STATEMENT OF QUALIFICATIONS

ROUTE 606
LOUDOUN COUNTY
PARKWAY/OLD OX ROAD
RECONSTRUCTION AND WIDENING

STATE PROJECT NO.: 0606-053-983
FEDERAL PROJECT NO.: STP-5A01 (165)
CONTRACT ID NO.: C00097529DB64

AUGUST 27, 2013
August 27, 2013

Mr. John C. Daoulas, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia  23219

RE:  Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening
State Project No.: 0606-053-983; Federal Project No.: STP-5A01 (165);
Contract ID Number: C00097529DB64

Dear Mr. Daoulas:

The Lane Construction Corporation (LANE) is pleased to present this Statement of Qualifications (Section 3.2) for the above referenced project to the Virginia Department of Transportation (VDOT). LANE was founded in 1890 and is one of the nation’s top-rated heavy civil construction companies. We specialize in high quality bridge, roadway, dam, mass-transit and airport construction. LANE has a long and successful history of project completion in the Commonwealth of Virginia managed from our regional office in Chantilly.

As a leader in the Design-Build method (ranked as the 38th Top Design-Build Firm by Engineering News-Record), we appreciate the importance of partnering and have constructed nearly $3 billion in Design-Build projects during the last decade. LANE’s teaming and leadership experience enable us to deliver innovative and technically sound results that VDOT and Virginia residents deserve.

LANE is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We have teamed with Johnson, Mirmiran, and Thompson, Inc. (JMT) as the Lead Designer. Together, we will provide VDOT with a reputable team capable of completing projects of any size and scope on time and on budget.

LANE and JMT, in conjunction with hand-selected specialty firms experienced with VDOT processes and procedures, will provide design and construction for the reconstruction and widening of Route 606 Loudoun County Parkway/Old Ox Road from Route 621 Evergreen Mills Road to Route 267 Dulles Greenway. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LANE team has assembled committed personnel, with proven delivery of VDOT’s requirements to meet the quality, safety and schedule demands of this Project.

3.2.2 Offeror’s Point of Contact Information: Mr. Richard A. McDonough is the authorized representative and point of contact for the LANE team for all matters associated with this qualifications submittal.

Richard A. McDonough, District Manager
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: RAMcdonough@laneconstruct.com
3.2.3 **Offeror's Principal Officer Information:** Mr. Mark A. Schiller is a principal officer of The Lane Construction Corporation and the legal entity with whom a Design-Build contract with VDOT will be written.  
Mark A. Schiller, Regional Vice President, Mid-Atlantic Region  
14500 Avion Parkway, Suite 200  
Chantilly, VA 20151  
Tel: (703) 222-5670  Fax: (703) 222-5960  
Email: MASchiller@laneconstruct.com

3.2.4 **Offeror's Corporate Structure:** LANE was founded in 1890 and was incorporated in the State of Connecticut on April 5, 1902. LANE will undertake the financial responsibility for the Project and has no known liability limitations. LANE’s pre-qualification status/capabilities with VDOT are well in excess of the requirements of this project. The co-sureties will furnish a single 100% performance bond and a single 100% payment bond.

3.2.5 **Lead Contractor and Lead Designer:** The full legal name of the Offeror is: The Lane Construction Corporation. The full legal name of the Lead Designer is: Johnson, Mirmiran, and Thompson, Inc. LANE will serve as the prime/general contractor responsible for overall construction of the project and will serve as the legal entity who will execute the contract with VDOT. JMT will serve as the lead design firm responsible for the overall design of this Project under contract to Lane.

3.2.6 **Affiliated/Subsidiary Companies:** LANE’s parent company is Lane Industries, Inc. There are no affiliated or subsidiary companies.

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

3.2.8 **Offeror's VDOT Prequalification Evidence:** Evidence from VDOT’s online Prequalified List (L002/Active) is included in the Appendix and verifies that LANE is prequalified for this SOQ submission.

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

3.2.10 **Professional Services Evidence:** The matrix in the Appendix delineates the respective state registrations and licensures of the LANE team. The Offeror and all team members are eligible at the time of the SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the Project. Respective copies of licenses may be found in the Appendix.

3.2.11 **DBE Statement:** LANE supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 14% goal for the design and construction of this Project utilizing Virginia certified DBE companies. LANE will take all necessary and reasonable steps to ensure that DBE firms have the maximum opportunity to compete for and perform services on this Design-Build contract.

Through our proven performance, our team will deliver this Project on time and within budget. We appreciate the opportunity to submit our Statement of Qualifications and look forward to working with VDOT on this important reconstruction and widening project.

Respectfully submitted,

[Signature]

Mark A. Schiller  
Regional Vice President, Mid Atlantic
3.3 Offeror’s Team Structure

We have carefully chosen a group of the most highly skilled team members, both firms and individuals, to create a team structure that advantageously utilizes the Design-Build (D-B) process and capitalizes on the strongest attributes of each team member’s respective capabilities. LANE’s role will include managing the project, supervising construction, and self-performing the major work elements. LANE has selected JMT as the Lead Designer. Together, this forms the foundation of the LANE team.

The Lane Construction Corporation (LANE) will serve as the Lead Contractor of the D-B team for the Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening project (Route 606). LANE is currently ranked 6th in the Top 20 Transportation Contractors and 7th in the Top 50 Domestic Heavy Contractors by Engineering News-Record. Our proven heavy civil experience in bridge, roadway, dam, and airport related construction and more than 60 D-B projects ranging in scope and value from $13M to $1.5B demonstrates LANE’s ability to tackle the region’s most challenging infrastructure projects.

LANE has created a team through the careful and strategic selection of high-quality design and construction firms for the Route 606 project. All of our team members have worked together on numerous projects with each other throughout the region and have developed a dynamic synergy that will provide VDOT tremendous value delivering this project.

LANE has selected Johnson, Mirmiran, and Thompson, Inc. (JMT) as the Lead Designer for their proven efforts in providing value-added solutions and innovations in their approach to D-B projects. JMT is a multidisciplinary employee owned design consulting firm specializing in engineering solutions for a variety of needs. JMT serves public agencies throughout the Eastern United States with a broad range of design, and construction management services. JMT is currently ranked 100th in Engineering News-Record’s List of Top 500 Design Firms for 2013, and ranked 18th for Highway Design. JMT has the resources of more than 850 personnel and 42 years of experience providing a broad range of roadway, bridge, and dam improvements with Virginia offices located in Herndon, Richmond, and Virginia Beach. JMT offers the staff, capabilities and resources of a “big” firm, while maintaining the personal touch and service of a “small” firm.

Building upon the team’s foundation we have added a group of dedicated, professional firms experienced in D-B who understand the features of this project as well as VDOT requirements and specifications. Each team member will utilize its specialized capabilities and expertise in the development of various aspects of the D-B process.

Construction Subconsultants. Quinn Consulting Services (QCS), a local Virginia-certified DBE firm, will provide the Quality Assurance Manager (QAM) and will be under sub contract to LANE. QCS will provide the QAM, Mr. John Vicinski, PE and the full-time Quality Assurance Lead Inspector, Mr. Ahmed Hamdan. QCS has provided similar specialized consulting and quality assurance management on numerous D-B projects throughout Northern Virginia such as the Dulles Metrorail Extension (Phase 1 and 2), Fairfax County Parkway (Phase II), Waxpool Road, Battlefield Parkway D-B, Route 50 Traffic Calming near Gilberts Corner, and the I-495 Express Lanes.

GeoConcepts Engineering, Inc. (GeoConcepts) will provide geotechnical engineering and QC testing. GeoConcepts is a Virginia certified DBE firm located in Ashburn, Virginia that provides professional geotechnical engineering, hydrogeologic, and environmental consulting services to private and public sector clients including VDOT, MWAA, and Loudoun County. GeoConcepts has established a solid reputation for providing innovative and cost-effective geotechnical solutions to a range of clients. They are particularly well-suited for this project due to their experience providing geotechnical engineering services for over 38 VDOT projects in
the last 10 years, their involvement on D-B transportation projects of similar scope, and their expertise working with the geologic conditions as well as dam structures found within Loudoun County.

As additional subcontractors are required before and during the construction, LANE will support and provide ample opportunities to include DBE and SWaM firms.

**Design Subconsultants.** JMT will provide overall project management for all design activities. Under subcontract to JMT and directly reporting to the Design Manager, Mr. Robert Re ed, PE, the subconsultants include: **EEE Consulting, Inc. (EEE), RJM Engineering (RJM), and GeoConcepts.** Mr. Reed maintains a strong and familiar working relationship with each of the identified design subconsultants. Together, they have successfully delivered numerous projects throughout the region under Mr. Reed’s leadership and management of multi-disciplinary projects.

**EEE Consulting, Inc. (EEE)** will provide environmental permitting and noise studies. EEE specializes in environmental permitting and compliance, environmental engineering, local government planning and environmental education. EEE has helped local government, and state and federal transportation agencies with natural resources, wetlands, hazardous materials, air quality, noise studies, environmental compliance, and NEPA documents, including Environmental Impact Statements, Environmental Assessments, Categorical Exclusions, and State Environmental Review Process Requirements. EEE’s transportation experience includes contracts with VDOA, VDOT, VDRPT, WMATA, NCDOT, STB, FTA, and local governments. EEE is familiar with the environmental work necessary for this project. They have provided similar services to JMT on numerous recent projects including the Fairfax County Parkway D-B Project Phases I, II & IV.

**RJM Engineering, Inc. (RJM)** will provide drainage system designs, stormwater management (SWM), and erosion control for the roadway. RJM is a Virginia certified DBE firm and has been providing preliminary engineering, design and construction phase services for roadway reconstruction and widening projects for over two decades in Maryland and Northern Virginia. Project experience has consisted of roadway design, SWM concepts and design, hydrologic/hydraulics analysis, erosion/sediment control, drainage, scour analysis, structural analysis and design of bridges, retaining walls and drainage structures, alignment studies, and traffic engineering, right-of-way, utility relocation/rehabilitation design, pedestrian/bike facilities, as well as construction phase services including constructability and shop drawing reviews. Their engineering staff is thoroughly familiar with VDOT policies and FHWA guidelines, as well as using MicroStation V8i and GEOPAK.

The members of the LANE team as assembled above are able to provide the required key personnel as well as all supporting talent to fulfill the roles to successfully deliver the Route 606 project on time and within budget. All of the proposed key personnel have noteworthy experience on projects and in roles similar to those they have been selected for on this project team.

**3.3.1 Qualifications of Key Personnel.** We consider VDOT management and staff true project partners, working alongside the LANE team members. Our relationships are effective, functional, and benefit from a common accountability initiative—to safely and expeditiously design and construct the project with the highest level of functionality and quality. The LANE team is led by highly qualified and capable professionals with local roots and strong D-B experience. All of the proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on the Route 606 project.

Leading the LANE team is the **Design-Build Project Manager, Mr. Robert Portley,** who is responsible for the overall project, construction quality management, and contract administration. Mr. Portley is one of LANE’s most seasoned D-B Managers and was LANE’s D-B Project Manager for the $1.5B I-495 Express Lanes project. He has over 30 years of experience in the construction industry and specializes in roadway and dam construction. This experience includes lock and dam projects (of various sizes and scope) where he was the Project Manager or Project Executive. Mr. Portley will use his specialized expertise to effectively and efficiently complete this project with no learning curve required.
Quality Assurance Manager - Mr. John Vicinski, PE (QCS) will ensure that the construction quality of the Route 606 project meets or exceeds the VDOT Minimum Quality Control and Quality Assurance Requirements for D-B and PPTA Projects, dated January 2012 (VDOT QA/QC Guidelines). Mr. Vicinski understands that a strong QA/QC program is imperative, having served as the QAM on the I-495 Express Lanes project and numerous D-B projects here in Northern Virginia. He recognizes the importance of the distinct separation between quality assurance and construction quality control. He will apply his 30 years of experience toward the success of this project. Mr. Vicinski has assigned and will supervise the full-time QA Lead Inspector assigned to this project, Mr. Ahmed Hamdan (QCS). Mr. Hamdan is further discussed in Section 3.3.2.

Design Manager - Mr. Robert Reed, PE, (JMT) will be responsible for coordinating the individual design disciplines and ensuring the overall project design is in conformance with the contract documents. Mr. Reed will be responsible for establishing and overseeing the design quality control and quality assurance program. He has over 40 years of experience in transportation design including numerous roadway designs for VDOT and other Northern Virginia transportation agencies and has specialized experience with dam design including both hydraulic and geotechnical design. He has served as a Project Manager and Design Manager on numerous VDOT D-B projects including the Route 7/Route 15 Widening (Leesburg Bypass), the I-81 Truck Climbing Lane, and the Fairfax County Parkway Widening.

Construction Manager - Mr. Robert Cross (LANE) is responsible for the day-to-day construction operations of the project. Mr. Cross is a Construction Manager/General Superintendent with LANE and possesses over 40 years of construction experience which includes highway and bridge, rail, heavy civil, and dam construction. He most recently served on the VDOT I-495 Express Lanes P-3 D-B project and is currently working on the I-95 Shoulder Widening project which will be complete next summer. Mr. Cross has worked on over 40 dams and impoundment structures and has experience in managing construction alterations/modifications for high hazard dams of similar scope.

Lead Geotechnical Engineer, Mr. Ted Lewis, PE (GeoConcepts), will be responsible for the field exploration and material testing required for the geotechnical evaluations required for the modification of the Horsepen Dam, and the design of retaining walls, bridge foundations, soil and rock cut and fill slopes, embankment materials and construction, ground improvements (as required), geotechnical instrumentation, pavement subgrade and structures.

Dam Design Specialist, Mr. Mike Leffler, PE (JMT), will be responsible for the evaluation, analysis and design modification requirements of the Horsepen Dam. Mr. Leffler’s 34 years of experience includes hundreds of projects where he managed and developed field investigation programs including test boring and test pits. His work included geotechnical engineering analysis and preparation of reports to provide geotechnical design recommendations for new embankment dams, rehabilitation of high hazard dams, failed embankment dams, which included evaluation of embankment foundations, spillway foundations, stability, seepage and seepage control features. Mr. Leffler will be assisted by Mr. Paul Clement, PE who will provide the hydraulic design and analyses for the Dam; the two have collaborated on numerous dam designs for JMT.

Dam QC Inspector, Ms. Rebecca Smith-Zakowicz, CPG (GeoConcepts), will be responsible for the QC Inspection of the modifications to Horsepen Dam. Ms. Smith-Zakowicz has over 10 years of experience in geologic, geotechnical, hydrogeologic, and environmental engineering, with a special focus on dams and SWM impoundments. She has served on numerous projects throughout the region performing studies, evaluations and the construction inspection and materials testing for facilities similar to Horsepen Dam. This includes dams at several sites classified as high hazard facilities.

In our Key Personnel Resumes, we have used the icon to represent D-B build projects and the icon to represent dam projects.

3.3.2 Organizational Chart. The LANE team organization has a straightforward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. The following Organizational Chart depicts VDOT, third party stakeholders, key personnel, and their respective relationships and functions.
Reporting Relationships of Key Personnel. D-B Project Manager, Mr. Portley, will report to VDOT and serves as VDOT’s central point of contact. He will facilitate communication among team partners and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. It will be his responsibility to work with the team to ensure that the design is on time and complies with the owner’s specifications. Mr. Portley’s management from design through construction will include weekly design and construction meetings to...
discuss how the LANE team will construct the project. Additionally, he is responsible for construction quality management and contract administration for the Project.

