ATTACHMENT 3.2.5(a)

PRIMARY DEBARMENT FORM

Key Construction Company, Inc.
ATTACHMENT NO. 3.2.5(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-007-111, P101, R-201, C-501, B-627

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

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

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

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

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

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

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]

President

[Title]

Key Construction Co., Inc.

Name of Firm
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

[Signature] 12/9/11

Senior Vice President
Title

Johnson, Mirmiran and Thompson
Name of Firm
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

Edward G. Drisko
Signature

November 21, 2011
Date

Principal

Schnabel Engineering
Name of Firm

Title
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

Willard H. Baehrman November 21, 2011
Vice President of Transportation

Signature Date Title

Anderson & Associates, Inc.

Name of Firm
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

[Signature]  11/21/11  [President]

[Signature]  Date  [Title]

HAZAN WATER RESOURCES, PLC

Name of Firm
ATTACHMENT NO. 3.2.5(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

\[Signature\] \hspace{1cm} \text{December 9, 2011} \hspace{1cm} \text{President}

Signature Date Title

McCormick Taylor, Inc.

Name of Firm
ATTACHMENT NO. 3.2.5 (b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No: 0581-128-109, P101, RW201, C501, B627

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

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

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

________________________  _________________________  _______________________
Signature                    Date                        Title

December 2, 2011

________________________
Name of Firm

T3 Design Corporation
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

[Signature] [Date] [Title]

[Volkert]
Name of Firm
ATTACHMENT NO. 3.2.5(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

Signature: [Signature]
Date: 1/30/2011
Title: [Title]

Name of Firm:

[Name of Firm]
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS
To be completed by a Sub-consultant)

Project No.: 0581-128-109, P101, RW201, C501, B627

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

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

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

__________________________
Signature

December 1, 2011
Date

Branch Manager

S&ME, Inc.

Name of Firm
ATTACHMENT 3.3.1
KEY PERSONNEL RESUMES

Key Construction Company, Inc.
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:

   Timothy B. Nunn
   Vice President

b. Project Assignment:

   Design-Build Project Manager

c. Name of Firm with which you are now associated:

   Key Construction Company, Inc.

d. Years experience: With this Firm 33 Years With Other Firms 0 Years

   Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.)

   Name of Firm: Key Construction Company, Inc.   Start Date: June 1978   End Date: Present
   Position: Vice-President

Responsibilities:

   Mr. Nunn has been employed by Key Construction Company, Inc. or one of its affiliates for 30+ years, serving as vice president for the past sixteen. Through this experience, he has developed a wide range of skills, which include estimating, planning, resource allocation, and project management, that allow him to efficiently and effectively manage construction projects from start to completion. Much of Mr. Nunn’s focus for the past 15 years has been on VDOT projects. As such, he has acquired an intimate knowledge of VDOT’s specifications and standards, its safety and environmental regulations, as well as its policies and procedures. He has successfully applied this knowledge on numerous projects—on new roadways as well as on road reconstructions and widenings, in rural and urban environments, and on projects large and small.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

   Virginia Polytechnic Institute and State University, Blacksburg, VA/ Bachelor of Science Civil Engineering /1978/ Construction Management

f. Active Registration: Year First Registered/ Discipline/VA Registration #: 

   Erosion & Sediment Control / Certification # 1089C

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.)

Franklin Turnpike Extension, Pittsylvania County, Virginia VDOT Project #(NFO)6265-071-V05, B643, C501
Name of Firm: Key Construction Company, Inc.
Start: 08/2009
Finish Date: 11/2011
Project Role: Project Director
Responsibilities: Provided overall project management including bidding and estimating, schedule development and implementation, oversight of field managers, and primary liaison with VDOT. Clearing and grubbing, 300,000+ cubic yards of excavation, water and sewer, storm drainage, aggregate base material, asphalt, concrete curb and gutter, guardrail, fencing, overhead signs, and two bridges each 600+ if in length were activities performed during construction of this final phase of the Franklin Turnpike Extension connecting Route 41 in the City of Danville to the Route 29 Danville Bypass. Coordination and cooperation with the many stakeholders involved, including VDOT, the City of Danville, N&S Railroad, local business owners, and the travelling public, contributed significantly to the successful early completion of this $18.9 million project.
Owner Contact: (Name/Title/Phone): Virginia Department of Transportation
   Mr. Zack Weddle, P.E., Area Construction Engineer (434)476-6471.
US 360 & US 58 Bypass in Halifax County, Virginia VDOT Project #6360-041-E15, C501, B608, B609, B610
Name of Firm: Key Construction Company, Inc.
Start: 08/2003
Finish Date: 12/2006
Project Role: Project Manager
Responsibilities: Supervised the demolition of an existing bridge and the construction of two two-lane bridges 2,134 feet long containing 5,005 cubic yards of concrete, 1.7 million pounds of reinforcing steel and 7.2 million pounds of plate girders in a highly environmentally sensitive area across the Dan River and its flood plains. This project also featured construction of a MSE wall and a tie back reinforced retaining wall. Additionally, grading, paving, curb and gutter, water and sewer installation, and drainage structures were completed on the heavily traveled highway. Of note, implemented value engineering on the MSE wall construction on this $24.6 million project that was completed seven months ahead of schedule and under budget.

Owner Contact: (Name/Title/Phone): Virginia Department of Transportation
Mr. J.D. Barkley, II, Resident Engineer (434)791-5218

Route 41, City of Danville, Virginia VDOT Project #NFO 0041-108-101, C501
Name of Firm: Key Construction Company, Inc.
Start: 4/2006
Finish Date: 12/2008
Project Role: Division Manager
Responsibilities: A highly traveled, congested two lane commuter route was reconstructed into a five lane undivided street with curb and gutter and sidewalks. This project, valued at $6.5 million, consisted of grading, water and sewer utilities, storm drainage, incidental concrete, aggregate base, asphalt, striping, and signalization. Strong MOT and construction planning were essential elements in maintaining safe travel throughout the workzone, private owner and business access, and scheduling requirements. Through Mr. Nunn’s initiative, and with the cooperative partnership of the Department, a modified pavement structure was implemented that enhanced constructability and significantly contributed to an early (three months) completion. Mr. Nunn was involved in the management of the project from the bidding phase through completion.

Owner Contact: (Name/Title/Phone): Virginia Department of Transportation
Mr. Zack Weddle, P.E., Area Construction Engineer (434) 476-6471

Route 604 Genito Road, Chesterfield County, Virginia VDOT Project #0604-020-158, C504, B674
Name of Firm: Key Construction Company, Inc.
Start: 09/2001
Finish Date: 07/2003
Project Role: Project Manager
Responsibilities: This $8.1 million project involved reconstructing an outdated overcapacity 2-lane rural highway into a 4-lane urban thoroughfare with major intersections in a heavily populated area of Chesterfield County. Work consisted of grading, drainage, curb and gutter, utilities, underdrain, aggregate base, asphalt, guardrail, striping, signalization, landscaping, and a new bridge. This project required considerable planning and cooperation between all parties, the contractor and the Department as well as the County and utility owners-electric power, communications, gas, and petroleum. Despite funding, utility conflict, and other numerous delays, this project was completed ahead of schedule. In fact, our company received a $100,000 early completion incentive bonus and was awarded recognition for pavement rideability on this $8.1 million project.

Owner Contact: (Name/Title/Phone): Virginia Department of Transportation
Mr. Chris Winstead, P.E., District Construction Engineer (804)674-2800

Route 58 in Mecklenburg County, Virginia VDOT Project #6058-058-E28, C501, B649
Name of Firm: Key Construction Company, Inc.
Start: 01/2002
Finish Date: 05/2005
Project Role: Project Manager
Responsibilities: Provided oversight for this 3.6 mile project which entailed clearing and grubbing, regular and borrow excavation, installation of utilities, seeding and erosion control, soil cement treated subgrade, aggregate base, paving, guardrail, and striping. This project also included replacement of an existing bridge and the construction of two new bridges. Additionally, managed the proposal pricing and final pricing of all grading and structure work, material/subcontractor pricing, scheduling, and efficiency. Initiated and ultimately provided the Department with two VEPs. First, value engineered standard storm drain installation and MOT plan to provide cost savings and improve workzone safety. Second, two three span bridges were redesigned as single span bridges which again provided a cost savings to the Department as well as mitigated environmental concerns by eliminating in-stream cofferdams. By maintaining a rigid production schedule and incorporating the aforementioned VEPs, this $10.4 million project was delivered to the Department on time and under budget.

Owner Contact: (Name/Title/Phone): Virginia Department of Transportation
Mr. Charlie Guerrat, Engineering Manager I (434)774-2300
## Brief Resume of Key Personnel anticipated for the Project.

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>William (Bill) McDowell, P.E., Vice President, Construction Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Quality Assurance Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>Volkert, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm</td>
<td>10</td>
</tr>
</tbody>
</table>

Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.).

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Volkert, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td>Vice-President, Construction Management</td>
</tr>
<tr>
<td>Manages construction engineering staff, contract management, quality control and field inspection/review</td>
<td></td>
</tr>
<tr>
<td><strong>Start Date:</strong></td>
<td>Sept. 2002</td>
</tr>
<tr>
<td><strong>End Date:</strong></td>
<td>Present</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Virginia Dept. of Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td>Assistant State Construction Engineer</td>
</tr>
<tr>
<td>Construction program oversight in 3 Districts</td>
<td></td>
</tr>
<tr>
<td><strong>Start Date:</strong></td>
<td>1996</td>
</tr>
<tr>
<td><strong>End Date:</strong></td>
<td>2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Virginia Dept. of Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td>Transportation Engineer Program Supervisor</td>
</tr>
<tr>
<td>Oversight of letting and award of all contracts; constructability reviews, estimating, bid analysis, claim analysis</td>
<td></td>
</tr>
<tr>
<td><strong>Start Date:</strong></td>
<td>1992</td>
</tr>
<tr>
<td><strong>End Date:</strong></td>
<td>1996</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Virginia Dept. of Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td>Transportation Engineer Senior</td>
</tr>
<tr>
<td>Oversight of antitrust division operations. Reviewed plans, analyzed financial data and bidding, constructability reviews, structures redesign</td>
<td></td>
</tr>
<tr>
<td><strong>Start Date:</strong></td>
<td>1991</td>
</tr>
<tr>
<td><strong>End Date:</strong></td>
<td>1992</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
<th>North Carolina State / Bachelor of Science, 1980, Civil Engineering</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
<th>1988, Professional Engineer, #018236</th>
</tr>
</thead>
</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.)

<table>
<thead>
<tr>
<th>Project:</th>
<th>Route 60 over Route 288 Design-Build Project, Chesterfield County, Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Firm:</td>
<td>Volkert, Inc.</td>
</tr>
<tr>
<td><strong>Start:</strong></td>
<td>Nov. 2007</td>
</tr>
<tr>
<td><strong>Finish Date:</strong></td>
<td>Nov. 2008</td>
</tr>
<tr>
<td><strong>Project Role:</strong></td>
<td>Quality Assurance Manager</td>
</tr>
<tr>
<td><strong>Responsibilities:</strong></td>
<td>Managed QA to verify that construction of this bridge widening (from 3 to 4 lanes with a full shoulder) project complied with contract documents. The new bridge included a reinforced concrete deck, steel plate girders, elastomeric bearings, piers, end bents, MSE walls and seismic design and included the 1,500 – 2,000 feet of roadway approaches. Prepared a QA plan with testing types and frequencies. Managed inspection and testing personnel and conducted preparatory meetings and inspections before major construction activities. Oversight of materials testing including density, moisture, slump, and air content of</td>
</tr>
</tbody>
</table>
concrete, compressive strength test on concrete, and used one-point proctors on soils. Addressed non-conformance issues regarding concrete quality and failed subgrades, monitored corrective actions, and maintained a non-conformance log. Monitored schedule, budget, and compliance with work zone safety, environmental, and EEO/DBE regulations. Oversight of document control procedures and quality including the materials notebook, reviewed daily work reports, and submitted materials test reports, non-conformance reports, and progress reports to VDOT. Conducted punch list inspection at the close of the project. Conducted constructability reviews during design.