**QAM, Mr. Vicinski, PE(QCS)** will report directly to Mr. Portley, the D-B Project Manager on all quality issues. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel will have no authority over QA inspection staff, and issues raised by construction personnel will be resolved by Mr. Vicinski and the D-B Project Manager. Mr. Vicinski will keep VDOT informed of the status of construction and issues/solutions through weekly reports and progress meetings. As QAM, Mr. Vicinski holds the authority to shut down the job if quality issues warrant. **Froehling & Robertson, Inc.** will report to QCS and will perform the QA testing.

**Design Manager, Mr. Reed, PE** will report directly to the D-B Project Manager, Mr. Portley. Mr. Reed will maintain close communication with the D-B Project Manager and will ensure the Project is completed in accordance with the requirements of the contract documents. He is responsible for coordinating all design disciplines and ensuring the overall project design is in conformance with project documents; all design disciplines report directly to Mr. Reed. Mr. Reed will provide VDOT with design plans for review and approval to confirm that the design work is constructable and complies with the requirements of the Contract Documents. He is also responsible for establishing oversight of the QA/QC program for each design discipline of the project. He will be assisted by Mr. Bill Schaub, PE who will provide an independent design QA audit. The design QC will be coordinated by Mr. Lee Priestas, PE and will be performed at the office where the work is conducted by a qualified independent staff person of each team member.

**Construction Manager, Mr. Cross, will report directly to Mr. Portley, the D-B Project Manager.** His daily duties include: safety, coordination of all project personnel including subcontractors, QC and QA. He holds ultimate responsibility for managing the project schedule with his staff engineer and to coordinate daily with the adjacent projects underway. He will coordinate daily meetings with the QA Lead Inspector to discuss ongoing construction activities. He will also review all QC reports and lab results. Anything that is not meeting standards will be addressed immediately with corrective actions mandated that same day.

**Lead Geotechnical Engineer, Mr. Lewis, PE** will report directly to Mr. Reed, the Design Manager. Mr. Lewis will be responsible for the overall geotechnical design of the entire project and will support Mr. Leffler on the geotechnical design of the Dam.

**Dam Design Specialist, Mr. Leffler, PE** will report directly to Mr. Reed, the Design Manager. Mr. Leffler will be responsible for design of the Dam. He will also coordinate directly with the appropriate agencies with regard to the Dam permitting requirements and design.

**Dam QC Inspector, Ms. Smith-Zakowicz, CPG** will report directly to Mr. Colbert, the Construction QC Manager. Ms. Smith-Zakowicz, will provide the quality control inspection for all aspects of the Dam construction/modifications.

**Other Functional Relationships.** The LANE team also includes the following recognized specialists whom we deem critical to this Project, albeit non-key personnel as defined by the RFQ; their qualifications are provided below.

**Design QA – Mr. Bill Schaub, PE (JMT) and Design QC – Lee Prietas, PE (JMT)** will report directly to Mr. Reed, the Design Manager. With more than 35 years’ experience apiece, they are both thoroughly familiar with VDOT QA/QC Guidelines and the complete design process related to transportation projects, including public involvement policy and environmental document preparation, along with roadway, hydrolics, geotechnical and bridge design. Mr. Schaub is JMT’s D-B Design Manager on the current EFLHD/VDOT D-B project for Mark Center Short and Mid-Term Improvements, and the VDOT US 29 Bypass. He was also the D-B design manager on the now complete Phases I/II and IV of Fairfax County Parkway D-B and the DDOT 9th Street Bridge Replacement D-B project. Mr. Prietas previously served as the Director of Public Works/County Engineer for Henrico County in charge of quality for all projects. He has extensive experience in traffic control devices (signs, signals, and pavement markings), roadway design, as well as traffic control for work areas and special events.
Construction QC Manager – Dave Colbert (LANE) will report directly to Mr. Cross, the Construction Manager. Mr. Colbert is a highly regarded Construction QC Manager with over 24 years of experience; most recently on the D-B Silver Line Metro Rail Phase I project. He has successfully completed many large, complex projects on time, under budget and with the highest attention to providing a quality product for the owner. His responsibilities include the development, implementation and management of the project specific QC program. Mr. Colbert has been involved in dam and impoundment projects throughout the country including numerous wastewater treatment plants which typically contain both raw water and settled water containment ponds. The Roadway/Bridge QC Inspector(s), Dam QC Inspector, and QC testing lab, GeoConcepts each report directly to Mr. Colbert.

Quality Assurance Lead Inspector – Mr. Ahmed Hamdan (QCS) will report directly to Mr. Vicinski, the QAM, and will be assigned to the project on a full-time basis for the duration of the project. Mr. Hamdan has experience in the inspection of all aspects of highway and bridge construction. He has overseen compliance with VDOT specifications, standards, plans, contracts, and special provisions. He is responsible for maintaining daily records of all activities on the job site; including field drawings, calculations, invoices, materials, summaries, etc. Mr. Hamdan is familiar with VDOT D-B projects and has experience with the Site Manager documentation system as well as VDOT QA/QC Guidelines.

Public Relations Manager – Mr. Timothy Kelleher, PE (JMT), will report directly to the D-B Project Manager, Mr. Portley. Mr. Kelleher has more than 35 years of experience and has been involved in projects in and around Dulles Airport and the Route 606 corridor. Mr. Kelleher’s project experience has included working with Loudoun Water, MWAA, NOAA, FAA, VDOT and NOVEC. Mr. Kelleher’s role will be to provide interface between the D-B team and any/all agency, utility, property owner(s) and government entity impacted or affected by the Route 606 Widening Project.

The following staff will report directly to the Design Manager, as well as all of the design specialists.

Roadway – Rodney Hayzlett, PE (JMT) has more than 19 years in the management and design of transportation related projects. His projects include both arterial and interstate-type roadways on new locations, reconstruction and widening as well as extensive airport experience. He has advanced technical urban and rural roadway and drainage experience.

Dam Hydraulics Engineer – Mr. Paul Clement, PE (JMT) has more than 36 years of conventional and D-B experience including hydraulic analyses for dam (including high hazard) and pond design; as-built inspections and certifications; preparation of pond as-built plans and obtaining approval for SWM ponds; natural stream channel design; waterway/wetland permits; wildlife mitigation plans; watershed hydraulic/hydrologic (H/H) modeling; related professional services during construction; and flooding investigations/remedial actions/ construction projects. Mr. Clement has prepared applications for NPDES, SW M, ESC and other permits or modifications and has acted as the Engineer-in-Charge for numerous dam repair projects.

Drainage Engineer – Dong Zhao, PhD, PE (RJM) has over 15 years of experience in transportation engineering project design and management in Virginia. He is experienced in SWM facilities, drainage, and erosion/sediment control design for highway projects and has been providing these design services to VDOT for the I-264/I-64 Interchange Improvements, Route 3 Widening, and Route 15/Route 662 projects.

Structures Engineer – Mr. Trip Phaup, PE (JMT) will be responsible for the design of bridges, retaining walls, noise walls and miscellaneous structures. He has 23 years of experience in the analysis, design, and preparation of preliminary and final design plans, special provisions, and construction cost estimates for structures on numerous transportation projects.

Transportation Management Plans (TMP)/Traffic Engineer – Randy Boice, PE (JMT) has over 22 years of experience and has developed many of JMT’s TMPs. Many roadway projects have benefitted from Mr. Boice’s expertise in developing and analyzing alternatives during construction. During the development of the TMP for the D-B Fairfax County Parkway project, he led the alternatives analysis that recommended the detour routes providing unencumbered construction of the “Fullerton Flip” which saved both schedule and funds and allowed for the construction of additional phases of the work that were not originally funded.

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3.4 EXPERIENCE OF OFFEROR’S TEAM
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As previously mentioned, both LANE and JMT are among the nation’s top ranked firms in their respective disciplines. Together and individually, we have designed, built and maintained some of our country’s most important infrastructure. Each firm has achieved a widely recognized level of success by paying specific attention to detail in controlling, managing, and executing their work. Bringing this team together for the Route 606 project unifies the abilities of each to perform in a complimentary manner based on our past performance together. The blend of similar projects that we have worked on individually and/or collectively in the region and with the agencies involved confirms our qualifications to successfully deliver all elements of the Route 606 project.

Adding to this, LANE has a well-known commitment to VDOT and the Commonwealth of Virginia. We have maintained a regional office in Northern Virginia for over 40 years; employ a full-time workforce in excess of 900 craftsmen in Northern Virginia alone; and own and operate asphalt plants nearby in Loudoun County, Chantilly, Alexandria, Occoquan, and Stafford. Plus, our construction group has successfully completed a wide variety of D-B projects for VDOT and other owners to include most recently the highly acclaimed VDOT I-495 P3 D-B Express Lanes project.

Similarly, JMT has a strong relationship with VDOT. They routinely employ a proactive approach to D-B projects providing an interactive design process of collaboration with the contractor and VDOT to assure engineering excellence. Their successful proactive approach is evident in the numerous D-B projects that JMT has worked on in Virginia including the Fairfax County Parkway (Phases I, II and IV), the Route 29/Charlottesville Bypass and the Mark Center Short and Mid-Term Improvement projects. JMT also has held numerous statewide contracts for Design and Traffic Engineering throughout the Commonwealth which further illustrates JMT’s experience and commitment to supporting and improving Virginia’s infrastructure. Likewise, JMT currently holds the VDOT MS-4 Permit Compliance Statewide Contract.

LANE and JMT Together. LANE and JMT developed a working relationship over a decade ago and have worked together on a number of D-B projects such as Fairfax County Parkway and Mark Center Short and Mid-Term Improvements. JMT has

Roadway/Bridge Experience. LANE was the lead contractor for Dulles Greenway Rt.607 project which involved the widening of an existing bridge, expansion of the existing MSE retaining wall, addition of two traffic lanes to Route 607, construction of shared-use paths, placement of underdrain for the roadway and miscellaneous site drainage.

JMT was the lead designer for the 3rd Street (Route 15/460) over Buffalo Creek Bridge Replacement D-B project which included the replacement of a structurally deficient bridge over water with a new four-lane bridge, along with the reconstruction of the roadway approaches on both ends of the proposed structure located on Route 15/460.

LANE completely reconstructed approximately 2.3 miles of existing Route 234 providing a 4 lane divided highway, with turn lanes and signal controlled intersections. The project required expanding the existing right of way to accommodate the new 4 lane alignment, construction of 2 new lanes that eventually made up the ultimate southbound lanes and then reconstructed the existing 2 lanes to become the new northbound lanes.
3.4 EXPERIENCE OF OFFEROR’S TEAM

**Dam Experience.** LANE constructed the $50M Burnsville Lake Dam in West Virginia which involved the placement of more than 1,780,000 cubic yards of various earth and rockfill embankment. In addition to the embankment portion of the dam, approximately 83,000 cubic yards of mass concrete was placed to construct an overflow spillway that utilized three large hydraulically controlled tainter gates. With the exception of the hydraulic mechanical systems and electrical work, all work was completed by LANE including the field fabrication of the tainter gates along with trunnion arms and blocks.

JMT provided design services for the North Gayton Road Extension. The services included inspection of the 2.2 miles of six-lane and four-lane urban roadway, turn lanes, crossovers, multiuse paths, and numerous residential and business entrances; a two-span continuous plate girder bridge over I-64; signalization of two major intersections and four minor intersections; installation of two precast arch structures (stream crossings); and 1178' of MSE wall up to 35' in height.

GeoConcepts conducted a geotechnical investigation for the rehabilitation of dams at three different sites, all classified as “high hazard” by the Virginia DCR: Toms Branch, Inch Branch and Robinson Hollow. Drilling was administered by GeoConcepts to obtain soil cores for the evaluation of the subsurface conditions.

Our team has compiled the following project matrix to further demonstrate our combined experience and ability successfully delivering relevant projects with similar scope and complexity. The LANE team has proven experience in both the D-B and traditional D-B-B project delivery methods.

### 3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a), (b), (c) and (d) as required for LANE (Lead Contractor) and JMT (Lead Designer) are included in the Appendix.

In our Work History Forms, we have used the icon to represent D-B build projects and the icon to represent dam projects.
## 3.4 EXPERIENCE OF OFFEROR'S TEAM

<table>
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<tr>
<th>Project</th>
<th>D-B</th>
<th>Roadway</th>
<th>Retaining Structure and Bridges</th>
<th>Dam/Ponds</th>
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3.5 | PROJECT RISKS

The LANE team has carefully considered the key elements of work for the Route 606 project to determine three critical Project Risks. In making our assessment, we considered numerous potential risks to the project including: geotechnical, utilities, noise control, Horsepen Dam, agency/stakeholder coordination, SWM, and ROW. We have concluded that Retrofitting of Existing Horsepen Dam, Utility Impacts, and Stormwater Management are the most critical to the success of this project.

Risk No. 1 – Retrofitting of Existing Horsepen Dam

Risk Identification: Retrofitting of the existing Horsepen Dam to accommodate the widening of Route 606 and increase the stored water capacity is a critical risk for this project. The retrofitting of the Horsepen Dam according to the RFQ is to include partial removal and extension of the existing principal spillway pipe, repairs to the principal spillway riser structure, relocation of the downstream water sampling station, raising the height of the Dam, extending the downstream toe of the Dam, and supporting the proposed foundations for the bridge and associated retaining walls on or through the Dam and its emergency spillway. These modifications create risks associated with stability, integrity and performance of the Dam and its emergency spillway. Of these modifications to the Dam, the two that are considered most critical are: the extension of the principal spillway culvert within the downstream toe of the Dam, and placement of very deep fill depths (on the order of 50 feet) to extend the downstream toe of the Dam to accommodate raising the grades for the proposed roadway. What makes these modifications even more challenging is that they are likely to be performed while maintaining a permanent pool within Horsepen Lake. If the excavation for removal and replacement of the spillway encounters the phreatic surface within the Dam, uncontrolled seepage could occur. Placement of the very large depths of fill will present challenges associated with total and differential settlement affecting the existing spillway to remain and also various zones of the Dam’s embankment.

In the design process for retrofitting existing dams (when the scope includes the partial removal and replacement of an existing spillway pipe through the dam and placement of very large depths of fills over the downstream toe), it is critical to recognize where seepage paths can develop within the foundation, abutments, embankment fill of the dam or along structures penetrating the dam, such as the principal spillway culvert and foundations for the bridge and associated retaining walls. Excess seepage can also occur due to unanticipated pervious zones within the embankment, poor compaction adjacent to structures that penetrate the dam, and differential settlement from placement of large depths of fill over the downstream toe and existing spillway culvert which may create cracks and weak zones within the dam and hydraulic fracturing.

Why This Risk Is Critical: If the locations of seepage paths through the Dam are not recognized and appropriate seepage control features are not provided, then uncontrolled seepage could occur and cause poor performance and even failure of the Dam resulting from piping of soils where the resultant loss of soil causes voids to occur. Once these voids form, large quantities and high velocities of seepage continue, which then could likely result in a progressive failure of the Dam. Failures such as this can occur on small storm detention facilities as well as large volume facilities such as the notable catastrophe at the Teton Dam in Idaho. Therefore, great attention needs to be given to this risk assessment.

Risk Mitigation Strategy:

- Perform a thorough review of the existing design and construction documents and dam safety inspection reports and compare to our own new dam safety inspection to identify changes or issues.

Relevant Project Experience

JMT’s design of the Hillendale and Seven Oaks ponds required rehabilitation to correct leakage that was occurring through and below their embankment dams. Rehabilitation included providing a liner on the upstream face for the Hillendale Pond and adding an inverted filter on the downstream face of the Seven Oaks Pond.
Dedicated Dam Personnel

The Dam Designer and Geotechnical Engineers will be involved in preparation and review of the design and construction documents with other disciplines including Hydraulic and Structural Engineers. The Dam QC Inspector will continue to coordinate daily with the Dam Designer during all stages of retrofitting.

Role of VDOT and Other Agencies: VDOT’s role in the Dam Design process for this project will be one of oversight and approval. We do not anticipate any additional role for VDOT unless unforeseen circumstances arise. We will also coordinate with Virginia DCR for permitting. The LANE team will also participate and coordinate with MWAA; MWAA is anticipated to have a role in the coordination of access for the Dam work on their property as well as oversight on approvals of facilities that they will ultimately own and maintain responsibility.

Risk No. 2 – Utility Impacts

Risk Identification: Throughout the Route 606 project footprint, multiple overhead and underground electric and communication utilities are visible including a fiber optic line crossing Horsepen Dam. Additionally, Loudoun Water waterlines (up to 24”), sanitary sewer lines including the Potomac Interceptor Sanitary Main, gas lines of various sizes, and numerous private service lines for those listed above is obvious. These utilities will require that design and construction considerations be given to their relocation and/or protection. This is necessary to minimize service disruptions to utility customers and to allow the construction of the project to occur without delay. Frequent coordination with utility owners will need to take place. Without their cooperation, a major element of the project will be jeopardized and potential negative schedule impacts occur.

Why This Risk Is Critical: Due to the magnitude of the apparent utility work, critical planning, design and construction must take place. The cooperation of the utility owners mentioned above will be paramount to avoid disruption to the project. Information on proposed facility requirements, construction costs and the disposition of utility right-of-way must be known up front. Proposed facility installations and relocations must be well planned to accommodate not only today’s upgrade, but also accommodate the ultimate future build-out. Utilities must be cleared prior to starting construction in many areas of the project; especially those areas outside of the existing right-of-way where construction activities beyond the existing traffic lanes could begin as soon as right-of-way is cleared. Relocations and replacements for utilities could easily reveal themselves to be on the critical path of the project schedule and not under absolute control of the D-B team. Many of the decisions regarding relocation and/or replacement will be made by the utility owners whose obligations to the project may at times be in conflict with other projects in the area placing their attention to this project beyond the control of the D-B team and VDOT.
Risk Impact on the Project: Due to the extent of the utility work anticipated, the project schedule and utility construction costs will impact this project if not managed diligently from the very beginning. Furthermore, the utility services provided to the local businesses, residential areas, and the MWAA and NOAA facilities could face disruptions if the utility work is not implemented and managed as planned from the onset through completion. These disruptions have the potential to add to the previously mentioned cost and schedule impacts bringing the impacts full circle.

Risk Mitigation Strategy: Upfront planning with the utility owners if the first step in the mitigation. Meeting with them and developing a clear understanding of the goal and setting the stage for a partnership to accomplish this will then allow the D-B team to move forward with their tasks. We would then begin our systematic design and construction process including:

- Conduct early coordination with all utility owners including completion of UT9 Forms, defining right-of-way, “prior rights”, and establishing the relocation/reconstruction expectations and costs. At this time the required Utility Field Inspection meeting would also occur.
- Locate and designate precise locations of all existing utilities including service feeds by augmenting any previously provided location data by utilizing JMT’s in-house Subsurface Utility Exploration capabilities to generate supplemental utility location plans.
- Investigate alternative roadway designs to avoid or minimize impacts to existing utilities.
- Investigate a common utility duct bank for all underground utilities to condense utility locations.
- Determine appropriate locations and alignments for both underground and aerial facilities to accommodate the planned future widening of Route 606.
- Continue coordination with utility owners throughout the process exploring methods to both control costs and improve and expedite utility related design and construction.
- The LANE team’s Utility Relocation Manager will manage and coordinate all utility construction being performed at the site (by facility owners, self-performing construction staff and subcontractors.)

Role of VDOT and Other Agencies: We do not anticipate VDOT having any role beyond providing the D-B team with previously collected utility information pertinent to the project and providing approvals. The LANE team will coordinate directly with the utility companies; however, in the event that unforeseen circumstances arise or if the utility companies fail to participate to the necessary level, we would request oversight and assistance from VDOT to gain the necessary cooperation.

Risk No. 3 – Stormwater Management

Risk Identification: The primary goal of this project is to provide added vehicular capacity along heavily congested Route 606. To meet this goal, improvements to the SWM system throughout the project must be incorporated. From a Value Engineering viewpoint, costs associated with SWM add no value toward meeting our primary goal and divert funding from relieving traffic congestion. These required (but secondary) costs should be minimized to promote overall effective use of funds. To accomplish these economies, SWM facilities need to be made highly efficient in operation and must be cost effective. Key factors of this risk:

- The added lanes increase the impervious area of the watershed and will require SWM facilities at a minimum for water quality control and potentially for water quantity control.
- Numerous traditional SWM ponds are shown on the RFQ Plans; nearly half of those depicted are situated on MWAA or NOAA lands thus requiring specific design and coordination measures including required wildlife management.
Some outfalls are proposed to be treated using rain gardens. Infiltration of the underlying soil may not be optimum for this type of treatment.

Adding to the complexity of the SWM system is the need to design the drainage system for the future 8-lane roadway requiring significant variation between the ultimate SWM hydrology and the actual SWM hydrology to be controlled for the current 4-lane construction.

**Why this Risk is Critical:** Numerous traditional stormwater ponds directly impact MWAA and NOAA property. This will require alterations to security systems, the acquisition of permanent easements as well as extensive coordination with these agencies to develop a SWM feature that can be stalled to function without impact to the current operation of the respective facility’s use. Final approval would be required from MWAA or NOAA. The process to acquire right-of-way or easements on federally owned land can be lengthy thus impacting the project schedule. Changes to the airport security system could be costly.

Rain gardens rely on infiltration and retention of rainfall to remove pollutants. Inflow and outflow parameters are critical for effective operation; rain gardens are not good at treating large variations in inflows. The SWM design must accommodate not only runoff from the current 4-lane concept but also the larger runoff from the future 8-lane concept. In addition, infiltration into the underlying existing soil may not be optimum for this type of treatment; it’s reported to have a high water table and poor infiltration characteristics. All of this would lead to a more in-depth design process.

**Risk Impact on the Project:** Increased stormwater risks could impact the need for environmental documentation and permitting, or require renewed negotiations with the VDOT and the agencies mentioned above; either case introduces a risk of project delay and approval.

**Risk Mitigation Strategy:**

- Complete a detailed Conceptual Drainage Report shortly after NTP to evaluate and define the SWM concept. Present refined criteria, more detailed design, and investigate alternative SWM approaches.
- Investigate the drainage requirements for the 4-lane, 6-lane, and 8-lane roadway concepts. Identify components that may best be addressed during future build-outs. Coordinate the most effective systems and phasing with VDOT and document decisions for future implementation.
- Consider use of proven proprietary SWM devices to reduce the need for additional right-of-way and reduce impacts to the airport security systems.
- Conduct early coordination with MWAA in relation to impacts to their property and security systems. Resolve responsibilities to install individual components (fences, perimeter roads, other sensors, etc.) and establish timing for implementation. LANE and JMT have long work histories with MWAA and understand their security requirements. JMT has designed modifications to the NOAA site that lies adjacent to Route 606.

**Role of VDOT and Other Agencies:** VDOT’s role in the SWM Design process for this project will be one of oversight and approval. The LANE team will participate and coordinate with MWAA, NOAA, and Loudoun County. VDOT would also participate if additional environmental documentation is required. We do not anticipate any additional role for VDOT unless unforeseen circumstances arise.

MWAA and NOAA are anticipated to have a role in the coordination of access for the work on their property as well as oversight on approvals of facilities that will occupy easements on their land.
ATTACHMENT 3.1.2
SOQ CHECKLIST
Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

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**DBE statement within Letter of Submittal** confirming Offeror is committed to achieving the required DBE goal

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<td>Section 3.3.1</td>
<td>yes</td>
<td>3-5</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>
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<td>Key Personnel Resume – Quality Assurance Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.2</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
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<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 3.3.1</td>
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<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>
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<td>Key Personnel Resume – Lead Geotechnical 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>Key Personnel Resume – Dam Design and Construction Specialist (optional)</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.6</td>
<td>no</td>
<td>Appendix Attachment 3.3.1</td>
</tr>
</tbody>
</table>
## ATTACHMENT 3.1.2

### Project: 0606-053-983, P101

#### STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<tr>
<td>Organizational chart</td>
<td>NA</td>
<td>Section 3.3.2</td>
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<td>Organizational chart narrative</td>
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<td>Section 3.3.2</td>
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### Experience of Offeror’s Team

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<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>SOQ Page Reference</th>
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<td>Lead Contractor Work History Form</td>
<td>Attachment 3.4.1(a)</td>
<td>Section 3.4</td>
<td>Appendix Attachment 3.4.1(a)</td>
</tr>
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<td>Lead Designer Work History Form</td>
<td>Attachment 3.4.1(b)</td>
<td>Section 3.4</td>
<td>Appendix Attachment 3.4.1(b)</td>
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<td>Dam Construction Work History Form</td>
<td>Attachment 3.4.1(c)</td>
<td>Section 3.4</td>
<td>Appendix Attachment 3.4.1(c)</td>
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<td>Dam Design Work History Form</td>
<td>Attachment 3.4.1(d)</td>
<td>Section 3.4</td>
<td>Appendix Attachment 3.4.1(d)</td>
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### Project Risk

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<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<td>Identify and discuss three critical risks for the Project</td>
<td>NA</td>
<td>Section 3.5.1</td>
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ATTACHMENT 2.10
FORM C-78-RFQ
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO.           C00097529DB64
PROJECT NO.:      0606-053-983, P101

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 07/12/2013 (Date)

2. Cover letter of RFQ Addendum No. 1 08/09/2013 (Date)

3. Cover letter of (Date)

Signature 8-19-2013 Date
ATTACHMENT 3.2.6
AFFILIATED AND SUBSIDIARY COMPANIES
OF THE OFFEROR
ATTACHMENT 3.2.6
State Project No. 0606-053-983

Affiliated and Subsidiary Companies of the Offeror

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

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

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
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</tbody>
</table>

1 of 1
ATTACHMENT 3.2.7(a)
DEBARMENT FORM- PRIMARY COVERED TRANSACTIONS
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

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

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

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

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

[Signature] 8/6/13  [Regional Vice President, Mid-Atlantic Region Title]

[The Lane Construction Corporation Name of Firm]
ATTACHMENT 3.2.7(b)
DEBARMENT FORM- LOWER TIER COVERED
TRANSACTIONS
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

[Signature]  July 31, 2013  Senior Vice President
Date  Title

Johnson, Mirmiran and Thompson, Inc.  Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

______________________________
Signature

July 24, 2012
Date

______________________________
Vice President

______________________________
Title

EEE Consulting, Inc.

______________________________
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

Signature 7/29/13

President
Title

GeoConcepts Engineering, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

Signature: [Signature] Date: July 22, 2013

Vice President

Title

RJM Engineering, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

[Signature] [Date] July 30, 2013 [President] [Title]

Quinn Consulting Services, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

Signature  Date  Regional Vice President  Title

Froehling & Robertson, Inc.
Name of Firm
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

[Signature] 8/13/2013  [Managing Partner]
[Date] [Title]

Appraisal Review Specialists, LLC
Name of Firm
ATTACHMENT NO. 3.2.7(h)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0606-053-983

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

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

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

Signature: [Signature]
Date: 8-16-13
Title: [Title]

Name of Firm: [Name of Firm]
ATTACHMENT 3.2.8
VDOT PREQUALIFIED SUPPORTING DOCUMENTATION
L002
THE LANE CONSTRUCTION CORPORATION
PREQ. EXP : 06/30/2014

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

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

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

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

===============================================================================

L070
LANCO PAVING, INC.
PREQ. EXP : 06/30/2013

--PREQ ADDRESS ------------------ WORK CLASSES (LISTED BUT NOT LIMITED TO)
11010 BILL TUCK HIGHWAY          002 - GRADING
VIRGILINA, VA 24598-3104         004 - ASPHALT CONCRETE PAVING
PHONE : 434-572-6713             101 - EXCAVATING
FAX   : 434-572-8105             006 - PORTLAND CEMENT CONCRETE PAVING
                                 007 - MINOR STRUCTURES
                                 045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: NUNN, TODD LAWRENCE
EMAIL: LANCOPAVING@WILDBLUE.NET

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

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

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 This list includes all prequalified levels
 as of 06/27/2013
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This list includes all prequalified levels
as of 06/27/2013
-L-
August 8, 2013

Virginia Department of Transportation
John Daoulas, PE Alternate Project Delivery Office
1401 East Broad Street
Richmond, VA 23219

RE: The Lane Construction Corporation
Request for Qualifications
Route 606 Loudoun County Parkway/Old Ox Road Reconstruction and Widening
Contract Number: C0009752DB64
Estimated Value of Project: $105,000,000.00

Dear Mr. Daoulas:

This letter will serve to confirm that The Lane Construction Corporation is a highly regarded and valued client of Aon Construction Services and the sureties, Zurich American Insurance Company, Fidelity and Deposit Company of Maryland and Liberty Mutual Insurance Company (the “co-sureties”). Each surety company is licensed to conduct surety business in the state of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury’s Listing of Approved Sureties (Department Circular 570) dated July 1, 2013. Furthermore, each surety company is rated “A” or better by A.M. Best Company, both with Financial Size Category “XV”.

The Lane Construction Corporation has developed a strong track record of completing complex construction projects on time and within the available budget. In the recent past, the co-sureties have executed bonds on behalf of The Lane Construction Corporation for individual projects with contract values approaching $350,000,000 and corresponding backlogs approaching $2,000,000,000. At this time, The Lane Construction Corporation has more than sufficient bonding capacity available to meet the requirements of this project. The co-surety is prepared to provide 100% Performance and 100% Labor and Materials Payment Bonds for this Project as proposed in the RFQ, in the amount of the anticipated cost of construction should The Lane Construction Corporation be the successful bidder and enter into a contract for this Project.

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

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

Sincerely,

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

Theresa E. Rowedder
Attorney-in-Fact
ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY

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

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

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

ATTEST:

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

By: ________________  
Assistant Secretary  
Eric D. Barnes

Vice President  
Thomas O. McClellan

State of Maryland  
City of Baltimore  
On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant Secretary, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

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

POA-F 063-0474
EXTRACT FROM BY-LAWS OF THE COMPANIES

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

CERTIFICATE

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,
this 6th day of August, 2013.