**Client/Owner Contact:** D.W. Lyle Corporation / VDOT; Mr. Dale Totten, P.E., VDOT Chesterfield Resident Administrator, (804) 674-2800

**Project:** Route 1/I-495 and Telegraph Road/I-495 Interchanges, Alexandria, Virginia

**Name of Firm:** Virginia Department of Transportation

**Start Date:** 1997  **Finish Date:** 2001

**Project Role:** Assistant State Construction Engineer

**Responsibilities:** Provided quality oversight of the rebuilding the Route 1/I-495 and Telegraph Road/I-495 interchanges, associated roadway improvements and the replacement of the Woodrow Wilson Bridge. Conducted contract modification negotiations, scheduling and cost analyses, plan/construction error analyses and NOI analyses. QA/QC activities included constructability reviews; verification that workmanship, materials, inspection and testing were in compliance to contract requirements; resolution of quality-related issues and monitoring of the implementation and effectiveness of solutions; frequent visits to the construction site to observe and check inspectors’ performance and accuracy of records and logs; and preparation of reports to the Chief Engineer and the State Construction Engineer discussing issues and solutions.

**Client/Owner Contact:** VDOT; Frank Gee, Chief Engineer; Retired

**Project:** Springfield Interchange I-95 / I-295 / I-395, Springfield, Virginia

**Name of Firm:** Virginia Department of Transportation

**Start Date:** 1996  **Finish Date:** 1999

**Project Role:** VDOT Central Office Representative, Assistant State Construction Engineer

**Responsibilities:** Responsible for the quality of several phases of construction of the $746-million interchange. Attended preparatory meetings and inspections and observed structural steel erections. Addressed non-conformance issues and monitored corrective actions. Special attention was given to the correct installation of bridge joints and finishes on bridge decks, the resolution of structural steel and anchor bolt issues, and erosion and sediment control. Worked with contractors and inspectors to resolve disputes. Reviewed plans, schedule and materials testing reports, daily work reports, and non-conformance logs. Conducted QA site visits to check compliance with document control procedures and accuracy of records. Prepared reports to the Chief Engineer and the State Construction Engineer discussing issues and solutions.

**Client/Owner Contact:** VDOT; Frank Gee, Chief Engineer; Retired

**Project:** CEI for Culpeper District-Wide

**Name of Firm:** Volkert, Inc.

**Start Date:** 2008  **Finish Date:** 2011

**Project Role:** Quality Assurance Manager

**Responsibilities:** Responsible for the performance of a large inspection and testing staff and the quality of a variety of maintenance and construction projects for the Culpeper District. To date 20 tasks have been assigned including bridge repairs, new roadway construction, roadway widenings, and schedule maintenance and resurfacing projects. The most significant project is the new Meadow Creek Parkway, a $14-million, 1.4-mile parkway connecting East Rio Road with Melbourne Road. The project includes 2 steel-girder bridges over the NS Railroad and over Meadow Creek, a pedestrian bridge, a linear park with a multi-use trail, improvements to East Rio Road, and signalization. Oversight of QA to verify that construction complies with contract documents. Oversight of implementation of QA plans with testing types and frequencies. Oversight of preparatory meetings and inspections before major construction activities and materials testing activities including density tests to verify asphalt compaction. Addresses non-conformance issues, monitors corrective actions, and reviews non-conformance log. Monitors schedule, budget, and compliance with work zone safety, environmental, and EEO/DBE regulations. Oversight of document control procedures and quality including the materials notebook. Reviews daily work reports, materials test reports, non-conformance
reports, and progress reports to VDOT. Conducts punch list inspection at the close of the project.

**Client/Owner Contact:** VDOT, Mr. Kenneth Shirley, P.E., District Construction Engineer, (540) 829-7513

**Project:** I-95 / Route 234 Widening and Interchange Improvements, Prince William County, Virginia

**Name of Firm:** Virginia Department of Transportation

**Start Date:** 1998  **Finish Date:** 2000

**Project Role:** Assistant State Construction Engineer

**Responsibilities:** Managed inspection for the widening and reconstruction of approximately 2 miles roadway from 2 lanes to multiple lanes, the replacement of 2 bridges, and the widening of I-95. The $6-million project included traffic signals, grading, drainage, sidewalk, curb, gutter, utility relocation, drainage, and demolition of structures. Used VE practices to save VDOT more than $3 million. QA/QC activities included verification that the workmanship, materials, inspection and testing were in compliance to contract requirements, resolution of quality-related issues and monitoring of the implementation and effectiveness of solutions, unannounced random visits to the construction site to observe and check inspectors' performance and accuracy and efficiency of records and logs, and preparation of QA/QC reports.

**Client/Owner Contact:** VDOT; Frank Gee, Chief Engineer; Retired
**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><strong>a. Name &amp; Title:</strong></td>
</tr>
<tr>
<td>Robert T. Gallagher, P.E.</td>
</tr>
<tr>
<td>Senior Vice President</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>b. Project Assignment:</strong></td>
</tr>
<tr>
<td><strong>DESIGN MANAGER</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>c. Name of Firm with which you are now associated:</strong></td>
</tr>
<tr>
<td>Johnson, Mirmiran &amp; Thompson, Inc.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>d. Years experience:</strong> With this Firm 4 Years With Other Firms 20 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Name of Firm:** Johnson Mirmiran & Thompson

<table>
<thead>
<tr>
<th>Start Date: 02/07</th>
<th>End Date: Present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td></td>
</tr>
<tr>
<td>Senior Vice President, Richmond Office Manager, VA Region Transportation Discipline Leader</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibilities:</strong></td>
<td></td>
</tr>
<tr>
<td>Responsible for operations of JMT’s Richmond Office and serves as JMT’s Transportation discipline leader for Virginia. Oversees all roadway and bridge design, construction inspection, and right-of-way acquisition within the Commonwealth. Mr. Gallagher also serves as JMT’s Project Manager on the VDOT Statewide Limited Services Design contract and the NOVA Limited Services Quality Plan Review contract.</td>
<td></td>
</tr>
</tbody>
</table>

**Name of Firm:** Earth Tech

<table>
<thead>
<tr>
<th>Start Date: 07/05</th>
<th>End Date: 02/07</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td></td>
</tr>
<tr>
<td>Vice President, Senior Section Manager</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibilities:</strong></td>
<td></td>
</tr>
<tr>
<td>Senior Section Manager for Transportation services for the Richmond office. Responsible for the major transportation disciplines of roadway and bridge design, construction inspection and right-of-way acquisition. Served as the Project Manager and Principal-in-Charge for design and administration of many VDOT and municipal VDOT-funded highway projects. Served as the Capital District Transportation Business Line Leader responsible for coordinating transportation efforts between individual offices including Baltimore, Alexandria, Richmond, and Norfolk.</td>
<td></td>
</tr>
</tbody>
</table>

**Name of Firm:** Earth Tech

<table>
<thead>
<tr>
<th>Start Date: 07/03</th>
<th>End Date: 07/05</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position:</strong></td>
<td></td>
</tr>
<tr>
<td>Vice President, Operations Manager</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibilities:</strong></td>
<td></td>
</tr>
<tr>
<td>Operations Manager for the Richmond office responsible for all Transportation services. Served as the Project Manager and Principal-in-Charge for select VDOT assignments. Assumed additional responsibility for the Environmental service line during structural operation changes of the company. Additional responsibilities involved oversight of multidisciplinary environmental professionals including professional engineers, professional geologists, certified hazardous materials managers, scientists, accountants, procurement professionals, field crews and support personnel. Responsibilities included: profitability and budgets, acquisition and execution of projects, setting strategic goals and budgets for profit and office support centers.</td>
<td></td>
</tr>
</tbody>
</table>

**Name of Firm:** Earth Tech

<table>
<thead>
<tr>
<th>Start Date: 07/98</th>
<th>End Date: 07/03</th>
</tr>
</thead>
</table>
Position: Vice President and Senior Program Director for Richmond Global Facilities and Infrastructure Division

Responsibilities: Responsible for Richmond home and field offices for the major Transportation disciplines of roadway and bridge design, environmental documents and permitting, construction inspection and Right-of-Way acquisition services in the Commonwealth of Virginia. Served as Project Manager for multiple VDOT Limited Services Design contracts and Project Manager on select project specific consultant contracts. Also served as the Capital District Transportation Business Line Leader responsible for coordinating transportation efforts between the individual offices throughout Virginia.

Name of Firm: Earth Tech (formerly Rust Environment and Infrastructure)  
Start Date: 04/90  End Date: 07/98  
Position: Transportation Project Manager and Engineer  
Responsibilities: Served in various engineering and project manager roles for VDOT and municipal funded Virginia Transportation projects. Experience centered on highway design, structure design and analysis, roadway hydraulics and storm water management.

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
</table>
| Tri-State University, Angola, Indiana/BS/1987/Civil Engineering  
State University of New York Agricultural & Technical College, Alfred, NY/AAS/1984/Construction Technology |

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992/ Professional Engineer / 23016</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.)  

**Project: Fairfax County Parkway (Route 7100) Design-Build, Fairfax County, VA**  
**Name of Firm:** Johnson, Mirmiran & Thompson  
**Start Date:** 10/08  **Finish Date:** September 2009 (Phase I/II Design) November 2009 (Phase IV Design) November 2010 (Construction)  
**Project Role:** Design Manager  
**Responsibilities:** Responsible for engineering of the Design-Build construction on one of the last segments of the Fairfax County Parkway between Rolling Road (Route 638) on the north and Fullerton Road on the south. This project includes construction of approximately 1.5 miles of a four-lane divided, limited access highway designed to facilitate future widening to 6 lanes. The project includes relocation of portions of Rolling Road; a multipurpose trail along a portion of the road; interchanges at Rolling Road/EPG Access Road, Boudinot Drive Interchange; I-95 SB DAR access ramp; and 6 new multi-lane bridges (including two 400 long bridges over Accotink Creek), 1 interstate ramp widening and UXO and Hazmat accommodations. Responsibilities include roadway and structure design and coordination with all other support disciplines including survey, utility designations and locations, water resources, environmental analysis and permitting, geotechnical engineering, traffic engineering, signing and lighting and project website. Project required an extensive coordination process to satisfy varying diverse needs as defined by the MOA (VDOT, Dept. of the Army, DOT FHWA) and Fairfax County. Project involved mitigation of and processing where necessary design waivers and exceptions to accommodate previously committed right of way and other constraints. Design execution included accommodating significant owner options into the project development while maintaining schedule. Conditional approval for clearing, grading and E&S construction for the western half of the project was received 2 months ahead of original schedule.