[Signature]

Geoffrey Delisio, Vice President
POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, do hereby name, constitute and appoint, JEU. M. FREEMAN, KEVIN A. WHITE, MARK R. HERENDOERFF, SUSAN M. KEDRAN, JEAN C. ORREDA, MARIA CHAVES, BRIAN DRISCOLL, THERESE E. RUDER, JANE GILSON,

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer of the Companies and the corporate seals of the Companies have been affixed thereunto this 31st day of MAY 2012.

STATE OF WASHINGTON
COUNTY OF KING

On this 23rd day of MAY, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, Peerless Insurance Company and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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

By: [Signature]
KD Riley, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 8th day of August, 2013.

By: [Signature]
David M. Carey, Assistant Secretary
ATTACHMENT 3.2.10
SCC AND DPOR INFORMATION
Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>DPOR Registered Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Lane Construction Corporation</td>
<td>F0254476</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>90 Fieldstone Court, Chesire, CT 06410</td>
<td>Contractor (Class A)</td>
<td>2701011871</td>
<td>1/31/2014</td>
</tr>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>F1499013</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>9201 Arboretum Pkwy Suite 310, Richmond, VA 23236</td>
<td>Business Entity Branch Office Registration</td>
<td>0411000029</td>
<td>2/28/2014</td>
</tr>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>F1499013</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>13921 Park Center Rd, Herndon, VA 20171</td>
<td>Business Entity Branch Office Registration</td>
<td>0411000441</td>
<td>2/28/2014</td>
</tr>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>F1499013</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>272 Bendix Rd, Suite 260, Virginia Beach, VA 23452</td>
<td>Business Entity Branch Office Registration</td>
<td>0411000440</td>
<td>2/28/2014</td>
</tr>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>F1499013</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>72 Loveton Circle, Sparks, MD 21152</td>
<td>Business Entity Registration</td>
<td>0407001314</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>EEE Consulting, Inc.</td>
<td>05049416</td>
<td>Corporation</td>
<td>Active</td>
<td>8525 Bell Creek Road, Mechanicsville, VA 23116</td>
<td>Business Entity Registration</td>
<td>0407003798</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>GeoConcepts Engineering Inc.</td>
<td>05167671</td>
<td>Corporation</td>
<td>Active</td>
<td>19955 Highland Vista Drive Suite 170, Ashburn, VA 20147</td>
<td>Business Entity Registration</td>
<td>0407004404</td>
<td>12/31/2013</td>
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<tr>
<td>RJM Engineering Inc.</td>
<td>F1296021</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>6031 University Blvd, Suite 290, Ellicott City, MD 21043</td>
<td>Business Entity Registration</td>
<td>0407005491</td>
<td>12/31/2013</td>
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### SCC and DPOR Information

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<tr>
<th>Business Entity Name</th>
<th>State ID</th>
<th>Business Type</th>
<th>Address</th>
<th>Business Entity Branch Office Registration</th>
<th>Date of Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJM Engineering Inc.</td>
<td>F1296021</td>
<td>Foreign Corporation</td>
<td>700 Princess St., Suite 207, Alexandria, VA 22314</td>
<td>0411000614</td>
<td>2/28/2014</td>
</tr>
<tr>
<td>Quinn Consulting Services Incorporated</td>
<td>04925517</td>
<td>Corporation</td>
<td>14160 Newbrook Drive, Suite 220, Chantilly, VA 20151</td>
<td>0407003733</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Froehling &amp; Robertson Inc.</td>
<td>00272112</td>
<td>Corporation</td>
<td>22923 Quicksilver Drive, Suite 111, Sterling, VA 20166</td>
<td>0411000051</td>
<td>2/28/2014</td>
</tr>
<tr>
<td>Appraisal Review Specialists LLC</td>
<td>T0490682</td>
<td>Foreign Limited Liability Company</td>
<td>3058 Mount Vernon Road, Suite 12, Hurricane, WV 25523</td>
<td>4008001735</td>
<td>4/30/2014</td>
</tr>
<tr>
<td>V. Lynn Kelsey</td>
<td></td>
<td>Sole Proprietor – SCC Not Required</td>
<td>Non-Professional Services – DPOR Not Required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Individual's Name</th>
<th>Office Location Where Professional Services will be Provided (City/State)</th>
<th>Individual's DPOR Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>Robert G. Reed</td>
<td>Herndon, VA</td>
<td>Haymarket, VA</td>
<td>Professional Engineer</td>
<td>0402018550</td>
<td>4/30/2015</td>
</tr>
<tr>
<td>Johnson Mirmiran &amp; Thompson, Inc.</td>
<td>Michael E. Leffler</td>
<td>Sparks, MD</td>
<td>Laurel, MD</td>
<td>Professional Engineer</td>
<td>0402019033</td>
<td>2/28/2014</td>
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<tr>
<td>GeoConcepts Engineering Inc.</td>
<td>Tadeusz W. Lewis</td>
<td>Ashburn, VA</td>
<td>Ashburn, VA</td>
<td>Professional Engineer</td>
<td>0402021276</td>
<td>4/30/2014</td>
</tr>
<tr>
<td>GeoConcepts Engineering Inc.</td>
<td>Rebecca L. Smith-Zakowicz</td>
<td>Ashburn, VA</td>
<td>Reston, VA</td>
<td>Certified Professional Geologist</td>
<td>2801001708</td>
<td>8/31/2015</td>
</tr>
<tr>
<td>Quinn Consulting Services Inc.</td>
<td>John K. Vicinski</td>
<td>Chantilly, VA</td>
<td>Chantilly, VA</td>
<td>Professional Engineer</td>
<td>0402026380</td>
<td>8/31/2015</td>
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<td>N/A (Sole Proprietorship)</td>
<td>Valerie Lynn Kelsey</td>
<td>Spotsylvania, VA</td>
<td>Spotsylvania, VA</td>
<td>Real Estate Appraiser</td>
<td>4001010298</td>
<td>11/30/2013</td>
</tr>
</tbody>
</table>
THE LANE CONSTRUCTION CORPORATION

General
SCC ID: P0254476
Entity Type: Foreign Corporation
Jurisdiction of Formation: CT
Date of Formation/Registration: 7/24/1972
Status: Active
Shares Authorized: 11700

Principal Office
90 FIELDSTONE COURT
CHESHIRE CT06410

Registered Agent/Registered Office
CT CORPORATION SYSTEM
4761 COX RD STE 301
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 1/5/2004

Johnson, Mimran & Thompson, Inc.

General
SCC ID: F1499013
Entity Type: Foreign Corporation
Jurisdiction of Formation: MD
Date of Formation/Registration: 10/17/2006
Status: Active
Shares Authorized: 1000

Principal Office
72 LOVETON CIRCLE
SPARKS MD21152

Registered Agent/Registered Office
ROBERT GALLAGHER
9201 ARBORETUM PKY STE 140
RICHMOND VA 23236
CHESTERFIELD COUNTY 120
Status: Active
Effective Date: 9/6/2007

Select an action
- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- View eFile transaction history
- Manage email notifications

New Search Home
EEE Consulting, Inc.

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

Principal Office
825 BELL CREEK RD
MECHANICSVILLE VA23116

Registered Agent/Registered Office
CT CORPORATION SYSTEM
4701 COX RD STE 301
GLÉN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 5/15/2012

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

New Search | Home

GeoConcepts Engineering, Inc.

General
SCC ID: 05167671
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 2/25/1999
Status: Active
Shares Authorized: 5000

Principal Office
19955 HIGHLAND VISTA DRIVE
SUITE 170
ASHBURN VA20147

Registered Agent/Registered Office
VIVIAN LEWIS
GEOCONCEPTS ENGINEERING INC
19955 HIGHLAND VISTA DR #170
ASHBURN VA 20147
LOUDOUN COUNTY 153
Status: Active
Effective Date: 11/24/2004

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

New Search | Home
ATTACHMENT 3.2.10.2
DPOR SUPPORTING DOCUMENTATION
FOR EACH OFFICE
Details of license number 2701011871

Name: THE LAKE CONSTRUCTION CORPORATION
Doing Business As: VIRGINIA PAINTING COMPANY
License Number: 2701011871
License Description: Contractor Class A
Address: 90 FIELDSTONE COURT
CHESIRE, CT 06410
Business Type: Building (Bld)
Specialties-Classifications: Highway / Heavy (H/H)
Initial Certification Date: 1972-10-12
Expiration Date: 2014-01-31

Details of license number 0411000029

Name: JOHNNSON NR/KAIRAN B. THOMPSON INC.
License Number: 0411000029
License Description: Business Entity Branch Office Registration
Business Name: JOHNNSON NR/KAIRAN B. THOMPSON INC.
Address: 9201 ARBORETUM PKWY SUITE 310
RICHMOND, VA 23236
Initial Certification Date: 1992-03-24
Expiration Date: 2014-02-28

Details of license number 0411000441

Name: JOHNNSON NR/KAIRAN B. THOMPSON INC.
License Number: 0411000441
License Description: Business Entity Branch Office Registration
Business Name: JOHNNSON NR/KAIRAN B. THOMPSON INC.
Address: 13921 PARK CENTER RD
HERNDON, VA 20171
Initial Certification Date: 2006-03-06
Expiration Date: 2014-02-28
Details of license number 0407004404

Name: GEOCONCEPTS ENGINEERING INC
Business Type: Business Entity Registration
Address: 19955 HIGHLAND VISTA DRIVE SUITE 170
ASHBURN, VA 20147
Initial Certification Date: 2003-03-28
Expiration Date: 2013-12-31

Details of license number 0407005491

Name: RJM ENGINEERING INC
Business Type: Business Entity Registration
Address: 6031 UNIVERSITY BLVD SUITE 290
ELLIOTT CITY, MD 21043
Initial Certification Date: 2009-07-21
Expiration Date: 2013-12-31

Details of license number 0411000614

Name: RJM ENGINEERING INC
Business Type: Business Entity Branch Office Registration
Address: 700 PRINCESS ST. STE 207
ALEXANDRIA, VA 22314
Initial Certification Date: 2009-07-21
Expiration Date: 2014-02-28
### Details of license number 0407003733

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<tr>
<td>Name</td>
<td>QUINN CONSULTING SERVICES INC</td>
</tr>
<tr>
<td>License Number</td>
<td>0407003733</td>
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<tr>
<td>License Description</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>14160 NEVBOOK DR SUITE 220 CHANTILLY, VA 20151</td>
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<td>Initial Certification Date</td>
<td>1998-03-05</td>
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### Details of license number 0411000051

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<td>Name</td>
<td>FROEHLING &amp; ROBERTSON INC</td>
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<tr>
<td>License Number</td>
<td>0411000051</td>
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<tr>
<td>License Description</td>
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<td>Business Name</td>
<td>FROEHLING &amp; ROBERTSON INC CORP</td>
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<td>Business Type</td>
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<tr>
<td>Address</td>
<td>22923 QUICKSILVER DR STE 111 STERLING, VA 20166</td>
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<td>Initial Certification Date</td>
<td>1992-04-08</td>
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<td>Expiration Date</td>
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### Details of license number 4008001735

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<td>APPRAISAL REVIEW SPECIALISTS LLC</td>
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<tr>
<td>License Number</td>
<td>4008001735</td>
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<tr>
<td>License Description</td>
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<tr>
<td>Business Type</td>
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<tr>
<td>Address</td>
<td>3058 MOUNT VERNON ROAD SUITE 12 HURRICANE, WY 25523</td>
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<tr>
<td>Initial Certification Date</td>
<td>2012-04-05</td>
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<td>Expiration Date</td>
<td>2014-04-30</td>
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</table>
ATTACHMENT 3.2.10.3
DPOR SUPPORTING DOCUMENTATION
FOR KEY PERSONNEL
Details of license number 0402018550

Name: REED, ROBERT G.  
License Number: 0402018550  
License Description: Professional Engineer License  
Address: HAMMONDS FT, 19, 2016  
Initial Certification Date: 1988-06-17  
Expiration Date: 2015-04-30  

No Open Complaints

“Open Complaints” reflect only those complaints against registrants for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only these complaints 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 56.4-193]. Members of the public may request official records and obtain copies only after a complaint investigation is closed.

No Closed Complaints

“Closed Complaints” reflect complaints against registrants closed since 1996. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about closed complaints, see the department’s Public Records Access or contact the department’s Information Management Section at (804) 786-5885 or publicrecords@dpor.virginia.gov.

The information on this page was last updated on 2015-08-06.

Details of license number 0402019033

Name: LEFFLER, MICHAEL E.  
License Number: 0402019033  
License Description: Professional Engineer License  
Address: LAUREL MS, 20723  
Initial Certification Date: 2014-02-28  
Expiration Date: 2017-02-28  

No Open Complaints

“Open Complaints” reflect only those complaints against registrants for which a departmental investigation has determined that sufficient evidence exists to establish probable cause of a violation of the law or regulations. Only these complaints 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 56.4-193]. Members of the public may request official records and obtain copies only after a complaint investigation is closed.

No Closed Complaints

“Closed Complaints” reflect complaints against registrants closed since 1996. Cases closed without disciplinary action are purged after three years in accordance with DPOR’s record retention policy.

To inquire about closed complaints, see the department’s Public Records Access or contact the department’s Information Management Section at (804) 786-5885 or publicrecords@dpor.virginia.gov.

The information on this page was last updated on 2015-08-06.
<table>
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<tr>
<td>0402021276</td>
<td>GEORCE CONSULTING INC</td>
<td>Business Entity Registration</td>
<td>2013-12-31</td>
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**No Open Complaints**

*Open Complaints* reflect only those complaints against registrants 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 51.5-168). Members of the public may review official records and obtain copies only after a complaint investigation is closed.

**No Closed Complaints**

*Closed Complaints* reflect complaints against registrants closed since 1993. Cases closed without disciplinary action are purged after three years in accordance with DPOR's record retention policy.

To inquire about closed complaints, see the department's Public Records Access or contact the department's Information Management Section at (804) 627-8989 or publicrecords@dpor.virginia.gov.

The information on this page was last updated on 2013-08-08.
ATTACHMENT 3.2.10.4
DPOR SUPPORTING DOCUMENTATION
FOR NON-APELSCIDLA REGULATED SERVICES
ATTACHMENT 3.3.1
KEY PERSONNEL RESUMES
ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: ROBERT PORTLEY | DISTRICT MANAGER

b. Project Assignment: DESIGN-BUILD PROJECT MANAGER

c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION

d. Years experience: With this Firm 8 Years With Other Firms 16 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.):

   The Lane Construction Corporation, 2013 – Present: District Manager – As District Manager, Mr. Portley is responsible for all construction operations on projects under his command. Responsibilities include: design (when appropriate) staffing, budget, schedule, and Lane’s authority and representation with the Owner.

   The Lane Construction Corporation, 2005 – 2012: Deputy Project Director – Construction – As Deputy Project Director, Mr. Portley manages construction staffs and crews in addition to interfacing with the lead designers, engineering specialists, subcontractors, and several stakeholders including federal, state, county, and transit authority agencies.

   William P. Young Construction, 2003 – 2005: Project Executive – As Project Executive, Mr. Portley was responsible for the field operations of various civil construction projects throughout California.

   Dillingham Construction, 1999 – 2003: Vice President of Operations – As the Vice President of Operations, Mr. Portley was responsible for the field operations of various construction projects, both civil and industrial. Projects he oversaw included power plants, spillway gate rehabilitation, and water treatment plants.

   Atkinson Construction, 1998 – 2001: Construction Manager – As Construction Manager he was responsible for various heavy civil and highway projects throughout the United States.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
   University of New South Wales (Sydney, Australia) / BS / 1969 / Engineering

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

g. Document the extent and depth of your experience and qualifications relevant to the Project.
   1. 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.)

VDOT I-495 Express Lanes, Fairfax County, VA

<table>
<thead>
<tr>
<th>Name of Firm</th>
<th>Project Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Lane Construction Corporation</td>
<td>D-B Project Manager</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2013</td>
</tr>
</tbody>
</table>

Specific Responsibilities: As LANE’s D-B Project Manager, as part of the Flour-Lane JV, Mr. Portley was responsible for the management of this $1.5B award-winning signature project that included the construction of four new general purpose, tolled lanes (two in each direction) on the outside of 14 miles of existing lanes of the Capital Beltway surrounding metropolitan Washington DC, the reconstruction of 12 key interchanges, and 57 bridges including pedestrian/bicycle facilities improvements on 10 roads over the Beltway as well as replacement of a pedestrian bridge and another lengthened, ROW acquisition services and utility relocation. The project also included the installation of a large stormwater pond embankment above Chain Bridge Road. As overall D-B Project Manager, Mr. Portley managed a construction staff and crew of approximately 900 workers in addition to interfacing with the owner, designers, engineering specialists, numerous subcontractors, and key project stakeholders that included federal, state, county, and transit authority agencies. Under Mr. Portley’s leadership, the design-build team was recognized for its outstanding safety record (over 5 million hours without a lost time incident) and overall project execution. The project was the recipient of numerous awards and was delivered a month ahead of schedule. Project relevancy to Route 606 includes road widening, bridge construction, shared-use paths, SWM embankment, relocation of utilities, sitework, and all associated project management functions.
### Olmsted Lock Replacement, Olmsted, IL

**Name of Firm:** Atkinson-Dillingham-Lane JV  
**Project Role:** Project Director  
**Beginning Date:** 1999  
**End Date:** 2001

**Specific Responsibilities:** As Project Director of the Atkinson-Dillingham-Lane JV on the U.S. Army Corps of Engineers' (USACE) $270M Olmsted Locks Project in Illinois, Mr. Portley managed all aspects of this project including construction management and subcontractor management and coordination with the owners, stakeholders, and designers. The project included the construction of twin 1200 foot long locks, significant excavation, foundation pile driving, placement of 610,000 cubic yards of concrete, installation of the mechanical equipment, and the removal of the cellular cofferdam surrounding the locks. This massive undertaking on the Ohio River is one significant phase of the largest project ever undertaken by USACE - the Olmsted Dam and Locks Project. **Project relevancy to Route 606 includes large dam construction, bridge construction, drainage, stormwater management, and all associated project management functions.**

### West Dam Project, CA

**Name of Firm:** Atkinson-Washington-Zachry  
**Project Role:** Project Director  
**Beginning Date:** 1995  
**End Date:** 1998

**Specific Responsibilities:** Mr. Portley served as the Project Director and directed construction of multiple contracts associated with the West Dam Project for the Metropolitan Water District of Southern CA (MWD) which included the construction of a 67-million cubic yard clay-core rock-fill dam ($385M), Pressure Tunnel ($13M) and I/O Tower ($41M). The West Dam embankment is one of the largest dam embankments in the U.S. The project team excavated 5.5 million cubic yards of earth for the Eastside Dam inlet/outlet approach channel, more than 6 million cubic yards of earth for the dam foundation, and 70 million cubic yards of rock for the dam embankment. The 270-foot inlet/outlet tower, including an access bridge, required 95,000 cubic yards of concrete and 9 million pounds of reinforcing steel. The mechanical package included an emergency gate, valves, along with 40,000 feet of miscellaneous piping. The electrical scope incorporated multiple raceways, instrumentation and communications ducts. **Project relevancy to Route 606 includes dam construction, drainage, stormwater management, and all associated project management functions.**

### Gallipolis Lock Replacement Project, Gallipolis, WV

**Name of Firm:** GLR Constructors  
**Project Role:** Project Director  
**Beginning Date:** 1990  
**End Date:** 1993

**Specific Responsibilities:** The Gallipolis Locks and Dam was built on the Ohio River near Gallipolis Ferry, WV, as part of a series of locks and dams to allow navigation year-round. It began operation in August 25, 1937, and final construction was completed in October 1937. Fifty years later, construction began on the USACE $244M Lock Replacement project to build bigger lock chambers, capable of locking through modern-sized tows and barges. As the Project Director, Mr. Portley managed the construction of a main lock chamber 110-feet wide by 1,200-feet long with an auxiliary lock chamber 110-feet wide by 600-feet long. This twin lock project involved 880,000 cubic yards of mass concrete, 14 million cubic yards of excavation and the installation of heavy mechanical equipment including multi-crane picks, 100 ton plus loads and a marine fleet which included cranes and the other heavy equipment on barges. Construction activities also included a 960-foot long precast girder bridge over water, roadwork, and paving. Mr. Portley managed all aspects of this project including construction management and subcontractor management and coordination with the USACE as well as designers. **Project relevancy to Route 606 includes dam construction, drainage, stormwater management, and all associated project management functions.**

### Upper Works of the Calaveras Project, Sierra Nevada, Tuolumne County, CA

**Name of Firm:** Sierra Constructors  
**Project Role:** Area Manager  
**Beginning Date:** 1984  
**End Date:** 1989

**Specific Responsibilities:** As the Area Manager, Mr. Portley supervised the construction of the Upper Works of the Calaveras Design-Build Project, which consisted of a concrete-faced rock-fill dam (New Spicer Meadow), a mass concrete dam (North Fork Dam), a power house, diversion tunnel and inlet tower. His responsibilities included management of all construction activities, oversight and direction of all subcontractors, and interfacing with the owner(s) of the joint development project and their designer(s)- Northern California Power Agency (NCPA) and Calaveras County Water District (CCWD). In developing the project, Mr. Portley worked with NCPA and CCWD to coordinate with a large group of stakeholders including the Federal Energy Regulatory Commission (FERC), U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, U.S. Forest Service, U.S. Bureau of Reclamation, California Department of Fish and Game, California Department of Water Resources, and various other federal, state and county agencies to create a multipurpose project of maximum benefit to the region and the environment. **Project relevancy to Route 606 includes dam construction, drainage, stormwater management, utilities, and all associated project management functions.**
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: **JOHN VICINSKI, PE, DBIA</td>
</tr>
<tr>
<td>b. Project Assignment: <strong>QUALITY ASSURANCE MANAGER</strong></td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: <strong>QUINN CONSULTING SERVICES, INC.</strong></td>
</tr>
<tr>
<td>d. Years experience: With this Firm 5 Years With Other Firms 25 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><strong>Quinn Consulting Services, Inc., Quality Assurance Manager, 2008 – Present:</strong> Mr. Vicinski has worked as a Quality Assurance Manager exclusively for D-B projects. His project history includes:</td>
</tr>
<tr>
<td>- January 2011 to Present. <strong>Quality Assurance Manager (QAM)</strong> for the FHWA Fairfax County Improvements (Phase III) D-B Project.</td>
</tr>
<tr>
<td>- April 2010 to December 2010. <strong>Quality Assurance Manager (QAM)</strong> for the VDOT Waxpool Road and Loudoun County Parkway Interchange Improvements D-B Project.</td>
</tr>
<tr>
<td>- June 2008 to November. <strong>Quality Assurance Manager (QAM)</strong> for the VDOT Battlefield Parkway D-B Project.</td>
</tr>
<tr>
<td>- June 2008 to November 2008. <strong>Quality Assurance Manager (QAM)</strong> for the VDOT D-B Gilberts Corner Project which is includes (4) traffic circles near the intersection of Rt..15 and Rt. 50 in Loudoun County, VA.</td>
</tr>
<tr>
<td><strong>Alpha Corporation, Vice President, 1998 – Present:</strong> As vice president and director of transportation services in Virginia, he managed up to 25 contracts simultaneously primarily providing CEI services on D-B, district-wide, and project specific projects for VDOT and other transportation clients. Some of those projects included:</td>
</tr>
<tr>
<td>- 2006-2008 – Client: VDOT. Project Director in charge of providing CEI inspectors and support services on I-66 Gainesville Interchange project.</td>
</tr>
<tr>
<td>- 2006-2008 – Client: City of Alexandria. Project Director in charge of providing CEI services on Monroe Street Design-Build project.</td>
</tr>
<tr>
<td>- 2005-2008 – Client: Prince William County. Project Director in charge of providing CEI services on transportation projects in Prince William County.</td>
</tr>
<tr>
<td>- 2005-2008 – Client: Fairfax County. Project Director in charge of providing CEI services on environmental and building projects in Fairfax County.</td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td><strong>University of Pittsburgh (Johnstown, PA) / BS / 1982 / Civil Engineering Technology</strong></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td><strong>1992 / Civil Engineer / 0402026380</strong></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
<td>1. <strong>Note your specific responsibilities and authorities for each assignment, not those of the firm.</strong></td>
</tr>
<tr>
<td>2. <strong>Note whether experience is with current firm or with other firm.</strong></td>
</tr>
<tr>
<td>3. <strong>Provide beginning and end dates for each assignment.</strong> (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>
### VDOT Fairfax County Parkway, Fairfax, VA

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Quinn Consulting Services, Inc.</th>
<th>Project Role:</th>
<th>Quality Assurance Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>2010</td>
<td>End Date:</td>
<td>2012</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Quality Assurance Manager on this 22 million dollar interchange and roadway FHWA/VDOT D-B project. Project elements included: the construction of a six-lane divided limited access highway; the Franconia-Springfield Parkway interchange improvements; a shared use path alongside a portion of relocated Rolling Road; sound barriers along relocated Rolling Road and Ramp D; and a new bridge over the Fairfax County Parkway. Responsibilities included overseeing QA and QC staff to make certain the project was completed in accordance with the contract documents and VDOT QA/QC Guidelines. Other responsibilities included facilitating preparatory meetings before new activities were begun, documenting asphalt and aggregate testing within the FHWA QL Pay System, and coordinating QA laboratory testing services. **Project relevancy to Route 606 includes road construction, bridge construction, shared-use paths, SWM pond, utilities, sitework, and all associated QAM functions.**

### VDOT I-495 Express Lanes, Fairfax County, VA

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Quinn Consulting Services, Inc.</th>
<th>Project Role:</th>
<th>Area Quality Assurance Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>2008</td>
<td>End Date:</td>
<td>2012</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Area Quality Assurance Manager on the D-B widening of 14 miles of the Capital Beltway. The 1.5 billion dollar project adds two-lanes in each beltway direction, replaces more than 50 bridges and overpasses, upgrades 10 interchanges, and improves bike and pedestrian access. Responsible for managing teams of inspectors to provide quality control inspection and testing services in accordance with the project specific quality assurance/quality control plan and VDOT QA/QC Guidelines. Responsibilities also include interfacing with project design engineers on RFI’s, field design changes (FDC’s), and non-compliance reports (NCR’s) and daily coordination with QA and general engineering consultant (GEC) personnel. **Project relevancy to Route 606 includes road construction, bridge construction, shared-use paths, SWM embankment, utilities, sitework, and all associated QAM functions.**

### Route 50 Traffic Calming (at Gilberts Corner), Loudoun County, VA

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Quinn Consulting Services, Inc.</th>
<th>Project Role:</th>
<th>Quality Assurance Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>2008</td>
<td>End Date:</td>
<td>2008</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Quality Assurance Manager on construction of four (4) new traffic circles or roundabouts being installed as part of the Rt. 50 traffic calming initiative at and near the intersection of Rt. 15 and Rt. 50 in Loudoun County, VA. Responsible for overseeing all QA and QC activities and assuring that work was performed in accordance with the project specific QA/QC plan and VDOT QA/QC Guidelines. In the initial stages of the project, helped write the QA/QC plan and assemble a team of QA inspectors and QC technicians that had the required experience and certifications to implement the plan and track all project documentation. Reviewed and signed monthly pay estimates after comparing pay requests with actual progress and compliance with minimum QA/QC technical standards. **Project relevancy to Route 606 includes road construction, SWM, relocation of utilities, sitework, and all associated QAM functions.**

### VDOT Waxpool Road, Loudoun County, VA

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Quinn Consulting Services, Inc.</th>
<th>Project Role:</th>
<th>Quality Assurance Manager</th>
</tr>
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<tbody>
<tr>
<td>Beginning Date:</td>
<td>2010</td>
<td>End Date:</td>
<td>2010</td>
</tr>
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</table>

**Specific Responsibilities:** Quality Assurance Manager for the demolition of existing medians and adding turn lanes in each direction. Project elements included maintenance of traffic, erosion and sediment control, demolition, removal and replacement of unsuitable materials, drainage pipe and associated structures, signalization, subbase, asphalt, permanent striping, incidental concrete, and signage. Responsible for overseeing all QA and QC activities and assuring that work was performed in accordance with the project specific QA/QC plan and VDOT QA/QC Guidelines. Additional responsibilities included holding a series of preparatory meetings for each activity, monitoring QC inspection and documentation, attending progress meetings, and verifying and signing contractor monthly pay estimates. **Project relevancy to Route 606 includes road construction, SWM, relocation of utilities, sitework, and all associated QAM functions.**

### Battlefield Parkway, Town of Leesburg, VA

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Quinn Consulting Services, Inc.</th>
<th>Project Role:</th>
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<tr>
<td>Beginning Date:</td>
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<td>End Date:</td>
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</tr>
</tbody>
</table>

**Specific Responsibilities:** Quality Assurance Manager on construction of Battlefield Blvd. extension East of the Town of Leesburg. Project elements included: right-of-way acquisition, utility relocation, new roadway and bridge construction, erosion and sediment control, MOT, and drainage work. Responsible for overseeing quality assurance activities, reviewing and approving monthly pay estimates, and verifying that contractor and QC personnel perform work in accordance with the contract documents and the project specific QA/QC plan and VDOT QA/QC Guidelines. **Project relevancy to Route 606 includes road construction, bridge construction, SWM, relocation of utilities, sitework, and all associated QAM functions.**
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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<tbody>
<tr>
<td>a. Name &amp; Title: ROBERT REED, PE</td>
</tr>
<tr>
<td>b. Project Assignment: DESIGN MANAGER</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: JOHNSON MIRMIRAN &amp; THOMPSON, INC.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm &lt;1 Years With Other Firms 39 Years</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.):

  **JMT, Regional Transportation Manager; September 2012 - Present:** Mr. Reed manages transportation design and planning projects within the Commonwealth of Virginia with a primary focus serving his long-established clients within Northern Virginia. He serves as transportation program manager for our Herndon office as well as project manager for major transportation design projects with full support from established staff from all JMT offices. He would be available for immediate assignment to this project.