**Relevant Attributes:** Design-Build Project, Bridge and Road Design and Construction Services, Sensitive Utilities, Heavy Public Involvement
**Project:** Route 288 PPTA Design-Build, Goochland County, VA  
**Name of Firm:** Earth Tech  
**Start Date:** 2000  
**Finish Date:** 2002  
**Project Role:** Design Manager/Principal-In-Charge  
**Responsibilities:** Responsible for roadway, bridge design and water resources work performed as a sub consultant to the PPTA design-build. Services included completion of the roadway construction plans and select bridge plans for this segment of the Route 288 (4 lane divided Principal Arterial Freeway) western bypass around Richmond from the James River to Interstate 64. Segment included four interchanges and extensive environmental permitting. Project design efforts included value engineering meetings with contractors focusing on cost savings through modifications to roadway and bridge plans. Required extensive coordination efforts to accommodate planned development of the 8,000 employee Capital One campus facility within the West Creek Business Park adjacent to the project at the interchange of Route 288 and Ridgefield Road. Provided field support for contractor Request for Information on roadway and bridge design, along with review of structural shop drawings submittals.  
**Relevant Attributes:** VDOT Design-Build Project, Bridge Design and Construction Services, Bridges Constructed by D.W. Lyle Corporation

---

**Project:** James Madison Highway (Route 15) Improvements PPTA Design-Build, Prince William County, VA  
**Name of Firm:** Johnson, Mirmiran & Thompson  
**Start Date:** 01/07  
**Finish Date:** 2009  
**Project Role:** Principal-In-Charge  
**Responsibilities:** Responsible for overseeing the design of two river crossing structures, review of structural shop drawings submittals, acquisition of right of way acquisition, and designation of utilities for a PPTA Design-Build project to improve and widen Route 15.  
**Relevant Attributes:** Design-Build Project, Bridge and Road Design and Construction Services, Right-of-Way Acquisition, Utilities, Bridges Constructed by D.W. Lyle Corporation

---

**Project:** Monroe Avenue (Route 1) Bridge Replacement Design-Build, City of Alexandria, VA  
**Name of Firm:** Earth Tech  
**Start Date:** 2006  
**Finish Date:** 02/07  
**Project Role:** Principal-In-Charge  
**Responsibilities:** Responsible for engineering and quality assurance activities for a contractor led, $50 million, Design-Build project in the Potomac Yard Development corridor, a major commercial corridor located in a former railroad switchyard in Alexandria. The project involved replacement of the existing Route 1 bridge over the CSX railroad corridor. The proposed 4-span, 800-foot steel structure provides three travel lanes in each direction and sidewalks. The project included improvements to accommodate public transit along Route 1, construction of a bike trail east of the railroad corridor and improvements to adjoining roads.  
**Relevant Attributes:** Design-Build Project, Bridge Replacement Project, Heavy Public Involvement

---

**Project:** Pentagon Secure Access Improvements (Route 27/244) Design-Build, Arlington County, VA  
**Name of Firm:** Earth Tech  
**Start Date:** 2002  
**Finish Date:** 2004  
**Project Role:** Principal-In-Charge  
**Responsibilities:** Responsible for engineering activities on a contractor led Design-Build team that provided a secure and dedicated access lane to the Pentagon’s 250,000-square foot Remote Delivery Facility. The $10M project, involved modification of the Route 27/244 Interchange and provided additional security checkpoint areas, truck queuing capacity and facilitated secure access. The project received the 2004 Design-Build Award of Excellence from the Associated Builders and Contractors’ Metropolitan Washington and Virginia Chapters.  
**Relevant Attributes:** Design-Build Project, Sensitive Utilities
**ATTACHMENT 3.31**

**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><em>Patrick H. Newton</em></td>
</tr>
<tr>
<td><em>Project Manager/Estimator</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Project Assignment:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Construction Manager</em></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>d. Years experience: With this Firm 5  With Other Firms 44 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm: Key Construction Company, Inc.</th>
<th>Start Date: Feb. 2006</th>
<th>End Date: Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position: Project Manager/Estimator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm: Tredright, Inc.</th>
<th>Start Date: 1992</th>
<th>End Date: 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position: Estimator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm: Talbott &amp; Marks</th>
<th>Start Date: 1966</th>
<th>End Date: 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position: Office Manager / Estimator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Responsibilities:**

As Construction Manager for this project, Mr. Newton’s duties will include, but will not be limited to: managing the construction project from start to completion; scheduling resources (both labor and equipment) as needed; ordering and scheduling delivery of materials; directing subcontractor efforts; creating and maintaining construction schedules; coordinating efforts with all other entities on the project; accumulating and submitting data for billing purposes; and supervising other construction tasks on this difficult and complex project. One of Mr. Newton’s greatest strengths is his communication skills which will be vital in maintaining relationships with all the stakeholders - VDOT, City of Roanoke, emergency services, school systems, traveling public, and local businesses. In addition, Mr. Newton will manage the construction staff to: assure the project is progressing on schedule; assure adherence to plans and VDOT specifications; ensure all cranes and heavy equipment are maintained according to OSHA regulations; and that proper safety standards and procedures are in place and continue for the duration of the project.

<table>
<thead>
<tr>
<th>e. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
<th>N/A</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
<th>N/A</th>
</tr>
</thead>
</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.)

Franklin Turnpike Extension, Pittsylvania County, Virginia, Project # (NFO) 6265-071-V05, B643, C501
Name of Firm: Key Construction Co., Inc.
Start Date: 8/2009
Finish Date: 11/2011
Project Role: Project Manager
Responsibilities: Mr. Newton is responsible for the construction of the Route 41 project which includes construction of a 640 ft dual 2-lane bridge over Norfolk Southern Railway and Fall Creek and all roadway construction activities inclusive of excavation, drilling & blasting, water, sewer, gas, utilities, incidental concrete, paving, traffic control, phased urban construction, and sensitive environmental protection. Mr. Newton has maintained a firm construction schedule on this project during its construction. Key is also utilizing the formal partnering process on this project which allows all stakeholders to be fully abreast of any situation that may arise and coordinate the best plan to resolve or manage the issue. This process has helped the overall management of the project. The total contract value of this project is $18.9M.
Client/Owner Contact: Virginia Department of Transportation/John Reece/434-432-7215

Piedmont Triad Research Park, Winston Salem, North Carolina
Name of Firm: D.W. Lyle Corporation, subsidiary of Key Construction Co., Inc.
Start: 1/2008
Finish Date: 7/2009
Project Role: Project Manager
Responsibilities: Mr. Newton managed the project from the estimating stage to the construction delivery stage. Responsible for the management of this $4.1M project which included the installation of crash walls on existing I-40 bridge for Norfolk Southern Railroad and the construction of new bridge for track changes and improvements for Piedmont Triad Research Park Project.
Client/Owner Contact: Yates Construction Co., Inc./Brett Arnold/336-548-9621

Cox to Hoskins Double Track, Jamestown, North Carolina, Project # 9542-003
Name of Firm: D.W. Lyle Corporation, subsidiary of Key Construction Co., Inc.
Start Date: 10/2008
Finish Date: 3/2009
Project Role: Project Manager
Responsibilities: The four structures on this project consisted of a 2 phase bridge replacement over US 70, a pile retaining wall, a large historic arch culvert extension and a 2 phase bridge widening at Deep River for Norfolk Southern Railroad. The purpose of the extension was to allow another set of tracks to lay parallel to the existing tracks.
This project was extremely complex due to the need to schedule construction around Norfolk Southern Railroad traffic of 40+ trains per day while simultaneously maintaining vehicular traffic. Significant coordination was required between contractor, subcontractors, Norfolk Southern, the Town of Jamestown and NCDOT. This project was completed on budget and on schedule with a contract value of $3.9M.
Client/Owner Contact: Faulconer Construction Co., Inc./Raymond Lindholm, Jr./919-380-9293
Route 15 Improvements, Fluvanna County, Virginia (NFO)0015-032-V04, C501, B601
Name of Firm: Key Construction Co., Inc.
Start Date: 3/2006
Finish Date: 10/2007
Project Role: Project Manager
Responsibilities: Managed construction of $6.8 million roadway and bridge project. Project included new construction and demolition operations in an environmentally and historically sensitive area. Coordinated with VDOT and state agencies to protect nearby historic structures. Managed value-engineering proposal which reduced construction schedule by approximately three months and reduced the project’s wetlands impact area. This project was awarded the 2008 Governor’s Award for Environmental Excellence.
Client/Owner Contact: Virginia Department of Transportation/Walter Lane /540-967-3710

Route 60 Appomattox County, Virginia (NFO)0060-006-106, C501, B602
Name of Firm: Key Construction Co., Inc.
Start Date: 11/2006
Finish Date: 10/2007
Project Role: Project Manager
Responsibilities: The project consisted of grading, paving, drainage structures, bridge construction, and demolition of existing bridge on Route 60 while safely and efficiently maintaining traffic flow to the traveling public and access to private landowner properties. Mr. Newton scheduled efficient use of employees, equipment and subcontractors on this project to ensure on time completion. The total value of this contract was $2.1M.
Client/Owner Contact: Virginia Department of Transportation/Tommy Hall /434-933-8141
<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>Arthelius A. “Trip” Phaup, II, P.E.</td>
</tr>
<tr>
<td>Senior Associate</td>
</tr>
<tr>
<td>b. Project Assignment:</td>
</tr>
<tr>
<td>Lead Structural Engineer</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>Johnson, Mirmiran &amp; Thompson, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 2 Years With Other Firms 19 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
</tbody>
</table>

Mr. Phaup has over 20 years of progressive experience in the analysis, design, and preparation of preliminary and final plans, special provisions, and construction cost estimates for a variety of highway, railway, and miscellaneous structures. These projects have covered a range of engineering complexity and site characteristics, including new structures, replacement structures, staged construction requirements, and temporary highway and railway structures. In addition, Mr. Phaup has provided inspection, office engineering, and consultation services during the construction of highway and railway structures. Also, Mr. Phaup has designed temporary structures for contractors, including formwork for concrete slab bridges, sheeting and shoring, and cofferdam structures.

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Johnson Mirmiran &amp; Thompson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>March 2009</td>
</tr>
<tr>
<td>End Date:</td>
<td>Present</td>
</tr>
<tr>
<td>Position:</td>
<td>Project Manager/Senior Engineer</td>
</tr>
<tr>
<td>Responsibilities:</td>
<td>Serves as Project Manager accountable for the quality, schedule, and budget on assigned road and bridge projects. Performs structural design and quality control reviews of structural design of highway and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions. Provides construction engineering design services for contractors including sheeting and shoring, cofferdam, and other temporary structure design, and value engineering redesigns of awarded projects. Performed quality assurance reviews of construction plans for bridges and structures for VDOT under an On-Call Quality Plan Review contract.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>CH2M Hill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>June 2008</td>
</tr>
<tr>
<td>End Date:</td>
<td>February 2009</td>
</tr>
<tr>
<td>Position:</td>
<td>Group Leader/Project Manager</td>
</tr>
<tr>
<td>Responsibilities:</td>
<td>Served as Group Leader overseeing the performance and development of a staff of transportation engineers and technicians. Served as Project Manager accountable for the quality, schedule, and budget on numerous transportation projects. Performed structural design and quality control reviews of structural design of highway and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions. Performed quality assurance reviews of construction plans for bridges and structures for VDOT under a General Engineering Consultant contract.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>STV/Ralph Whitehead Associates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>September 2003</td>
</tr>
<tr>
<td>End Date:</td>
<td>May 2008</td>
</tr>
<tr>
<td>Position:</td>
<td>Group Leader/Project Manager/Senior Engineer</td>
</tr>
<tr>
<td>Responsibilities:</td>
<td>Served as Group Leader overseeing the performance and development of a staff of structural engineers and technicians. Served as Project Manager accountable for the quality, schedule, and budget on numerous bridge and structures projects. Performed structural design and quality control reviews of structural design of highway, railway, and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions. Reviewed shop drawings and provided consultation during construction.</td>
</tr>
</tbody>
</table>
Provided construction engineering design services for contractors including sheeting and shoring, cofferdam, and other temporary structure design, and value engineering redesigns of awarded projects.

Name of Firm: Earth Tech
Start Date: December 1999          End Date: August 2003
Position: Group Leader/Project Manager/Senior Engineer
Responsibilities: Served as Group Leader overseeing the performance and development of a staff of structural engineers and technicians. Served as Project Manager accountable for the quality, schedule, and budget on numerous bridge and structures projects including Design-Build projects. Performed structural design and quality control reviews of structural design of highway and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions. Reviewed shop drawings and provided consultation during construction.