  **Parsons, Senior Project Manager/Design Director; 1998 - 2012:** Served as principal project manager leading all facets of the design of transportation projects for clients including VDOT, FHWA-EFLHD, and Fairfax County DOT. Design projects included interchanges on I-95, widening of the Fairfax County Parkway, the widening of Route 7-15 Leesburg Bypass, numerous intersection reconstructions and road widening projects. He prepared preliminary plans, estimates, and bid documents for Design-Build projects for Pacific Boulevard, Sycolin Road Overpass, Battlefield Parkway, and the addition of Truck Climbing Lanes on I-81. He was responsible for the conduct of all aspects of his projects including quality control, administration, risk assessment, safety, management of multiple disciplines, negotiation of contracts and subcontracts, as well as financial and schedule controls. Mr. Reed also served as the Design Manager/Assistant Project Manager for the joint venture helping VDOT to oversee the Downtown Tunnel/Midtown Tunnel/Martin Luther King Expressway during the formative stages of the PPTA project for over three years. Mr. Reed led roadway designs conforming to VDOT format using GEOPAK and MicroStation, designed complex maintenance of traffic plans, prepared signal plans, and coordinated geotechnical, structural and bridge designs. He personally led in concept development, closely directed final designs, and provided detailed stormwater management and hydrologic and hydraulic designs for most of his projects.

  Mr. Reed’s experience encompasses the design of complex utility services, including communications (FO and cable), electrical distribution, water supplies, gas lines, steam heating systems, chilled water for cooling, solid waste pneumatic systems, medical gases, fuel, and sanitary sewers including reuse of water for irrigation and combined stormwater/sanitary sewer systems.

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rensselaer Polytechnic Institute (Troy, New York) / BS / 1972 / Civil Engineering</td>
</tr>
<tr>
<td>Rensselaer Polytechnic Institute (Troy, New York) / ME / 1973 / Civil Engineering (Transportation)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988 / Virginia Professional Engineer / 0402-018550 (also PE in PA(1975), DE, NJ, NC, &amp; MD)</td>
</tr>
<tr>
<td>2009 / ATTSA-VDOT Advanced Work Zone Traffic Control / Cert. # 121809011</td>
</tr>
<tr>
<td>2006 / Parsons Certified Project Manager / 72903</td>
</tr>
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<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
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(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)
VDOT Route 7/15 Widening (Leesburg Bypass), Town Of Leesburg, VA

Name of Firm: Parsons Transportation Group Inc. of VA  
Project Role: Design Manager

Beginning Date: 2009  
End Date: 2012

Specific Responsibilities: Design Manager to widen the southeast quadrant of the bypass around Leesburg Virginia. This project included modifications to two crossings of Tuscarora Creek, two interchanges, provided a grade-separated overpass at the Sycolin Road intersection, and designed trail relocation and new connections for the crossing of the W&OD Trail. Led design efforts including roadway and drainage design (including hydraulic modeling for stream crossings), configuration of bridges and retaining walls, and developed a full transportation management plan. Documented and conducted VDOT’s Risk Analysis Workshop. Provided design QC and conducted Public Hearing.

Project relevancy to Route 606 includes design of roadway widening on heavily-travel highway, stream hydraulics, relocation of water, sewer, and overhead utility lines, detour traffic analysis for road closure during construction, and all associated project management functions.

VDOT Downtown Tunnel/Midtown Tunnel/Martin Luther King Expressway, Norfolk & Portsmouth, VA

Name of Firm: Southeast Transportation Partners – a JV including Parsons Transportation Group Inc. of VA  
Project Role: Design Manager/Assistant PM

Beginning Date: 2010  
End Date: 2012

Specific Responsibilities: Design Manager and Assistant Project Manager augmenting VDOT in the development of this PPTA project to add a second tube to the Midtown Tunnel under the Elizabeth River, upgrade the Downtown Tunnel, and provide the Martin Luther King Expressway to connect the Midtown Tunnel to I-264. Managed an international team of expert subconsultants. Provided QC and approval reviews of all design submittals including: alignments; maintenance of vehicular, marine, and rail traffic; establishment and enforcement of design criteria; utility relocations; right of way acquisitions, and review of design exceptions and waivers. Project relevancy to Route 606 includes roadway design and planning, TMP, relocations of major and minor utilities, flood issues, design waivers and exceptions, structural engineering, and all associated project management functions.

VDOT I-81 Truck Climbing Lane, Christiansburg, VA

Name of Firm: Parsons Transportation Group Inc. of VA  
Project Role: Design Manager

Beginning Date: 2007  
End Date: 2008

Specific Responsibilities: Design Manager for preliminary design of a design-build project to provide a 9-mile truck climbing lane for southbound I-81 in Montgomery County with complex phasing to accommodate traffic during construction with heavy truck volumes. Led design of roadway widening, complex rock cuts, three bridges, development of storm water management system (SWM) with rock substrata, and VDOT Risk Analysis and Value Engineering Workshops. Conducted Public Hearing. Provided design QC. Project relevancy to Route 606 includes design of roadway widening, structural engineering for 3 bridges, TMP, relocations of FO lines and overhead utilities, drainage and stormwater management design, and all associated project management functions.

VDOT Fairfax County Parkway Widening, Fairfax County, VA

Name of Firm: Parsons Transportation Group Inc. of VA  
Project Role: Design Manager

Beginning Date: 2005  
End Date: 2010

Specific Responsibilities: Design Manager for a design to widen Fairfax County Parkway from 4 lanes to 6 lanes (a limited access freeway with at-grade intersections and raised grass median) from U.S. Route 50 to the Dulles Toll Road. Included 6 miles of widening along the mainline and the redesign of nearly 6 miles of crossing roadways. Design tasks included: traffic and HOV analyses, signal design, drainage, bicycle and pedestrian facilities, storm water management facilities, erosion and sediment control, grading and paving, traffic signs and markings, temporary traffic control, Value Engineering workshop, as well as right of way and plats. Conducted a series of citizen’s information meetings and agency coordination. Provided design QC. Project relevancy to Route 606 includes roadway and street design, complex traffic analyses, impacts to major gas transmission lines (serving Dulles Airport) and minor utilities, public involvement, as well as all associated project management functions.

VDOT Pacific Boulevard Design-Build Plans, Loudoun County, VA

Name of Firm: Parsons Transportation Group Inc. of VA  
Project Role: Design Manager

Beginning Date: 2007  
End Date: 2008

Specific Responsibilities: Design Manager for definition of scope of project, establishing funding and design budgets, supervising design tasks and performing quality control of all deliverables. Prepared Design-Build plans for roadway and bridges on approximately one mile of new alignment or widened highway. Developed alternate horizontal and vertical alignments for options to use either open-bottomed culverts or a bridge over a tributary to Broad Run plus MSE walls and another bridge over the W&OD Trail. Assisted VDOT in preparing the design-bid procurement including preparation of the Preliminary Geotechnical Report, early coordination with utilities (Dominion Virginia Power and Loudoun Water).

Project relevancy to Route 606 includes roadway design, utility relocations and avoidance, bridges, pedestrian trails.
## ATTACHMENT 3.3.1

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: **ROBERT CROSS</td>
</tr>
<tr>
<td>b. Project Assignment: <strong>CONSTRUCTION MANAGER</strong></td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: <strong>THE LANE CONSTRUCTION CORPORATION</strong></td>
</tr>
<tr>
<td>d. Years experience: With this Firm 7, Years With Other Firms 37 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><strong>The Lane Construction Corporation, 2006-Present:</strong> Construction Manager with 35 years of experience in the heavy construction industry including both roadway and site development construction. Performs constructability reviews of design drawings; develops and maintains project schedule, and coordinates contractor/ subcontractor activities. Oversees all Quality Control activities on the project site to include both materials used and work performed to ensure that these meet contract requirements and the “approved for construction” plans and specifications.</td>
</tr>
<tr>
<td><strong>Moore Brothers, 2005-2006:</strong> General Superintendent on the I-66 HOV project between Route 234 and the Prince William Parkway interchanges. Supervised all aspects of construction including highway widening, geotechnical work, hydraulics, hydrology and erosion control, permitting, and utility coordination. Additionally, he performed quality control activities to ensure contract requirements were met and that approved for construction plans and specifications were met.</td>
</tr>
<tr>
<td><strong>Archer Western Contractors, 2003-2005:</strong> General Superintendent on the Springfield Interchange Project. Performed constructability reviews of design drawings; developed and maintained project schedule; coordinated contractor and subcontractors’ activities. He supervised all aspects of construction including quality control assessments and measures.</td>
</tr>
<tr>
<td><strong>Shirley Contracting Company, LLC, 1999-2003:</strong> General Superintendent who implemented and enforced corporate safety policies; performed constructability reviews of design drawings; developed and maintained project schedule; coordinated with contractor and subcontractor activities.</td>
</tr>
<tr>
<td><strong>Prince William Construction Company, 1998-1999:</strong> Superintendent then promoted to VP of Operations - As Superintendent, he performed constructability reviews of design drawings; developed and maintained project schedules; coordinated all work activities on the projects. As Vice President he was responsible for personnel, financial, and safety.</td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>Northern Virginia Community College, Annandale, VA / Coursework</td>
</tr>
<tr>
<td>Langley High School, McLean, VA / 1972</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>VDOT Erosion and Sediment Control Contractor Certification (“ESCCC”) Expiration: 1/27/2017</td>
</tr>
<tr>
<td><em>A Virginia Department of Conservation and Recreation Responsible Land Disturber Certification will be obtained before construction begins</em></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
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**VDOT I-495 Express Lanes, Fairfax County, VA**

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>The Lane Construction Corporation</th>
<th>Project Role:</th>
<th>Construction Manager/General Superintendent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Date:</td>
<td>2009</td>
<td>End Date:</td>
<td>2013</td>
</tr>
</tbody>
</table>
Specific Responsibilities: As the Area 1 Construction Manager/General Superintendent on this project, his specific responsibilities included coordinating with design team members, supervising engineering, survey, and QC staff, developing and maintaining the project schedule, tracking and evaluating the project schedule, scheduling subcontractors’ activities and on-site engineering calculations and drawings. He was responsible for the roadway construction and elements of the 495 Interstate widening and improvements as part of this $1.5 billion PPTA project. Two new lanes were constructed in each direction on a 14-mile stretch outside the existing lanes of I-495, from the Springfield Interchange to just north of the Dulles Toll Road. The project encompassed the replacement of more than $260 million of aging infrastructure, including more than 50 bridges and overpasses. Additional construction elements included retaining walls, excavation, storm sewer work, grading stone placement and paving. Project relevancy to Route 606 includes road widening, bridge construction, SWM, relocation of utilities, sitework, and all associated construction management functions.

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>Project Role:</th>
<th>Specific Responsibilities:</th>
</tr>
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<tbody>
<tr>
<td>Prince William Construction</td>
<td>General Superintendent</td>
<td>As Construction Manager/Superintendent, Mr. Cross oversaw the project schedule, coordinated with design team members, supervised engineering, survey, and QC staff, and maintained the project schedule. He was responsible for the roadway construction and elements of the 495 Interstate widening and improvements as part of this $1.5 billion PPTA project. Two new lanes were constructed in each direction on a 14-mile stretch outside the existing lanes of I-495, from the Springfield Interchange to just north of the Dulles Toll Road. The project encompassed the replacement of more than $260 million of aging infrastructure, including more than 50 bridges and overpasses. Additional construction elements included retaining walls, excavation, storm sewer work, grading stone placement and paving. Project relevancy to Route 606 includes road widening, bridge construction, SWM, relocation of utilities, sitework, and all associated construction management functions.</td>
</tr>
<tr>
<td>Moore Brothers</td>
<td>Construction Manager/General Superintendent</td>
<td>Performed as Construction Manager/General Superintendent on the 4-mile reconstruction of Interstate 66 from Route 234 business to Route 234 bypass, a critical project in the expansion of I-66 and the extension of HOV lanes. He supervised all aspects of construction for this major $37 million project which included highway widening, bridge reconstruction, SWM pond (earthen dam), geotechnical work, hydraulics, hydrology, erosion control, permitting, and utility coordination. In addition, he made recommendations for means and methods of construction budgets and personnel issues. He supervised structure construction to include bridges, retaining walls and shoring for support of excavation. Project relevancy to Route 606 includes road widening, bridge reconstruction, multiple earthen dams, relocation of utilities, sitework, and all associated construction management functions.</td>
</tr>
<tr>
<td>The Lane Construction Corporation</td>
<td>Construction Manager</td>
<td>As Construction Manager/General Superintendent, Mr. Cross oversaw the project schedule, coordinated and scheduled with all subcontractors and supervised all aspects of construction. This $200 million project constructed the foundation for the new 4th runway and taxiway on a 675 acre site at Washington Dulles International Airport. Construction included installation of erosion and sediment control measures, stormwater management ponds with earthen dams, ground stabilization, clearing and grubbing, demolition of existing structures and fencing, 2.3 million yards of excavation and embankment, 4,700 lf of box culverts, 15,000 lf of RCP, security fencing, and staging areas with associated utilities for multiple construction contracts. Project relevancy to Route 606 includes road construction, multiple earthen dams, relocation of utilities, sitework, and all associated construction management functions.</td>
</tr>
</tbody>
</table>
### ATTACHMENT 3.3.1

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>A. Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: **TADEUSZ W. LEWIS, PE</td>
</tr>
<tr>
<td>b. Project Assignment: <strong>LEAD GEOTECHNICAL ENGINEER</strong></td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: <strong>GEOCONCEPTS ENGINEERING, INC.</strong></td>
</tr>
<tr>
<td>d. Years experience: With this Firm <strong>14</strong> Years With Other Firms <strong>12</strong> 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><strong>GeoConcepts Engineering, Inc., Principal/Owner; 1999-Present:</strong> Mr. Lewis serves as contract manager/quality control manager and senior reviewer, and has more than 26 years of experience in geotechnical, environmental, and hydrogeologic engineering. He serves as Chairman of the Route 28 Highway Improvement Tax District Advisory Board, is the Vice-Chair of the Loudoun County Economic Development Commission where he chairs the Executive Committee, and is serving on the Loudoun County Sustainable Energy Task Force. He performs subsurface investigations and engineering analysis for transportation and transit, commercial and industrial buildings, earthen embankment dams, retail centers and residential developments. His duties include contract administration, management of drilling activities, foundation and earthwork analyses, and preparation of reports. He would be available for immediate assignment to this project.</td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td><strong>Averett College (Danville, VA) / MBA / 1991 / Business Administration</strong></td>
</tr>
<tr>
<td><strong>Virginia Polytechnic Institute (Blacksburg, Virginia) / MS / 1987 / Civil Engineering</strong></td>
</tr>
<tr>
<td><strong>Virginia Polytechnic Institute (Blacksburg, Virginia) / BS / 1986 / Agricultural Engineering</strong></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td><strong>1990 / Virginia Professional Engineer / 0402021276 (also PE in MD, DC, WV, PA, MA, NC, SC, NY)</strong></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VDOT Pacific Boulevard Extension, Sterling, Loudoun County, VA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Firm:</strong> GeoConcepts Engineering, Inc.</td>
</tr>
<tr>
<td><strong>Beginning Date:</strong> 2008</td>
</tr>
</tbody>
</table>