Name of Firm: RK&K Engineers
Start Date: September 1998          End Date: November 1999
Position: Senior Engineer
Responsibilities: Performed structural design of highway and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions.

Name of Firm: Ralph Whitehead Associates
Start Date: August 1991             End Date: August 1998
Position: Project Manager/Senior Engineer
Responsibilities: Performed structural design of highway, railway, and miscellaneous structures including preparing design calculations, plan details, construction cost estimates, and special provisions. Reviewed shop drawings and provided consultation during construction.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

  Virginia Commonwealth University, Richmond, VA / Masters of Business Administration / 2002 / Business
  Virginia Tech, Blacksburg, VA / Masters of Science / 1988 / Civil Engineering emphasis in Structures
  Virginia Tech, Blacksburg, VA / Bachelors of Science / 1987 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:

  1992 / Professional Engineer / 23335

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.)

Project: Route 288 Public Private Transportation Act, Design-Build Project, Goochland County, Virginia
Name of Firm: Earth Tech
Start: 2000          Finish Date: 2003
Project Role: Lead Structural Engineer and Field Engineer
Responsibilities: Lead Structural Engineer responsible for the design and plan preparation of four (4) bridges on VDOT's Route 288 Public Private Transportation Act, Design-Build Project in VDOT’s Richmond District including:

  Route 288 (NBL and SBL) over West Creek Parkway
  Route 6 (Patterson Avenue) over Route 288 (NBL and SBL)
  Route 650 (River Road) over Route 288 (NBL and SBL)

Responsibilities included working closely with the Design-Build Bridge Contractor to develop economical bridge designs that met the contract requirements. Similar value engineering solutions were incorporated into the design for each bridge to provide economies of scale during manufacturing and construction of the structures, including use of prestressed concrete bulb tee beams, laminated elastomeric bearing pads, and MSE retaining walls. Similar geometry was used for cast-in-place concrete elements to further enhance efficiencies in construction, including deck slab
overhang widths; pier cap, column, and footing sizes; abutment cap sizes; and drilled shaft sizes and details. Provided all structural design and quality control reviews of structural design for four (4) bridges on the project. Managed the geotechnical subconsultant performing investigations and preparing foundation recommendations for the four bridges. Served as field engineer during construction of 25 bridges on the project. Reviewed material and shop drawings for conformance with the plans and specifications, responded to Contractor submitted request for information, resolved field issues during construction, and assisted bridge inspection staff. Conducted close coordination and interaction with other Design-Build Team members including roadway, geotechnical, traffic, hydraulic, and utility engineers; construction managers, superintendents, and foremen; and quality assurance and quality control staff. Worked closely with VDOT Structure and Bridge engineers to finalize project specific details and to obtain structure and bridge plan approval and with VDOT Construction personnel responsible for approving construction activities. Relevant Attributes: VDOT Design-Build Project, Bridge Design and Construction Services, Bridges Constructed by D.W. Lyle Corporation

| Project: Route 360 (Hull Street Road) over Swift Creek, Chesterfield County, Virginia |
| Name of Firm: Earth Tech |
| Start: 2000 | Finish Date: 2002 |
| Project Role: Lead Structural Engineer |
| Responsibilities: Lead Structural Engineer responsible for the preliminary and final design, construction cost estimates, and special provisions for a three span, continuous replacement bridge, 170 feet long with spans of 50'-70'-50' on tangent alignment, designed for Chesterfield County under a VDOT/County agreement. An existing substandard bridge, built in 1955, was demolished and replaced by this new structure. The superstructure is 70 feet wide and consists of steel plate girders of weathering steel and a composite, reinforced concrete deck supported by laminated elastomeric bearing pads. The abutments consist of fully integral backwalls on shelf abutments founded on steel H-piles driven to refusal on rock, and approach slabs with sleeper pads. The piers consist of tall, wall piers founded on spread footings resting on rock. Provided all structural design and quality control reviews of structural design for the project. Managed the geotechnical subconsultant performing investigations and preparing foundation recommendations for the bridge. Coordinated and interacted with other design team members including roadway engineers, traffic, hydraulic, and utility engineers. Worked closely with the river mechanics engineers to develop the hydraulic model for the existing and proposed bridge across the floodplain and worked with the public interests groups concerned about development in the Swift Creek Reservoir watershed area. Designed a temporary support structure for 18 existing telephone and cable conduits during demolition of the existing bridge and construction of the new bridge thus avoiding a $500,000 utility relocation. Relevant Attributes: Bridge Replacement Project, Sensitive Utilities |

| Project: Route 642 (Salem Church Road) over Reedy Creek, Chesterfield County, Virginia |
| Name of Firm: Earth Tech |
| Start: 2000 | Finish Date: 2002 |
| Project Role: Lead Structural Engineer |
| Responsibilities: Lead Structural Engineer responsible for the project, designed for Chesterfield County under a VDOT/County agreement, involving the preliminary and final design and construction cost estimate for a single span curved bridge, 38.1 meters long on a 6 degree horizontal curved alignment. The superstructure is 12.6 meters wide and consists of curved steel plate girders of weathering steel, a composite, reinforced concrete deck, and laminated elastomeric bearing pads to accommodate longitudinal and transverse movements. The abutments are oriented radially and consist of one shelf abutment founded on spread footings resting on shallow rock and one stub abutment founded on steel H-piles driven to refusal on rock. Managed the geotechnical subconsultant performing investigations and preparing foundation recommendations for the bridge. Coordinated and interacted with other design team members including roadway engineers, traffic, hydraulic, and utility engineers. Worked closely with the river mechanics engineers to develop the hydraulic model for the existing and proposed bridge across the floodplain. Relevant Attributes: Bridge Design Services, Bridge Constructed by D.W. Lyle Corporation |

| Project: Southpoint Parkway over Massaponax Creek, Spotsylvania County, Virginia |
| Name of Firm: STV/Ralph Whitehead Associates |
| Start: 2003 | Finish Date: 2004 |
| Project Role: Lead Structural Engineer |
| Responsibilities: Lead Structural Engineer responsible for the design of a 120 foot single span bridge for a commercial development near Fredericksburg, Virginia. The bridge is on tangent horizontal alignment with the outside edges of the deck curved and flared to provide turn lanes off of the structure. The superstructure is 82 feet wide and consists of 61 inch deep, prestressed concrete bulb tee beams with a composite, reinforced concrete deck and |
supported on laminated elastomeric bearing pads. The substructure units are oriented perpendicular to the bridge centerline and consist of 24 foot tall reinforced concrete, cantilever abutments founded on steel H-piles. Provided all structural design and quality control reviews of structural design for the project. Worked with the developer to evaluate alternate superstructures in order to minimize project cost, including evaluating structural steel plate girders and prestressed concrete bulb tee girders. Coordinated and interacted with other design team members including roadway engineers, hydraulic, and geotechnical engineers. Worked closely with the river mechanics engineers to develop the hydraulic model for the existing and proposed bridge across the floodplain.

**Relevant Attributes:** Bridge Design Services, Bridge Constructed by D.W. Lyle Corporation

---

**Project:** Route 15 over Rivanna River, Fluvanna County, Virginia

**Name of Firm:** STV/Ralph Whitehead Associates

**Start:** 2006  **Finish Date:** 2006

**Project Role:** Lead Structural Engineer

**Responsibilities:** Lead Structural Engineer responsible for design and plan preparation for a value engineering redesign of bridge pier foundations for the Route 15 Bridge over the Rivanna River in Fluvanna County. The original bridge plans required construction of three (3), cast-in-place concrete piers with concrete spread footings founded on rock. Construction of the piers, as detailed on the plans, required installation of three (3) cofferdams within the river in order to construct the spread footings and the portion of the columns below the waterline. The value engineering redesign replaced the spread footings and portion of columns below the waterline with drilled shafts. Using drilled shafts, eliminated the need for cofferdams and reduced the amount of cast-in-place concrete for the spread footings. The project was designed and detailed in accordance with VDOT and AASHTO standards and included performing a seismic analysis of piers for Seismic Performance Category B.

**Relevant Attributes:** Bridge Design Services, Value Engineering Redesign Working Directly for D.W. Lyle Corporation
ATTACHMENT 3.4.1(a)

LEAD CONTRACTORS WORK HISTORY FORMS

Key Construction Company, Inc.
**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Narrative describing nature of Firm’s Responsibilities</th>
</tr>
</thead>
</table>
| Route 265 Franklin Turnpike Extension Pittsylvania County, VA Project (NFO) 6265-071-V05-B643,C501 | • CPM  
• Construction Management  
• Bridges (2)  
• Roadway  
• Storm Drainage  
• MSE Wall  
• Wetlands Impact Avoidance  
• Subcontractor Management  
• Water & Sewer relocation & adjustments  
• Incidental Concrete  |

<table>
<thead>
<tr>
<th>c. Client/Owner/Project Manager who can verify Firm’s responsibilities. Include address and current phone number.</th>
</tr>
</thead>
</table>
| Virginia Department of Transportation  
Halifax Residency  
5211 Halifax Road  
Halifax, VA 24558  
Project Manager: Zachary P. Weddle, P.E.  
Area Construction Engineer  
Tel: 434-476-6471 (office) |

<table>
<thead>
<tr>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Estimated Value (in Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 2, 2011</td>
<td>Nov. 18, 2011</td>
<td>$18,295</td>
</tr>
</tbody>
</table>

$(Increased contract value due to approved change orders)$

<table>
<thead>
<tr>
<th>Dollar Value of Work for Which Firm Was/Ils Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>$18,900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Similar Scope Elements to I-581/Valley View Interchange, Phase II D-B</th>
</tr>
</thead>
</table>
| Utility Relocation X  
Clearing, Grubbing & Erosion Control X  
Roadway Construction X  
Phased MOT X  
Communicating/Coordination w/ Third Party Stakeholders X  
High Visibility Project X  
Bridge Construction X  
Project Management X  
Signing & Signalization X |

Key Construction Co., Inc. constructed the Franklin Turnpike Extension through a formal partnering process with VDOT that led to a project with very few communication issues. The project consisted of clearing and grubbing, 300,000+ cubic yards of excavation, water and sewer, storm drainage, aggregate base material, asphalt, concrete curb and gutter, guardrail, fencing, overhead signs, and two bridges each 600+ ft in length were activities performed during construction of this final phase of the Franklin Turnpike Extension connecting Route 41 in the City of Danville to the Route 29 Danville Bypass. Coordination and cooperation with the many stakeholders involved, including VDOT, the City of Danville, N&S Railroad, local business owners, and the travelling public, contributed significantly to the successful early completion of this $18.9 million project.

**Lessons Learned for I-581/Valley View Interchange, Phase II D-B**

- Required continuous and effective communications and coordination with all stakeholders – VDOT, City and County officials, utility owners, Retailers association and the general public
- Coordinated construction scheduling with 3rd party stakeholders
- Reconstructing heavily travelled signalized intersections
- Utilized MSE Retaining Walls to maximize available right of way
- Coordinated utility construction & relocation with 3rd party utility owners
Key was the prime contractor on this long anticipated VDOT bridge and roadway project that completed Route 360 as a four-lane highway system from Richmond to Danville. The original 2000 ft + bridge spanned across the Dan River, its flood plains and the Norfolk Southern Corp. The original bridge was demolished and replaced with two 2100 ft + structures. Also, the original Vaughan Street bridge across Route 360 was demolished and replaced with a wider, longer structure. All totaled, there were 5000 ft cy of concrete, 1.7 million pounds of reinforcing steel and 7.2 million pounds of steel plate girders utilized. The project also included staged roadway construction converting 1.5 miles of roadway from two lane rural design to four lane urban design. Of significance, there were three major intersections contained within this project, the westernmost being the major intersection of Routes 58, 360 and 501. The roadway & approach work included clearing and grubbing, grading, drainage, curb and gutter, sanitary water and sewer utilities, storm sewer, paving, and guardrail as well as construction of an MSE wall and a tie back retaining structure. There was an exceptional lesson learned on this project that now impacts our subcontractor selection process. Key experienced performance and scheduling issues from a subcontractor during the project. As a result of this experience, Key developed a more comprehensive and structured subcontractor selection process. This highly visible project, located in very sensitive environmental surroundings, required the best cooperative efforts between Key, VDOT, private utility companies, local governmental agencies, and the general public’s cooperation to deliver a successful job. Value engineering the traffic phasing and sequence of construction shortened the project duration by 7 months.