**Specific Responsibilities:** Project reviewer for the geotechnical engineering investigation and materials testing and inspections services during construction of the project consisting of a 0.6 mile extension of the four-lane roadway and two bridges over the Washington & Old Dominion Railroad Regional Park (W&ODRRP) and across Cabin Branch. The geotechnical engineering report included an evaluation of subsurface conditions including recommendations regarding abutments and piers foundations, pavement design, design parameters for MSE retaining walls, subdrainage, loadbearing fills including an assessment of on-site soils to be excavated for re-use as fill, rock excavation as well as identification of unsuitable soils. Construction also includes a variable-width median up to 16-feet wide, curb and gutter, a 10-foot wide shared-use path, and two stormwater management ponds. Mr. Lewis provided overall project oversight and management for the project. **Project relevancy to Route 606 Reconstruction and Widening includes VDOT project, design-build, geotechnical and construction testing and inspection, quality control, roadway design, median, retaining walls, stormwater management, shared-use path, drainage.**
<table>
<thead>
<tr>
<th>VDOT Route 50 Widening from Route 742 to Route 28, Loudoun and Fairfax Counties, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Firm:</strong> GeoConcepts Engineering, Inc.</td>
</tr>
<tr>
<td><strong>Beginning Date:</strong> 2011</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Geotechnical engineering design and construction materials testing services for the federally funded design-build project involving widening the 4-lane roadway to six lanes from Route 742 to Route 28. Mr. Lewis serves as quality control manager and senior reviewer for the geotechnical engineering investigation and observation and materials testing services during construction. Mr. Lewis provided quality control services and overall project oversight and management for the project. <em>Project relevancy to Route 606 Reconstruction and Widening includes design-build, geotechnical and construction testing and inspection, quality control, widening and reconstruction of roadway, bridges, stormwater management.</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VDOT Route 603 Widening, Elliston, Montgomery County, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Firm:</strong> GeoConcepts Engineering, Inc.</td>
</tr>
<tr>
<td><strong>Beginning Date:</strong> 2010</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Geotechnical engineering investigation for the proposed widening of Route 603 in Elliston from I-81 and Route 11/460 including stormwater management ponds which involved drilling 61 soil test borings with 630 linear feet of rock coring, groundwater monitoring wells, and completion of a geophysical survey. Design recommendations were provided to the client. Mr. Lewis provided overall contract management and quality control of this project which included development of estimated fee, monitoring of budget, and submittal of invoices. He also provided oversight of the quality control measures implemented for the project. <em>Project relevancy to Route 606 Reconstruction and Widening includes geotechnical services, widening of roadway, stormwater management, and completed for VDOT.</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VDOT Route 27/244 Interchange Modifications, Arlington County, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Firm:</strong> GeoConcepts Engineering, Inc.</td>
</tr>
<tr>
<td><strong>Beginning Date:</strong> 2011</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Geotechnical engineering investigation for modifications to the interchange including roadway improvements, improving and widening the ramps, a new single-span bridge, abutment wingwalls, a sound barrier wall, stormwater management basins, and a double pipe culvert. Subsurface conditions were investigated by drilling 93 test borings and analyzing previous soil test boring data to provide cost savings to the client. Recommendations were provided regarding driven piles, bridge abutment wingwalls, site retaining walls, pavements, earthwork, and stormwater management basins/pipe culverts. Mr. Lewis provided overall contract management and quality control of this project. <em>Project relevancy to Route 606 Reconstruction and Widening includes geotechnical and construction testing and inspection, quality control, roadway improvements and widening, retaining structures, stormwater management, and completed for VDOT.</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VDOT Route 1/Route 123 Interchange, Prince William County, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Firm:</strong> GeoConcepts Engineering, Inc.</td>
</tr>
<tr>
<td><strong>Beginning Date:</strong> 2010</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Project reviewer for a two phase geotechnical field investigation for an interchange including three bridges, retaining walls, associated utility relocations, and roadway re-alignments completed using the design-build approach. Mr. Lewis provided senior review of the geotechnical engineering investigation, involving 185 soil test borings about 4,000 linear feet of drilling, and for observation and materials testing services during construction. Mr. Lewis provided overall project oversight and management for the project. <em>Project relevancy to Route 606 Reconstruction and Widening includes geotechnical and construction testing and inspection, quality control, roadway design, retaining walls, utilities, bridge, and completed for VDOT.</em></td>
</tr>
</tbody>
</table>
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: **MICHAEL LEFFLER, PE</td>
</tr>
<tr>
<td>b. Project Assignment: <strong>LEAD DAM DESIGNER</strong></td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: <strong>JOHNSON MIRMIRAN &amp; THOMPSON, INC.</strong></td>
</tr>
<tr>
<td>d. Years experience: With this Firm <strong>7 Years</strong> With Other Firms <strong>28 Years</strong> 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>
<tr>
<td><strong>JMT, Geotechnical Engineering Section Head; 2006 – Present</strong>: Mr. Leffler is the section head for JMT’s Geotechnical Engineering Group. His geotechnical engineering experience includes hundreds of projects that he has managed and developed field investigation programs including test boring and test pits, geotechnical engineering analysis and preparation of reports to provide geotechnical design recommendations for new embankment dams, and rehabilitation of existing dams, which included performing dam safety inspections and evaluation of embankment foundations, spillway foundations, stability, seepage filter design and seepage control features such as toe drains and seepage filter diaphragms. His experience also includes bridges, culverts, low to high-rise structures, parking garages, sheet-pile bulkheads, slopes, reinforced slopes, utilities, and retaining wall systems. Mr. Leffler’s extensive experience includes geotechnical evaluation and analysis for bearing capacity, settlement, slope stability, lateral earth pressures for design of temporary and permanent retaining systems, permanent and temporary dewatering systems and pavement subgrade support characteristics for pavement design.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>ECS Limited, Principal Geotechnical Engineer; 1998-2006</strong>: Mr. Leffler was the head of ECS’s Chantilly, VA office’s Construction Inspection Group. In addition to serving as the head of the Construction Inspection Group he also served as Principal Engineer on geotechnical engineering projects. 1999 to October of 2006 Mr. Leffler was the head of the Geotechnical Engineering groups for the Baltimore and Aberdeen, MD offices. His geotechnical engineering construction inspection experience includes hundreds of projects that he has managed. For geotechnical engineering projects his experience includes developing field investigation programs including test boring and test pits, geotechnical engineering analysis and preparation of reports to provide geotechnical design recommendations for new embankment dams, and rehabilitation of existing dams, which included performing Dam Safety inspections and evaluation of embankment foundations, spillway foundations, stability, seepage filter design and seepage control features such as cement grouted cut-off walls, toe and blanket drains and seepage filter diaphragms. His experience also includes bridges, culverts, low to high-rise structures, parking garages, sheet-pile bulkheads, slopes, reinforced slopes, utilities, and retaining wall systems. Mr. Leffler’s extensive experience includes geotechnical evaluation and analysis for bearing capacity, settlement, slope stability, lateral earth pressures for design of temporary and permanent retaining systems, permanent and temporary dewatering systems and pavement subgrade support characteristics for pavement design.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Dam design for all assignments were based on experience on over 100 different dam projects, applicable state and county codes including Fairfax County’s Dam Standard in which Mr. Leffler was responsible for performing research of available state and federal standards and preparation of the geotechnical portion of Fairfax County’s Dam Standard.</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Mr. Leffler’s 34 years of experience includes hundreds of projects where he managed and developed field investigation programs including test boring and test pits, geotechnical engineering analysis and preparation of reports to provide geotechnical design recommendations for new embankment dams, rehabilitation of existing dams, failed embankment dams, which included evaluation of embankment foundations, spillway foundations, stability, seepage and seepage control features. This experience also includes removal and replacement of existing principal spillways that penetrate through existing dams and raising the height of the embankments and preparation of the geotechnical portion of Fairfax</td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>University of Dayton (Dayton, OH) / BSCE / 1979 / Civil Engineering</td>
</tr>
<tr>
<td>George Washington University (Washington, DC) / MSCE / 1984 / Geotechnical Engineering</td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>1988 / Professional Engineer / 0402019033 (also DC, DE, MD and PA)</td>
</tr>
<tr>
<td>2009 / NCEES / 36457</td>
</tr>
</tbody>
</table>
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 Description</th>
<th>Name of Firm</th>
<th>Project Role</th>
<th>Beginning Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillendale Country Club Pond Maintenance, Hillendale, MD</td>
<td>Johnson, Mirmiran and Thompson</td>
<td>Lead Geotechnical Engineer</td>
<td>2008</td>
<td>2011</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Responsible for oversight of subsurface investigation, which included test borings, soil laboratory testing and geotechnical evaluation of existing dam that was experiencing leakage through the embankment dam. Geotechnical services consisted of performing dam safety inspection, stability and seepage analysis to provide recommendations for the existing dam including recommendations for a liner on the upstream face of the dam. During construction oversaw the construction and served as the Engineer-In-Charge for Maryland Dam Safety Division. Project relevancy to Route 606 includes evaluation and design for the rehabilitation and modifications to the existing Horsepen Pond embankment dam.</td>
<td></td>
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</tr>
<tr>
<td>Joppa Road Stormwater Management Pond No. 2, Baltimore, County, MD</td>
<td>Johnson, Mirmiran and Thompson</td>
<td>Lead Geotechnical Engineer</td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Principal Engineer responsible for oversight of subsurface investigation, which included test borings, soil laboratory testing and geotechnical evaluation for proposed embankment dams constructed. Geotechnical services consisted of performing settlement, stability and seepage analysis to provide recommendations for cutoff trench, zoned embankment dam construction, and seepage control features. Project relevancy to Route 606 includes evaluation and design for the rehabilitation and modifications to the existing Horsepen Pond embankment dam.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven Oaks Regional Pond, Anne Arundel County, MD</td>
<td>ECS, Limited</td>
<td>Lead Geotechnical Engineer</td>
<td>2005 (estimated)</td>
<td>2005 (estimated)</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Principal Engineer responsible for oversight of subsurface investigation, which included test borings, soil laboratory testing and geotechnical evaluation for existing embankment dam. Geotechnical services consisted of performing dam safety inspection, stability and seepage analysis to provide recommendations for the existing dam including recommendations for an inverted filter on the downstream face of the embankment to control seepage through previous transverse cracks through the dam. During construction oversaw the construction and served as the Engineer-In-Charge for Maryland Dam Safety Division. Project relevancy to Route 606 includes evaluation and design for the rehabilitation and modifications to the existing Horsepen Pond embankment dam.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fawn Lake, Stafford County, VA</td>
<td>ECS Limited</td>
<td>Lead Geotechnical Engineer</td>
<td>1998 (estimated)</td>
<td>1998 (estimated)</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Principal Engineer responsible for oversight of subsurface investigation, which included test borings and piezometers, soil laboratory testing and geotechnical evaluation of existing 60 foot high embankment dam to evaluate seepage at downstream toe. Geotechnical services consisted of performing a dam safety inspection, review of available information, stability and seepage analysis to provide recommendations for additional drains to control seepage and mitigate erosion. Project relevancy to Route 606 includes evaluation and design for the rehabilitation and modifications to the existing Horsepen Pond embankment dam.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celebrate Virginia, Stafford County, VA</td>
<td>ECS Limited</td>
<td>Lead Geotechnical Engineer</td>
<td>1998 (estimated)</td>
<td>1998 (estimated)</td>
</tr>
<tr>
<td><strong>Specific Responsibilities:</strong> Principal Engineer responsible for oversight of subsurface investigation, which included test borings, rock coring and in-situ hydraulic conductivity testing, soil laboratory testing and geotechnical evaluation for proposed 60 and 20 foot high embankment dams. Geotechnical services consisted of performing settlement, stability and seepage analysis to provide recommendations for foundation preparation, cement grout-cutoff wall, cut-off trenches trench, zoned embankment dam construction, and seepage control features including seepage filter diaphragm, toe and blanket drains. Project relevancy to Route 606 includes evaluation and design for the rehabilitation and modifications to the existing Horsepen Pond embankment dam.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

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

| a. Name & Title: | REBECCA SMITH-ZAKOWICZ, CPG | ASSOCIATE |
| b. Project Assignment: | DAM QC INSPECTOR |
| c. Name of Firm with which you are now associated: | GEOCONCEPTS ENGINEERING, INC. |
| d. Years experience: With This Firm | 10 Years |
| d. | With Other Firms | 10 Years |
| d. 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.): |
| GeoConcepts Engineering, Inc., Associate; 2003-Present: | Ms. Smith-Zakowicz has over 10 years of experience in geologic, geotechnical, hydrogeologic, and environmental engineering. She has an extremely diverse project background, and frequently conducts geotechnical, environmental, and hydrogeologic services concurrently for projects including high hazard dams. She has extensive experience in managing field investigations; conducting geotechnical related engineering analysis of foundations, pavements, and stormwater management storage facilities, and preparing geotechnical engineering reports; and planning and coordinating drilling and excavation operations. She also has managed Phase I and II Environmental Site Assessments (ESAs). Ms. Smith-Zakowicz has performed and coordinated fracture trace analyses, geologic site reconnaissance, geophysical testing, drilling operations, and pump test analyses for several hydrogeologic studies for communal and individual well communities throughout the Washington Metropolitan Area. |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | |
| Radford University (Radford, VA) / MS / 2002 / Environmental and Engineering Geosciences |
| James Madison University (Harrisonburg, VA) / BS / 2000 / Integrated Science and Technology |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | |
| 2008/Certified Professional Geologist/2801001708 |
| 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.) |
| USDA National Resource Conservation Service South River Watershed Dam Rehabilitation, Augusta County, VA | |
| **Name of Firm:** | GeoConcepts Engineering, Inc. | **Project Role:** | Geotechnical Project Geologist |
| **Beginning Date:** | 2005 | **End Date:** | 2006 |
| **Specific Responsibilities:** | GeoConcepts conducted a geotechnical investigation for the rehabilitation of dams at three different sites, all classified as “high hazard” by the Virginia DCR: Toms Branch, Inch Branch and Robinson Hollow. A total of 13 soil test borings were drilled in order to evaluate subsurface conditions. Drilling was administered with a USDA-NRCS representative present at the site. Boring holes were then required to be backfilled by with a mixture of sand and bentonite. Ms. Smith-Zakowicz served as the project geologist. Project relevancy to Route 606 includes geotechnical investigations on high hazard dams. |
| Ashby Pond Dam Embankment Study, City of Fairfax, VA | |
| **Name of Firm:** | GeoConcepts Engineering, Inc. | **Project Role:** | Geotechnical Project Manager |
| **Beginning Date:** | 2012 | **End Date:** | 2012 |
### Specific Responsibilities:

Geotechnical engineering investigation prepared for the evaluation and proposed rehabilitation of an existing farm pond. Subsurface conditions were investigated by drilling a total of six soil test borings. Recommendations were provided regarding suitability of the existing pond embankment to serve as the permanent embankment, slope stability, embankment construction, foundation support, embankment fill construction, and internal seepage devices, as well as sediment dredging and disposal. During construction, services consisted of observations and testing of caissons, spread footings bearing capacity, proofrolls of compacted fill areas, and placement of concrete. Ms. Smith Zackowicz served as project manager for geotechnical design and construction testing services. **Project relevancy to Route 606 includes geotechnical investigations on a dam/pond.**

### Lake Anne Dam Rehabilitations, New Baltimore, Fauquier County, VA

- **Name of Firm:** GeoConcepts Engineering, Inc.
- **Project Role:** Geotechnical Project Manager
- **Beginning Date:** 2006  
  **End Date:** 2006