Lessons Learned for I-581/Valley View Interchange, Phase II D-B

- Developed more structured subcontractor selection process
- Required continuous and effective communications and coordination with all stakeholders – VDOT, City and County officials, utility owners, retailers association and the general public
- Reconstructing 2 heavily travelled signalized intersections
- Managed construction in and around sensitive environmental and public recreation features
- Utilized various types of Retaining Walls to maximize available right of way
### Lead Contractor - Work History Form

**Virginia Department of Transportation**  
1401 East Broad Street  
Richmond, VA 23219  
Mal Kerley, Chief Engineer  
Tel: 804-786-4798  

### D. W. Lyle Corporation

**Key Construction Company, Inc.**  

#### Similar Scope Elements to I-581/Valley View Interchange, Phase II D-B

<table>
<thead>
<tr>
<th>Design – Build Delivery</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Public Impact</td>
<td>X</td>
</tr>
<tr>
<td>Numerous project stakeholders</td>
<td>X</td>
</tr>
<tr>
<td>Large Amount of Retaining Walls</td>
<td>X</td>
</tr>
<tr>
<td>Selective Demolition for Bridge Widening</td>
<td>X</td>
</tr>
<tr>
<td>Multiple 3rd Party Stakeholders</td>
<td>X</td>
</tr>
<tr>
<td>High Visibility Project</td>
<td>X</td>
</tr>
</tbody>
</table>

**Lessons Learned for I-581/Valley View Interchange, Phase II D-B**

- Construction Team must provide consistent, continuous constructability review during design to minimize construction project delays.
- Design Team must provide continuous presence to minimize or eliminate delays to project during construction.
- Coordination and communication with all stakeholders minimizes or eliminates project misconceptions and delays.
- Phased Plan approvals can expedite project completion.
- Effective communication with 3rd party stakeholders can enhance the public’s perception of the project and improve the construction process.

**Key’s subsidiary D. W. Lyle Corporation was involved in the Richmond, VA Rte 288 design build/PPTA project as part of the VDOT’s original request for competing proposals.** Key’s subsidiary D. W. Lyle Corporation was the project team that value engineered and managed the design of all 25 bridges providing pre-bid constructability advice and post award provided detailed constructability reviews for structures and roadways. Input in total project schedule and detailed schedule information on all bridge construction. D. W. Lyle Corporation built 16 bridges in a wide variety of traffic and environmental conditions including two major urban primary interchanges and two high capacity interstate interchanges. Foundations, substructures and superstructures varied where necessary to provide the most efficient constructability and the most efficient schedule. Approx. 150,000 square feet of bridge deck was placed on a variety of steel girder and concrete bulb tee girders. Prime Contractor, APAC – Special Project Division and United Contractors, Inc. tasked D. W. Lyle Corporation with expediting the project so that it could be completed approx. 6 months earlier providing all bridge construction to be complete by Prime Contractor with VDOT.

**Pre Bid Design Build Value Engineering, estimating, and scheduling of bridge construction.**

- Post Award Design Build Coordination of all 25 bridges
- Complete construction of 16 bridges
- Pile Driving and beam erection on 3 additional bridges
- Existing Structure demolition and widening
- Rough Grading, access, and excavation for 8 bridge sites.
- Storm drainage, erosion control and grading of 9.5 lane miles of 288

**Virginia Department of Transportation**

**VDOT PPTA Project Coordinator:**

- Bob Riley  
  Now w/: The Louis Berger Group  
  801 East Main Street, Ste 500  
  Richmond, VA 23219  
  Tel.: 804-335-0348

**Original Contract Value**  

<table>
<thead>
<tr>
<th>Contract Completion Date (Original)</th>
<th>Contract Completion Date (Actual or Estimated)</th>
<th>Original Contract Value</th>
<th>Final or Estimated Contract Value</th>
<th>Dollar Value of Work for Which Firm Was/Is Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 1, 2003</td>
<td>July 15, 2003</td>
<td>$200,000 +</td>
<td>200,000+</td>
<td>$16,787 Bridge $ 2,824 Grading &amp; Drainage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(by Prime Contractor with VDOT)</td>
<td></td>
<td>$19,611 Total</td>
</tr>
</tbody>
</table>

**Notes:**

- Key/’s subsidiary D. W. Lyle Corporation was involved in the Richmond, VA Rte 288 design build/PPTA project as part of the VDOT’s original request for competing proposals. Key’s subsidiary D. W. Lyle Corporation was the project team that value engineered and managed the design of all 25 bridges providing pre-bid constructability advice and post award provided detailed constructability reviews for structures and roadways. Input in total project schedule and detailed schedule information on all bridge construction. D. W. Lyle Corporation built 16 bridges in a wide variety of traffic and environmental conditions including two major urban primary interchanges and two high capacity interstate interchanges. Foundations, substructures and superstructures varied where necessary to provide the most efficient constructability and the most efficient schedule. Approx. 150,000 square feet of bridge deck was placed on a variety of steel girder and concrete bulb tee girders. Prime Contractor, APAC – Special Project Division and United Contractors, Inc. tasked D. W. Lyle Corporation with expediting the project so that it could be completed approx. 6 months earlier providing all bridge construction to be complete by Prime Contractor with VDOT.
ATTACHMENT 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS
LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

Work by Lead Designer - three (3) projects which best illustrates current qualifications relevant to this Project.

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Narrative describing nature of Firm’s Responsibilities</th>
<th>c. Client/Owner/Project Manager who can verify Firm’s responsibilities. Include address and current phone number.</th>
<th>d. Contract Completion Date (Actual or Estimated)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Estimated Value (in Thousands)</th>
<th>f. Estimated Value (in Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Fairfax County Parkway (Route 7100) Design Build Fairfax County, VA</td>
<td>Lead Designer responsible for complete design of project including work in the following disciplines: highway, structural, water resources, traffic, multipurpose trail, lighting designs, surveys, utility designations, subsurface utility engineering, geotechnical engineering, environmental analysis and permitting.</td>
<td>Eastern Federal Lands Highway Division</td>
<td>September 2009 (Phase I/I Design)</td>
<td>September 2009 (Phase I/I Design)</td>
<td>$8,337 (Design)</td>
<td>$8,690 (Design)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21400 Ridgetop Circle Loudoun Technical Center Sterling, VA 22170</td>
<td>November 2009 (Phase I/I Design)</td>
<td>November 2009 (Phase I/I Design)</td>
<td>$10,053 (Design)</td>
<td>$100,000 (Design and Construction including Owner’s option for Phase IV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project Manager: Mr. Robert A. Morris, PE</td>
<td>Phone: (703) 404-6302</td>
<td>Phone: (703) 404-6302</td>
<td>$74,337</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

The Design-Build (D-B) Team of Johnson, Mimran & Thompson, Inc. (JMT) and Cherry Hill Construction, Inc. (CHC) was selected as the best value team for the Fairfax County Parkway (FCP) project by the Federal Highway Administration’s Eastern Federal Lands Highway Division (EFLHD), Virginia Department of Transportation (VDOT) and U.S. Army Garrison Fort Belvoir.

The 4-lane divided limited access highway on new location completes the missing connection of FCP to I-95. The project corridor begins at Rolling Road/Franconia-Springfield Parkway and proceeds southeastward on a new alignment and ends just east of Fullerton Road and includes new interchanges at Boudinot Drive and at the new Fort Belvoir Engineering Proving Ground (EPG) Access Road (Barta Road). The work involved in the parkway extension includes design of: highway and interchange ramps, bike paths, six new bridges and one bridge widening, retaining walls, noise walls, box culverts, sign structures, grading, drainage, storm water management, erosion and sediment control, landscaping, traffic analysis, traffic simulation, traffic signals, signing and striping, dynamic message signing, lighting and pavement marking as well as maintenance of traffic and a Type C Transportation Management Plan for a complicated construction detouring scheme. The project also included special coordination requirements with Fort Belvoir environmental staff due to the presence of contaminated soil/groundwater and the possibility of unexploded ordinance on the site as well as environmental permitting with the USACOE for the Accotink Creek bridge construction. In addition, the project included widening of southbound I-95 to accommodate a new exit lane. The project had an extremely aggressive 750 calendar day schedule.

During the bidding process, JMT prepared alternate technical concepts that improved the overall project design and reduced the cost. The JMT/Cherry Hill Construction team was selected based on the alternate technical concepts prepared by JMT and the overall best value that our team’s proposal offered to EFLHD. The most significant change identified was the “Fullerton Flip”. The original design depicted Fullerton Road crossing over Fairfax County Parkway. JMT was able to revise the profiles for both the Fairfax County Parkway and Fullerton Road to take the Parkway over Fullerton Road. The benefits that raising the grade of FCP brought to the project were:

- Reduced the amount of soil and rock excavation by also raising Boudinot Drive.
- Minimized the disturbance of contaminated material by placing embankment over the Central Motors site.
- Reduced the surplus material on the project.
- Resulted in a balanced earthwork project significantly reducing project cost.

JMT also identified areas on the project where the remaining surplus material could be disposed which eliminated the need to dispose material off site and eliminated the numerous truck trips on the local roads.

Lessons Learned for I-581/Valley View Interchange Phase II D-B

- Coordinated the mitigation and processing of design waivers and exceptions from previously approved CTB plans, allowing the project to remain within boundaries established by the MOA between project stakeholders (VDOT, EFLHD, US Army, and Fairfax County) and keeping the commitments of the ROD.
- Designed significant profile revisions to minimize surplus material, thereby avoiding impacts to HAZMAT and UXO’s, and reducing construction traffic on the local road network.
- Performed extensive JMT/CHC Team coordination for foundation design approvals to expedite construction schedule and minimize cost.
- Conducted extensive coordination process to satisfy the varying and diverse needs of the major stakeholders.
- Rapidly accommodated multiple owner options into the plans while maintaining the design and construction schedules.

Similar Scope Elements to I-581/Valley View Interchange Phase II D-B

<table>
<thead>
<tr>
<th>Road and Bridge Design</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition RO</td>
<td>X</td>
</tr>
<tr>
<td>Utility Relocation and Coordination</td>
<td>X</td>
</tr>
<tr>
<td>Road and Bridge Construction</td>
<td>X</td>
</tr>
<tr>
<td>Signal Design and Construction</td>
<td>X</td>
</tr>
<tr>
<td>Phased MOT</td>
<td>X</td>
</tr>
<tr>
<td>QA/QC</td>
<td>X</td>
</tr>
<tr>
<td>Public Outreach</td>
<td>X</td>
</tr>
<tr>
<td>Project Management</td>
<td>X</td>
</tr>
</tbody>
</table>
The Federal Highway Administration’s Eastern Federal Lands Highway Division (EFLHD) representing the District Department of Transportation (DDOT) selected the team of Cherry Hill Construction, Inc. (CHC) and Johnson Mirmiran & Thompson, Inc. (JMT) for this challenging $51M design-build project. The project required the construction of a completely new four span structure over CSXT and AMTRAK rail facilities and New York Avenue on a parallel alignment with the existing 7-span structure. The project also required the full depth reconstruction and widening of 1,700 feet of New York Avenue along with the realignment and construction of three new signalized intersections. Removal of the existing structure commenced after traffic was set in its final configuration. Project phasing allowed vehicular and pedestrian traffic free movement throughout the project, during both construction and demolition, an important goal of the Owner.

The Team was issued Notice to Proceed on September 6, 2006 and completed its 100% design milestone approximately one-month ahead of schedule. Construction was able to begin in advance of the August 2009 scheduled date. The Project mandated a community outreach program which the Design-Build team embraced through the establishment of a project website, community meetings, and an extensive aesthetic content program. Like previous EFLHD projects, the Team formed a partnering agreement with DDOT, EFLHD and CSXT, but added to this list the United States Postal Service, Amtrak and the DC Water and Sewer Authority (WASA) as significant stakeholders. These stakeholders were essential to the acquisition of easements and property transfers for the construction of the project. In support of the Owners property needs, the Team performed all Title Searches, Assessments, Plat preparations, and assisted with the assembly of agreements and closing services.

The project Owner was also concerned with the aesthetic design of the structure and minimizing impacts to the community by reducing construction time. To address these critical concerns, the Team focused on achieving an elegant, streamlined bridge with numerous architectural enhancements along with an aesthetic development program lead by a local area artist specializing in urban streetscape design. The program allowed the Owner to work with the artist to develop a design, adding or deducting elements as desired while maintaining their budget. CHC’s knowledge of AMTRAK operations minimized time impacts. The Team’s experience with Amtrak procurement regulations gave early recognition to the relocation of electrical traction facilities attached to the existing bridge girders. To advance construction, CHC accelerated the project schedule by acquiring the necessary AMTRAK materials without profit. In addition, a creative demolition sequence allowed the girder span holding the electrical traction elements to remain in place during the construction of all piers and abutments, thereby allowing construction to commence in advance of the one-year duration Amtrak quoted to perform the relocations.

A project of this magnitude involved ongoing and interactive coordination with all utilities and public traffic. Along with utilities within the right of way such as DC WASA, Washington Gas, PEPCO, MCI, AMTRAK, and CSXT Railroad, the project sees an average of 60,000 vehicles on New York Avenue and 24,000 vehicles on 9th Street. Maintaining this volume of traffic mandated seven (7) major traffic phases to accommodate peak rush-hour volumes without impact.
<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Narrative describing nature of Firm’s Responsibilities</th>
<th>c. Client/Owner/Project Manager who can verify Firm’s responsibilities. Include address and current phone number.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Estimated Value (in Thousands)</th>
<th>Original Contract Value</th>
<th>Final or Estimated Contract Value</th>
<th>Dollar Value of Work for Which Firm Was/Is Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Street (Route 15/460) over Buffalo Creek Design-Build Town of Farmville, VA</td>
<td>Lead Designer responsible for complete design of project including bridge, roadway, drainage, hydraulics, scour analysis, maintenance of traffic, signing and pavement marking, public involvement, construction Quality Assurance, and construction surveying and stakeout.</td>
<td>Virginia Department of Transportation Lynchburg District 4219 Campbell Avenue Lynchburg, VA 24501</td>
<td>June 2008</td>
<td>September 2008</td>
<td>$2,900 (Design and Construction)</td>
<td>$2,900 (Design and Construction)</td>
<td>$423 (Design)</td>
<td></td>
</tr>
</tbody>
</table>

VDOT selected the Corman Construction / Johnson, Mirmiran & Thompson Design-Build Team for the 3rd Street (Route 15/460) over Buffalo Creek bridge replacement Design-Build project in the Town of Farmville. Maintenance of traffic (MOT) was a key requirement for the project and the challenge was to design and construct a bridge replacement, in the same location, while maintaining the daily traffic along 3rd Street (Route 15/460). Preliminary plans, provided as part of the procurement process, depicted only one lane of traffic remaining open during construction with temporary signals at each end of the work zone. JMT was able to provide a plan where one lane of traffic in each direction was provided without signals. Flagging was used only as needed for short periods of time while moving construction equipment. The MOT plan and final design provided accessibility from the fire station at the northeast corner of the bridge to 3rd Street (Route 15/460) without creating impacts of delays to fire and emergency vehicles. The JMT design reduced the number of construction phases originally envisioned by VDOT and reduced project cost, reduced construction time and reduced the impacts to the public. The existing bridge was removed in stages and the proposed, 3-span, 270 foot long replacement bridge was constructed in stages while maintaining traffic on 3rd Street (Route 15/460). In addition to replacing the existing bridge, new approach roadways were designed to tie into the existing approach roadway, drainage system, and sidewalks and accommodate the proposed bridge typical section. Design services for the project included bridge, roadway, drainage, erosion and sediment control, hydrologic and hydraulic analysis, scour analysis, bridge load rating, shop drawing review, and consultation during construction. JMT also provided the construction inspection and Quality Assurance Management of the construction.

**Lessons Learned for I-581/Valley View Interchange Phase II D-B**

- Independent QA/QC extremely valuable to both VDOT and D-B team by promoting objectivity throughout the entire process.
- Developed alternate phased MOT plan to maintain 2 way traffic through the work zone and to accommodate emergency responders within the project limits without disrupting traveling public.
- Worked with VDOT to modify the normal construction procedure allowing continuous pours of the concrete deck and approach slabs thus advancing the project schedule and eliminating deck construction joints.
This Rating and Classification Will Expire: June 30, 2012

Issue Date: June 30, 2011

Work Classes: Grading, Major Structures, Drainage Structures, Underground Utilities

PREQUALIFIED

Assigned to you by the Commissioner:

You are hereby notified that the following Rating and Classification has been

In accordance with the Regulations of the Virginia Department of Transportation,

Vendor Number: K006

Key Construction Company, Incorporated

CERTIFICATE OF QUALIFICATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

COMMONWEALTH OF VIRGINIA
I Certify the Following from the Records of the Commission:

KEY CONSTRUCTION COMPANY, INCORPORATED is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is February 05, 1959.

Nothing more is hereby certified.

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

Joel H. Peck, Clerk of the Commission
<table>
<thead>
<tr>
<th>STREET:</th>
<th>2901 AMBERLINA PKWY</th>
<th>CITY:</th>
<th>RICHMOND</th>
<th>STATE:</th>
<th>VA</th>
<th>ZIP:</th>
<th>23224</th>
</tr>
</thead>
<tbody>
<tr>
<td>R/A OFFICE:</td>
<td>2</td>
<td>OFFICER</td>
<td>EFF. DATE:</td>
<td>07/01/10</td>
<td>LOC:</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>ACCEPTED AS:</td>
<td>22</td>
<td>11</td>
<td>9993</td>
<td>DATE:</td>
<td>07/01/11</td>
<td>GLENSAILLE CO</td>
<td></td>
</tr>
<tr>
<td>CURRENT AS:</td>
<td>22</td>
<td>11</td>
<td>9993</td>
<td>DATE:</td>
<td>07/01/11</td>
<td>ASSOCIATION:</td>
<td>0</td>
</tr>
</tbody>
</table>
| YEAR TAXES: | 100.00 | PENALTY INTEREST TANS: | BALANCE: | 1,000 | }

CIB has changed to enhance its navigation. Click on menu items or buttons to select and perform functions. You may also use function keys as labeled. Function key usage varies depending on the Application Screen. Please refer to Function Key Documentation for details.

(Screen: CIB - Corp Data Inquiry)
I certify the following from the Records of the Commission:

Johnson, Mirmiran & Thompson, Inc., a corporation existing under the laws of MARYLAND, holds a certificate of authority to transact business in Virginia, and is in good standing.

The certificate was issued on October 17, 2006.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 22, 2010

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

Richmond, February 8, 2002

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

Johnson, Mirmiran & Thompson, Inc.

a corporation organized under the laws of MARYLAND 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:

[Signature]
Clerk of the Commission
CIM0180

CORPORATE DATA INQUIRY

12/06/11
21:02:49

CORP ID:  C1200700 - 9
CORP NAME:  ANDERSON & ASSOCIATES OF VIRGINIA, INC.

SIGNOFF

DATE OF CERTIFICATE: 12/06/1976 PERIOD OF DURATION: 90
STATE OF INCORPORATION: VA VIRGINIA
STOCK ENSOR:  S
STOCK
MEMBER IN:  CORPORATION/DOMESTICATION IND:
GOOD STANDING IN:
MONITOR IN:
CHARTER FEE:
R/A NAME:  S. E. ANDERSON
R/A ST:  160 ARDEN ST
CITY:  BLAKEBOROUGH
STATE:  VA ZIP:  24060
R/A STATUS:  6 OFFICERS
EFF. DATE:  02/26/76 DOC #:  149
ACCEPTED A/B:  210 55 4814 DATE:  12/30/10
MONTGOMERY COUNTY
CURRENT A/B:  210 55 4814 DATE:  12/30/10 STATUS:  6 REGISTRATION INDICATOR:  0
YEAR END FILING FISCAL INCOME TAXES BALANCE TOTAL SHARES
11 870.00 270.00 59,600

CIM has enhanced its navigation.
Click on menu items or buttons to select and perform functions. You may also use
function keys as labeled. Function key usage varies depending on the Application
Screen.
Please refer to Function Key Documentation for details.
(Version 8.8 Corp Data Inquiry)
Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

The foregoing is a true copy of all documents constituting the charter of ANDERSON & ASSOCIATES OF VIRGINIA, INC. on file in the Clerk's Office of the Commission.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
September 1, 2010

Joel H. Peck, Clerk of the Commission
<table>
<thead>
<tr>
<th>LLC ID:</th>
<th>222222222</th>
<th>STATUS:</th>
<th>A</th>
<th>ACTIVE</th>
<th>STATUS DATE:</th>
<th>07/14/07</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLC NAME:</td>
<td>Mason Water Resources, LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATE OF FILING:</td>
<td>07/14/07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERIOD OF DURATION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRY CODE:</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATE OF FILING:</td>
<td>VA, VIRGINIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEMBER INDICATOR:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPAL OFFICE ADDRESS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STREET:</td>
<td>1211 PARKER MILL DR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CITY:</td>
<td>VALDERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATE:</td>
<td>VA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZIP:</td>
<td>23901-0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEMBER/MANAGER REG. ADDRESS INFORMATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STREET:</td>
<td>1211 PARKER MILL DR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CITY:</td>
<td>VALDERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATE:</td>
<td>VA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZIP:</td>
<td>23901-0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R/A STATUS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEMBER/MANAGER REG. DATE:</td>
<td>09/04/12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLC:</td>
<td>137</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COUNTY</td>
<td>SUFFOLK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YEAR:</td>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fecha:</td>
<td>12/08/11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PENALTY</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTEREST</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BALANCE</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CVN has changed to enhance its navigation. Click on menu items or buttons to select and perform functions. You may also use function keys as labeled. Function key usage varies depending on the Application Screen.

Please refer to **Function Key Documentation** for details.
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, July 16, 2007

This is to certify that the certificate of organization of

Hassan Water Resources, 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: July 16, 2007

State Corporation Commission
Attest:

Joel A. Beck
Clerk of the Commission
CORPORATE DATA INQUIRY

CORP ID: 0000514985 2 STATUS: 00 ACTIVE STATUS DATE: 07/31/10

CORP NAME: A M Design Corporation

DATE OF CERTIFICATE: 06/15/2006 PERIOD OF EXISTENCE: INDEFINITE INDUSTRY CODE: 70

STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK

MERGER INDICATOR: Y CONVERSION/DOMESTICATION INDICATOR: N

GOOD STANDING INDICATOR: Y MORTGAGE INDICATOR: N

CHARTER FEE: 0.00 MNR NO: MNR STATUS: MONITOR DUE:

R/A NAME: REES BROCK PC

ADDRESS: 8133 LEXINGTON PIKE MSR FL A R MINI MALL

CITY: VIENNA STATE: VA ZIP: 22182 2706

R/A STATUS: B R/A AVAIL IN V2 EST. DATE: 08/01/07 LOC: 129

ACCEPTED APS: 2 10 9 098 DATE: 06/15/11 FAIRFAX COUNTY

CURRENT APS: 2 10 9 098 DATE: 06/15/11 STATUS: APS AMENDMENT INDICATOR: 1

ASSIGNED FEE PENALTY EXTEND TAXES BALANCE TOTAL SHARES

1 100.00

CBS has changed to enhance its navigation.
Click on menu items or buttons to select and perform functions. You may also use function keys as labeled. Function key usage varies depending on the Application Screen.
Please refer to Function Key Documentation for details.
(Open at Corp_Data Inqui)
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, May 18, 2006

This is to certify that the certificate of incorporation of

T3 Design, P.C.

was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all Virginia laws applicable to the corporation and its business. Effective date: May 18, 2006

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corp ID:</td>
<td>60065</td>
</tr>
<tr>
<td>Corp Name:</td>
<td>Shenandoah Engineering Consultants, Inc.</td>
</tr>
<tr>
<td>Date of Certificate:</td>
<td>04/13/2009</td>
</tr>
<tr>
<td>Period of Duration:</td>
<td>01/01/2009 - 12/31/2009</td>
</tr>
<tr>
<td>State of Incorporation</td>
<td>VA Virginia</td>
</tr>
<tr>
<td>Stock Indicator:</td>
<td>S Stock</td>
</tr>
<tr>
<td>Good Standing Ind.:</td>
<td>Y Good Standing</td>
</tr>
<tr>
<td>Monitor Ind.:</td>
<td>N Monitor</td>
</tr>
<tr>
<td>Initial Fee:</td>
<td>$0.00</td>
</tr>
<tr>
<td>Address:</td>
<td>4701 Con Rd Ste 301</td>
</tr>
<tr>
<td>City:</td>
<td>GLEN ALLEN</td>
</tr>
<tr>
<td>State:</td>
<td>VA</td>
</tr>
<tr>
<td>Zip:</td>
<td>23060</td>
</tr>
<tr>
<td>Accepted Am:</td>
<td>211 12 3643</td>
</tr>
<tr>
<td>Date:</td>
<td>04/26/11</td>
</tr>
<tr>
<td>County:</td>
<td>MECKEN Health County</td>
</tr>
<tr>
<td>Assessment Ind.:</td>
<td>0 Assessment Ind.</td>
</tr>
<tr>
<td>Year File:</td>
<td>11</td>
</tr>
<tr>
<td>Interest:</td>
<td>150.00</td>
</tr>
<tr>
<td>Balance:</td>
<td>10,000</td>
</tr>
</tbody>
</table>

CIN has changed to enhance its navigability. Click on menu items or buttons to select and perform functions. You may also use function keys as labeled. Function key usage varies depending on the Application Screen. Please refer to Function Key Documentation for details.
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, August 12, 2009

This is to certify that the certificate of incorporation of

Schnabel Consultants, Inc.

was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all Virginia laws applicable to the corporation and its business. Effective date: August 12, 2009

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND, NOVEMBER 12, 2009

The State Corporation Commission has found the accompanying articles submitted on behalf of Schnabel Engineering Consultants, Inc. (formerly Schnabel Consultants, Inc.)

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 November 12, 2009.

The corporation is granted the authority conferred on it by law in accordance with the articles, subject to the conditions and restrictions imposed by law.

STATE CORPORATION COMMISSION

By

[Signature]

Commissioner

09-10-30-0071
AMENACPT
CIS0436
<table>
<thead>
<tr>
<th>STATE</th>
<th>CITY</th>
<th>STREET</th>
<th>ZIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA</td>
<td>VIENNA</td>
<td>11110 PARKER ST</td>
<td>22180</td>
</tr>
</tbody>
</table>

**Name:** J. TAYLOR

**Address:** 11110 PARKER ST

**City:** VIENNA

**State:** VA

**Zip:** 22180
I Certify the Following from the Records of the Commission:

The foregoing is a true copy of the certificate of authority to transact business in Virginia issued for McCormick, Taylor & Associates, Inc., a PENNSYLVANIA corporation.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
October 11, 2001

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

STATE CORPORATION COMMISSION
Richmond, June 2, 1997

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

McCormick, Taylor & Associates, Inc.

a corporation organized under the laws of Pennsylvania

and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission

Attest:

William J. Bridge

Chief of the Commission
CISNE130  CORPORATE DATA INQUIRY  12/09/11
2:05:13

COMP ID: 2003134 0 2 00 ACTIVE  STATUS DATE: 11/15/09
COMP NAME: PROTONIC & ROBERTSON INCORPORATED

DATE OF CERTIFICATE: 09/11/1994 PERIOD OF DURATION: INDB DUE CODE: 0
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: B STOCK
METERED IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MORTGAGE TERMINATION:
CHAPTER FEES: 2450.00 NON DOC: NON STATUS: NONITOR DATE:
R/A NAME: WILLIAM R HOOVER III
STREET: 1900 ONE JAMES CENTER  AB INT NALS:
901 E CARY ST
CITY: RICHMOND  STATE: VA ZIP: 23219
R/A STATES: 1 ATTORNEY EFF DATE: 04/21/11 LOC: 214
ACCEPTED DATE: 211 14 6324 DATE: 09/28/11 RICHMOND CITY
CURRENT AX: 211 14 6324 DATE: 09/25/11 STATUS: 1 ASSESSMENT INDICATOR: 0
YEARS PRES. FISCALITY INTEREST TAXES BALANCE TOTAL SHARES
11 1,700.00 1,100,000

CIS has changed to enhance its navigation.
Click on menu items or buttons to select and perform functions. You may also use
function keys as labeled. Function key usage varies depending on the Application
Screen.
Please refer to Function Key Documentation for details.
(07/14/Corp.Data.Inq.8)
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:

Volkert, Inc., a corporation existing under the laws of ALABAMA, holds a certificate of authority to transact business in Virginia, and is in good standing.

The certificate was issued on January 21, 1999.

Nothing more is hereby certified.

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

Joel H. Peck, Clerk of the Commission
Richmond, December 7, 2009

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

Volkert, Inc.
(Formerly known as Volkert & Associates, Inc.)
(Formerly known as David Volkert & Associates, Inc.)
(Date of qualification – January 21, 1999)

a corporation organized under the laws of ALABAMA 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:

[Signature]
Clerk of the Commission
CINCINNATI

CORPORATE DATA INQUIRY

12/03/13

CORP ID: 886658 - A

STATUS: ACTIVE

STATUS DATE: 12/29/87

CORP NAME: HALL PUBS, INC.

DATE OF CERTIFICATE: 12/29/87

PEACOCK OF DURATION: 0

INDUSTRY CODE: 00

STATE OF INCORPORATION: SC

NORTH CAROLINA STOCK INDICATOR: S

NUMBER END: 0

SURVIVOR CORPORATION/DOMESTICATION IND:

GOOD STANDING EVENT: 0

MONITOR INDICATOR:

CHARGE CODE: 7920.00

MON STATUS: MONITOR DUE!

R/A NAME: CT CORPORATION SYSTEM

STREET: 4001 ONX RD STE 301

CITY: GLEN ALLEN

STATE: VA

ZIP: 23060 6002

R/A STATUS: 5 B.E. PLUS IN VT EST. DATE: 01/25/01 LOC: 143

ACCEPTED ASB: 111 16 6563 DATE: 09/28/11

COMPANY COUNTY:

CURRENT ASB: 111 16 6563 DATE: 09/28/11

STATUS: A

ASSESSMENT INDICATOR: 0

YEAR FEE DEBIT INTEREST INCREASE BALANCE TOTAL DUE:

1 3,700.00

1,000,000
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, September 29, 1993

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

S&ME, Inc.

a corporation organized under the laws of NORTH CAROLINA

and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission

Attest:

William J. Bridgeman
Chief of the Commission
APELSCICLA Business License

APELSCICLA Business License

BUSINESS NAME: JOHNNY NIRMARAJ & THOMPSON INC
TRADING NAME: 
ADDRESS: 9201 Arborcrest Pkwy STE 140
RICHMOND, VA 23236-0500
BUSINESS TYPE: BUS ENTITY BRANCH OFFICE
REGISTRATION NO: 0411000029
INITIAL CERTIFICATION DATE: MARCH 24, 1992
EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Sections 58.1-40]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-8833 or recordsdept@dpor.virginia.gov.
### APELSCIDLA Business License

<table>
<thead>
<tr>
<th>BUSINESS NAME</th>
<th>JOHNSON MIRRAHI &amp; THOMPSON INC</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADING NAME</td>
<td></td>
</tr>
<tr>
<td>ADDRESS</td>
<td>13921 PARK CENTER RD HERndon, VA 20171-0000</td>
</tr>
<tr>
<td>BUSINESS TYPE</td>
<td>BUS ENTITY BRANCH OFFICE</td>
</tr>
<tr>
<td>REGISTRATION NO</td>
<td>0411000441</td>
</tr>
<tr>
<td>INITIAL CERTIFICATION DATE</td>
<td>MARCH 06, 2005</td>
</tr>
<tr>
<td>EXPIRATION DATE</td>
<td>FEBRUARY 29, 2012</td>
</tr>
</tbody>
</table>

For the professions offered by this office, please see below:

**Open Complaints:** None

*"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.*

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-199]. Members of the public may review official records and obtain copies only after a complaint is closed.

**Closed Complaints:** None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (904) 997-0900 or [Records@gov.dpovirginia.gov](mailto:Records@gov.dpovirginia.gov).
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2012

NUMBER
0411000441

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

PROFESSIONS: ENG

JOHNSON MIRMIRAN & THOMPSON INC
13921 PARK CENTER RD
HERNDON, VA 20171
APELSCIDLA Business License

BUSINESS NAME: JOHNSON PARTNERSHIP & THOMPSON INC
TRADING NAME:
ADDRESS: 273 BEIJON RD SUITE 300 VIRGINIA BEACH, VA 23452-0000
BUSINESS TYPE: BUS ENTITY BRANCH OFFICE
REGISTRATION NO: 041000440
INITIAL CERTIFICATION DATE: MARCH 06, 2006
EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-1681]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 669-8533 or Recomplaints@dpcor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPRES ON
02-29-2012

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

PROFESSION: ENG

JOHNSON MIRMIRAN & THOMPSON INC
272 BENDIX RD SUITE 260
VIRGINIA BEACH, VA 23452

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

NUMBER
0411000440
APELSICLA Business License

BUSINESS NAME: JOHNSON LEDGER & THOMPSON INC
TRADING NAME: 
ADDRESS: 72 LOVETON CIRCLE
SPARKS, MD 21152-0000
BUSINESS TYPE: BUSINESS ENTITY
REGISTRATION NO: 0407011314
INITIAL CERTIFICATION DATE: AUGUST 30, 1982
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints (Code of Virginia Section 54.1-100). Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

"Closed Complaints" reflect complaints closed since 1999. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.

To inquire about any disciplinary actions prior to 1999, contact the department's Public Records Section at (804) 367-6563 or Records.Mgt@dpaw.virginia.gov"
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: LA, ARCH, ENGS

JOHNSON MIRMIRAN & THOMPSON INC
72 LOVETON CIRCLE
SPARKS, MD 21152
APELSIDLA Business License

BUSINESS NAME: AEBASU MOTERERES ERCES PLLC
TRADING NAME: MSVR
ADDRESS: 2255 PARKERS MILL DRIVE
MADENS, VA 23102-0000
BUSINESS TYPE: PLLC
REGISTRATION NO: 041300099
INITIAL CERTIFICATION DATE: JULY 06, 2009
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complain" reflect only those complaints for which a departmental investigatios has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 18.2-340]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-8583 or Records@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2011

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL LIMITED LIABILITY COMPANY

PROFESSIONS: ENG

HASSAN WATER RESOURCES PLC
HWR
2255 PARKERS HILL DRIVE
MAIDENS, VA 23102-2244

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

BUSINESS NAME: T3 DESIGN P C
TRADING NAME: 
ADDRESS: 3927 OLD LEE HWY STE 101C
FAIRFAX, VA 22030-0000
BUSINESS TYPE: PROFESSIONAL CORPORATION
REGISTRATION NO: 040001624
INITIAL CERTIFICATION DATE: DECEMBER 19, 2007
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 5A.1-108]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-5553 or Records Sgt@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2011

NUMBER
0405001624

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

PROFESSIONS: ENG

T3 DESIGN P C
3927 OLD LEE HWY STE 101C
FAIRFAX, VA 22030-2422

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

(SEE REVERSE SIDE FOR NAME/ADDRESS CHANGE)
APELSCIDLA Business License

APELSCIDLA Business License

BUSINESS NAME: ANDERSON & ASSOCIATES OF VIRGINIA INC
TRADING NAME:
ADDRESS: 100 ARDMORE STREET
           BLACKSBURG, VA 24060-0000
BUSINESS TYPE: BUSINESS ENTITY
REGISTRATION NO: 0407004005
INITIAL CERTIFICATION DATE: FEBRUARY 06, 2005
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-108]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 397-0303 or Records@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: ENG, LS, LA

ANDERSON & ASSOCIATES OF VIRGINIA INC
100 ARDMORE STREET
BLACKSBURG, VA 24060

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.
APELSCIDLA Business License

**BUSINESS NAME:** SCHNABEL ENGINEERING CONSULTANTS INC

**TRADING NAME:**

**ADDRESS:** ONE CARY STREET
RICHMOND, VA 23220-6000

**BUSINESS TYPE:** BUS ENTITY BRANCH OFFICE

**REGISTRATION NO:** 0411000700

**INITIAL CERTIFICATION DATE:** JANUARY 05, 2010

**EXPIRATION DATE:** FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints (Code of Virginia Section 54.1-108) Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

"Closed Complaints" reflect complaints closed since 1990. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9805 Mayland Dr., Suite 100, Richmond, VA 23235
Telephone: (804) 367-8500

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

PROFESSIONS: ENG

SCHNABEL ENGINEERING CONSULTANTS, INC
ONE CARY STREET
RICHMOND, VA 23220

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

SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE.
APELSCIIDLA Business License

BUSINESS NAME: SCHMABEL ENGINEERING CONSULTANTS INC
TRADING NAME: 
ADDRESS: 1301 SOUTH MAIN ST. SUITE 11 BLACKSBURG, VA 24060-8000
BUSINESS TYPE: BUS ENTITY BRANCH OFFICE
REGISTRATION NO: 0411000607
INITIAL CERTIFICATION DATE: JANUARY 05, 2010
EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

“Open Complaints” reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54A-1:158]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

“Closed Complaints” reflect complaints closed since 1990. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about any disciplinary actions prior to 1990, contact the department’s Public Records Section at (804) 367-8553 or Records@dpor.virginia.gov.
Schnabel Engineering Consultants, Inc
1901 South Main St.
Suite 11
Blacksburg, VA 24060
APELSCLDA Business License

BUSINESS NAME: MCCORMICK TAYLOR INC
TRADING NAME: APELSCLDA
ADDRESS: 4931 LANZ BROOK DR SUITE 270 GLEN ALLEN, VA 23050-000
BUSINESS TYPE: BUSINESS ENTITY
REGISTRATION NO: 0407004111
INITIAL CERTIFICATION DATE: MAY 22, 2001
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-100]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

"Closed Complaints" reflect complaints closed since 1996. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.

To inquire about any disciplinary actions prior to 1996, contact the department's Public Records Section at (804) 367-8063 or RecordsAccess@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9950 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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

PROFESSIONS: ENG

MCCORMICK TAYLOR INC
NORTH SHORE COMMONS A
4951 LAKE BROOK DR SUITE 275
GLEN ALLEN, VA 23060

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

APELSCIDLA Business License

BUSINESS NAME: MCCORMICK TAYLOR INC.

TRADING NAME: 

ADDRESS:
113 MILL PLACE PARKWAY
UNIT 103
VERONA, VA 24482-0000

BUSINESS TYPE: BUS ENTITY BRANCH OFFICE

REGISTRATION NO: 041100071

INITIAL CERTIFICATION DATE: OCTOBER 27, 2010

EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

“Open Complaints” reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-108]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

“Closed Complaints” reflect complaints closed since 1990. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-5005 or RecordsDiv@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2012

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

PROFESSIONS: ENG

MCCORMICK TAYLOR INC.
113 MILL PLACE PARKWAY
UNIT 103
VERONA, VA 24482

Gordon N. Dixon, Director
APELSCIDLA Business License

APELSCIDLA Business License

BUSINESS NAME: FROEHLING ROBERTSON INC

TRADE NAME: 

ADDRESS: 1734 SEIBEL DR, HAMMOND, IN 46320-0000

BUSINESS TYPE: BUSINESS ENTITY BRANCH OFFICE

REGISTRATION NO: 0411000003

INITIAL CERTIFICATION DATE: APRIL 05, 1992

EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

“Open Complaints” reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-106]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

“Closed Complaints” reflect complaints closed since 1990. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about any disciplinary actions prior to 1990, contact the department’s Public Records Section at 804-357-6563 or records@dpor.virginia.gov.
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

FROEHLING ROBERTSON INC
1734 SEIBEL DR N E
ROANOKE, VA 24012
APELSCIDLA Business License

BUSINESS NAME: FREHLMAN & ROBERTSON INC
TRADING NAME:
ADDRESS: 5915 DUMBARTON ROAD
RICHMOND, VA 23226-6000
BUSINESS TYPE: BUSINESS ENTITY
REGISTRATION NO. 240732005898
INITIAL CERTIFICATION DATE: AUGUST 03, 1982
EXPIRATION DATE: DECEMBER 31, 2013

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-108]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

"Closed Complaints" reflect complaints closed since 1980. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 357-6563 or RecordsStaff@dpor.virginia.gov.
APELSCIDLA Business License

BUSINESS NAME: VOLZERT INC
TRADING NAME: 
ADDRESS: 5400 SHAWNEE RD
          STE 101
          ALEXANDRIA, VA 22312-0000
BUSINESS TYPE: BUSINESS ENTITY
REGISTRATION NO: 0417002610
INITIAL CERTIFICATION DATE: JULY 29, 1983
EXPIRATION DATE: DECEMBER 31, 2011

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 64.1-108]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-8583 or Records@DPOR.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2011

NUMBER
0407002610

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

PROFESSIONS: ENG

VOLKERT INC
5400 SHAWNEE RD
STE 301
ALEXANDRIA, VA 22312-2300

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

[Signature]
APELS/CIDA Business License

BUSINESS NAME: SAME INC
TRADING NAME: 
ADDRESS: 8211 HERITAGE RD
RICHMOND, VA 23226-5900
BUSINESS TYPE: BUS ENTITY BRANCH OFFICE
REGISTRATION NO: 0411005024
INITIAL CERTIFICATION DATE: JUNE 02, 2008
EXPIRATION DATE: FEBRUARY 29, 2012

For the professions offered by this office, please see below.

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-100]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

"Closed Complaints" reflect complaints closed since 1980. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about any disciplinary actions prior to 1990, contact the department’s Public Records Section at (804) 397-5563 or Recordsstaff@dpor.virginia.gov.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2012

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

PROFESSIONS: ENG

S&ME INC
8211 HERMITAGE RD
RICHMOND, VA 23228

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

DPOR Key Personnel Documentation

Key Construction Company, Inc.
APELSCIDLA Individual License

NAME: GALLAGHER, ROBERT TAYLOR
CITY, STATE: MECHANICSVILLE, VA
OCCUPATION: PROFESSIONAL ENGINEER 0402
LICENSE: 022016
FIRST CERTIFICATION DATE: JANUARY 27, 1992
EXPIRATION DATE: JANUARY 31, 2012

Open Complaints: None

"Open Complaints" reflect complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-168]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 786-6583 or recordsdept@dpor.virginia.gov.

Note: The official record copy of the data obtained from this search is maintained by the specific board offices at the Department of Professional and Occupational Regulation (DPOR). Click here for telephone and e-mail contact information for DPOR licensing boards. Click here for information on how to file a complaint, or contact the Compliance and Investigations Division at 804-786-8501.
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 TAYLOR GALLAGHER
10004 STUDLEY FARMS DRIVE
MECHANICSVILLE, VA 23116

EXPIRES ON
01-31-2012

NUMBER
0402023016

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODES OF VIRGINIA.
<table>
<thead>
<tr>
<th>APELSCIDLA Individual License</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME: PHIUP, ARThELUS AUGUSTUS 8</td>
<td></td>
</tr>
<tr>
<td>CITY, STATE: BChOOGID, VA</td>
<td></td>
</tr>
<tr>
<td>OCCUPATION: PROFESSIONAL ENGINEER 0402</td>
<td></td>
</tr>
<tr>
<td>LICENSE: 023335</td>
<td></td>
</tr>
<tr>
<td>INITIAL CERTIFICATION DATE: JUNE 25, 1992</td>
<td></td>
</tr>
<tr>
<td>EXPIRATION DATE: JUNE 30, 2012</td>
<td></td>
</tr>
</tbody>
</table>

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints (Code of Virginia Section 54.1-108). Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-8563 or Records@dpor.virginia.gov.

Note: The official record copy of the data obtained from this search is maintained by the specific board offices at the Department of Professional and Occupational Regulation (DPOR). Click here for telephone and email contact information for DPOR licensing boards. Click here for information on how to file a complaint, or contact the Compliance and Investigations Division at 804-367-8564.
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

ARTHелиUS AUGUSTUS PHAUP III
402 WAVENY ROAD
RICHMOND, VA 23229
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9560 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

WILLIAM DOUGLAS MCDOWALL II
2701 FRANKIE LN
HOPEWELL, VA 23860-7777

Gordon S. Dixon, Director
APELSIDLA Individual License

NAME: MOODY, WILLIAM DOUGLAS II
CITY, STATE: HOPEWELL, VA
OCCUPATION: PROFESSIONAL ENGINEER 0402
LICENSE: GIEZ36
INITIAL CERTIFICATION DATE: FEBRUARY 23, 1998
EXPIRATION DATE: OCTOBER 31, 2012

Open Complaints: None

"Open Complaints" reflect only those complaints for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only those cases that have proceeded through an investigation to the adjudication stage are displayed.

State law prohibits the disclosure of any information about open complaints [Code of Virginia Section 54.1-106]. Members of the public may review official records and obtain copies only after a complaint investigation is closed.

Closed Complaints: None

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

To inquire about any disciplinary actions prior to 1990, contact the department's Public Records Section at (804) 367-8563 or RecordsDPOD@por.virginia.gov.

Note: The official record copy of the data obtained from this search is maintained by the specific board offices at the Department of Professional and Occupational Regulation (DPOR). Click here for telephone and email contact information for DPOR licensing boards. Click here for information on how to file a complaint, or contact the Compliance and Investigations Division at 804-367-8564.