**Specific Responsibilities:**

Ms. Smith-Zakowicz managed geotechnical observation and materials testing services during the rehabilitation of the Lake Anne Dam which had been compromised by a combination of erosion, vegetation growth, and beavers that had burrowed into the embankment fills. Rehabilitation was presented in the form of tree removal, embankment slope grading, the installation of new outlet works, and the formation of a new emergency spillway. Services included observations and testing of fill placement for the embankments and outlet works and concrete placed as the cradle for outlet pipes. **Project relevancy to Route 606 includes geotechnical investigations on a dam.**

### VDOT Virt’s Corner Intersection, Leesburg, Loudoun County, VA

- **Name of Firm:** GeoConcepts Engineering, Inc.
- **Project Role:** Geotechnical Project Manager
- **Beginning Date:** 2010  
  **End Date:** On-going

**Specific Responsibilities:**

Project Manager for the geotechnical engineering design and materials testing services during construction for the development of a new traffic pattern at the intersection of three roadways including relocating intersections and adding turning lanes and an acceleration lane. GeoConcepts drilled 46 soil test borings at the site to evaluate subsurface conditions. A report was provided including an evaluation of proposed pavements, earthwork, a SWM pond, and rock excavation. The pavement analysis was challenging since both Vaswani and VDOT methods were required by the Town of Leesburg and VDOT. During construction, GeoConcepts was retained to provide quality assurance testing services on behalf of the owner, the Town of Leesburg. Services include subgrade preparation and approval, soil compaction testing, and concrete testing using VDOT procedures and requirements. **Project relevancy to Route 606 includes geotechnical investigations on SWM embankment.**

### Route 606 Concrete Plant Parking Lot and Stormwater Management Wet Pond, Loudoun County, VA

- **Name of Firm:** GeoConcepts Engineering, Inc.
- **Project Role:** Geotechnical Project Geologist
- **Beginning Date:** 2010  
  **End Date:** 2010

**Specific Responsibilities:**

Ms. Smith-Zakowicz served as project geologist for this project located at the end of Concrete Plaza, west of its intersection with Route 606 (Old Ox Road). A stream (Indian Creek) lies directly to the north of the site. The site consisted of a concrete paved lot in the rear of an active concrete plant. The project consisted of the removal of an existing concrete parking lot, and the construction of a SWM wet pond. Subsurface conditions were investigated by drilling a total of four test borings in the proposed SWM pond area. Recommendations were provided regarding the stormwater management pond, earthwork, and rock excavation. **Project relevancy to Route 606 includes geotechnical investigations on SWM embankment.**
ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR WORK HISTORY FORMS
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORTH AREA ROADS IMPROVEMENT</td>
<td>JMT</td>
<td>Name of Client/Owner: MWAA Phone: 703.417.8647 Project Manager: David Swennes Phone: 703.417.8647 Email: <a href="mailto:david.swennes@mwaa.com">david.swennes@mwaa.com</a></td>
<td>03/2008</td>
<td>11/2007 (early delivery)</td>
<td>$29,681</td>
<td>$29,681</td>
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h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

PROJECT DESCRIPTION

The North Area Roads Improvement project focused on the Dulles Area Access Highway (DIAAH) and associated areas and included:

- The construction of a new Collector-Distributor (C-D) Roadway system for the section of the DIAAH between Saarinen Circle and Route 28. The new C-D Roadway separates the Route 28 exiting traffic from DIAAH traffic destined for further on, thereby reducing the traffic congestion at three interchanges.
- Widening of the DIAAH from a four-lane to a six-lane highway to provide sufficient capacity for future DIAAH traffic.

This project, designed by JMT, included the existing roadway demolition and the reconstruction and widening of 1.25 miles of the DIAAH entering and exiting the airport including bituminous concrete roadways, a 60+/- foot span steel girder bridge, drainage improvements and storm water management facilities, overhead sign structures, and related traffic control, lighting and safety features.

The project also included the widening of an existing bridge (inbound DIAAH over Horsepen Run) and the construction of a new bridge (inbound Collector-Distributor Road over Horsepen Run). The bridge required construction of a 60’, two-lane span with an integrated back wall and mechanically stabilized earth wall and included short and medium span steel plate girder designs. The project involved the construction of one large 8’ by 4’ by 295’ long concrete box culvert and a smaller 8’ by 4’ by 69’ long concrete box culvert. Two retaining walls were also included to allow the widening eastbound of the DIAAH and the construction of the inbound Collector-Distributor roadways to pass under existing bridges without reconstructing those bridges.

The ultimate goal of the North Area Roads Improvement project was to create a roadway system capable of providing efficient access to Dulles International Airport that is easy for airport patrons to understand and use.

PROJECT BENEFITS

- Reduced traffic congestion and delays
- Improved traffic flow and roadway connectivity
- Improved passenger service
- Provided airport passengers with better access to rental car facilities and long term parking lots

EVIDENCE OF PERFORMANCE

LANE completed this project four months ahead of schedule.

Dulles Airport presented the project with the “Outstanding Safety Record Award” for the fourth quarter of 2006.
**PROJECT DESCRIPTION**

Sudley Manor Drive, the original portion of this contract, constructed the greenfield roadway section from Linton Hall Road north to Chatsworth Drive. This project was a 2.8 mile, new location, four-lane urban minor arterial designed to accommodate future expansion to six lanes. The LANE portion of the work included grading, storm and waste water pipelines, MOT at intersections, a portion of twin bridges over Norfolk Southern Railroad (N&S RR), retaining walls, environmental controls, roadway stone, and seeding. In addition to the completion of Sudley Manor Drive, the Linton Hall Road Improvement project from Devlin Road to Nokesville Rd (Route 28) was added by the Owner. The Linton Hall Road portion consisted of the complete reconstruction of the existing 2-lanes into a 4-lane divided roadway with turn lanes through a busy residential and commercial corridor. The work included twin bridges over Broad Run, grading, storm, waste, and drinking water pipe lines, environmental controls & facilities, roadway stone, seeding etc. These two projects were procured under the PPTA Act with Prince William County.

The project required close coordination with Prince William County and the Virginia Department of Transportation to meet the accelerated schedule for plan design, utility relocation, right-of-way acquisition, and construction. Additionally, coordination of the roadway and drainage design with existing utilities and proposed sound barriers was crucial to keeping the project on time and on budget.

Areas that needed special consideration included the completion of a single span steel girder bridge over the existing N&S RR tracks, four mechanically stabilized earth retaining walls, several large fuel pipelines, the construction and access requirements of a new firehouse, several site developments, floodplain analysis and environmental considerations related to major stream crossings and traffic analysis and design. LANE participated in all facets of the design review and VE process with the design team.

The project was started with approximately half of the land acquired to complete the work. LANE adjusted its schedule to overcome these hindrances and delivered the project on time.

**PROJECT BENEFITS**

The new roads offer the benefit of faster travel and congestion relief for motorists in the Northern Virginia region.

**EVIDENCE OF PERFORMANCE**

Part of the road was opened two weeks prior to the contracted completion date.
**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement. (in thousands)</th>
</tr>
</thead>
</table>
| I-495 EXPRESS LANES        | HNTB                                                                               | Name of Client/ Owner: VDOT  
Phone: 804.786.4798  
Project Garrett Moore, PE  
Phone: 804.786.4798  
Email: garrett.moore@vdot.virginia.gov | 12/2012                  | 11/2012 (early delivery)        | $1,346,560                          | $1,481,670                          | $642,000                          |

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

**PROJECT DESCRIPTION**

This $1.48B design-build project consisted of widening the I-495 Capital Beltway over 12 miles to accommodate two HOT (High Occupancy Toll) lanes in each direction, from the Springfield Interchange to Old Dominion Drive and the construction of Springfield Interchange Phase VIII which created HOV connections from I-95/I-395 to I-495. HNTB was the Project Designer with MACTEC and ECS Limited providing geotechnical services. (ECS designed the stormwater pond embankment above Chain Bridge Road)

All existing bridges over this portion of the Beltway were demolished and replaced, while maintaining traffic on one of the nation’s most heavily traveled sections of Interstate. Two major interchanges were completely reconstructed; the I-495/I-66 and I-495/Dulles Access/Dulles Toll Road, as well as 10 other I-495/arterial interchanges. Three new access points to the Capital Beltway were constructed. In all, 57 bridges were constructed, including two pedestrian bridges (with the adjacent shared-use paths).

LANE was also responsible for wetland mitigation, ROW acquisition services on behalf of VDOT, relocation of all existing utilities, provision of Intelligent Traffic Systems, installation of the electronic tolling infrastructure, and tolling software development, multiple types of retaining walls (MSE, gravity, post and panel, cantilever), 70,000 lf of sound walls, stormwater ponds, quality control and quality assurance.

The contract design and construction duration was five years. The project was placed into commercial operation approximately one month ahead of schedule.

Safety statistics were well below industry averages and the project received numerous safety awards. Benefits to drivers, carpoolers, public transportation users and the business community include: improved opportunities for reliable bus service for public transportation users; reduced cut-through traffic on local neighborhood streets; and positive environmental impact because vehicles move through the area more quickly, reducing emissions.

**CONSTRUCTION CHALLENGES**

Maintenance of Traffic (MOT) presented a major challenge given the volume of traffic. The alignment of many of the existing bridges over the Beltway could not be shifted; accordingly new bridges were built on the same footprint as the old. As a result, theses bridges were built in stages, half at a time. To reduce the impacts on the public, much of the work was performed at night. Also, LANE provided a robust public information program, providing advance information to political representatives and to the public, through meetings, website access, email blasts, flyers, and door to door calls.

Erosion and sediment control was also a major challenge on the project, with work being performed on steep slopes adjacent to the Beltway, the fast pace of construction, the length of work open simultaneously (12 miles in each direction), and heavy rain at times.

**EVIDENCE OF PERFORMANCE**

“A solid experienced company that has built to standard and worked well under difficult traffic and space constraints to minimize impact on travel.”

-Garrett Moore, VDOT Chief Engineer

“Project was built over four years under traffic as high as 200,000 vpd and achieved 5 million safe work hours as of September 2012 without a lost-time incident, making it among the safest heavy civil projects ever built in the U.S.”

-Public Works Financing Newsletter, December 2012
ATTACHMENT 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS
**LEAD DESIGNER - WORK HISTORY FORM**

**PROJECT DESCRIPTION**

JMT, is responsible for providing professional engineering services to VDOT for design and capacity improvements to Route 7 (Leesburg Pike) in Fairfax County, VA. Currently the project is split into two phases, Phase I is from Rolling Holly Drive to Reston Avenue (1.2 miles) and Phase II is from Reston Avenue to the Dulles Toll Road (approximately 6.5 miles). Plans are being prepared utilizing MicroStation V8 and GEOPAK. The widening will generally be to the inside however alternatives were developed to determine the most feasible and prudent options where widening exclusively to the median is not practical or is to be limited to not preclude future transit options. The project includes survey, subsurface utility engineering, preliminary design, complete right-of-way and roadway construction plans (to include standard retaining wall plan sheets), multi-purpose trails on both sides of Route 7; structure and bridge plans to include the design of a bridge replacement (Route 7 over Difficult Run), landscaping plans, signing, signals, roadway lighting, pavement markings, roadway drainage design and hydraulic and hydrologic analysis of bridged waterways and major structures as well as analysis to determine scour, water quality work, final plans, estimates, special provisions, review of shop drawings, construction consultation and load ratings.

The design includes improvements to 33 intersections, including adding turn lanes, medians, islands and signalization in accordance with VDOT NOVA District requirements. Included in the design are signing and pavement marking plans for the mainline roadway and the connections. JMT is conducting signal warrant studies at 9 intersections. 14 existing signals are being impacted by the design and are being designed for the new intersection configurations. Additionally, design alternatives are being developed at major intersections to determine the most feasible and prudent options to improve traffic flow, including assessing alternative intersection options. VISION/Synchro/SimTraffic software is being utilized to develop a coordinated system to maximize traffic flow volumes and to decrease delay times along the corridor. Furthermore, bicycle and pedestrian crossings are being analyzed at the signalized intersections due to the multi-use trail paralleling Route 7 through the corridor.

JMT has developed a Type C Transportation Management Plan (TMP) for Phase I of the project and is currently developing it for Phase II. There is significant bifurcation between the eastbound and the westbound roadways which complicates the phasing of construction. An extensive public involvement program is underway as well as newsletters and a website, to compliment the public involvement meetings, citizen working group sessions and coordination with Fairfax County. The roadway plans include drainage design for both open and closed storm systems, ditches, inlets, culverts, storm water management facilities, erosion and sediment control, hydraulic and hydrologic analysis for major structures and bridges. A very extensive stormwater strategy is being developed for the project to identify areas where stormwater management facilities may serve joint usage facilities for Fairfax County Park Authority and or other developments along the corridor to help minimize environmental and property impacts.

**PROJECT BENEFITS**

**Constructability** – Developed detailed temporary traffic control plans that included a detour roadway in the existing median to facilitate construction with severe bifurcation between existing roadway while maintaining over 60,000 ADT.

**Value Engineering** – Prepared studies and Value Engineering Designs to maximize utilization of existing roadway features to keep the project within the Departments budget and on schedule while meeting the project objective to improved capacity and overall safety. **Community Support** – Considerable public opposition arose against adding dual left-turn lanes from eastbound Route 7 to eastbound Georgetown Pike. JMT simulated multiple alternatives which maintained the existing right-of-way constraints while also providing the operating levels of service expected from the improvements. An agreement was reached for the intersection configuration and operations after several meetings with the community, elected officials and civic groups.

**EVIDENCE OF PERFORMANCE**

“I want to thank you all for your hard work on the Route 7 Widening Project from Rolling Holly Dr to Reston Ave – you guys have been great to work with! The project will be ADVERTISED TODAY!!” - VDOT’s Project Manager, Mark Gibney, PE, PMP (via email)

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<table>
<thead>
<tr>
<th><strong>a. Project Name &amp; Location</strong></th>
<th><strong>b. Name of the prime/ general contractor responsible for overall construction of the project.</strong></th>
<th><strong>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</strong></th>
<th><strong>d. Construction Contract Completion Date (Original)</strong></th>
<th><strong>e. Construction Contract Completion Date (Actual or Estimated)</strong></th>
<th><strong>f. Contract Value (in thousands)</strong></th>
<th><strong>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROUTE 7 (LEESBURG PIKE) PHASE I AND II [SINGLE CONTRACT] Fairfax County, VA</strong></td>
<td>Fort Myer Construction Corporation (Phase I)</td>
<td>Name of Client: VDOT Phone: 703.259.2734 Project Manager: Mark Gibney, P.E. (Phase I) Phone: 703.259.2734 Email: <a href="mailto:mark.gibney@vdot.virginia.com">mark.gibney@vdot.virginia.com</a> Phone: 703.259.2950 Project Manager: Kerri Yap (Phase II) Phone: 703.259.2950 Email: <a href="mailto:kerri.yap@vdot.virginia.com">kerri.yap@vdot.virginia.com</a></td>
<td>Phase I 10/2015</td>
<td>Phase I 12/2015</td>
<td><strong>Phase I $36,600</strong></td>
<td>Phase I 2015</td>
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<tr>
<td>****</td>
<td><strong>Involed on this</strong></td>
<td><strong>Prime general</strong></td>
<td><strong>the Lead</strong></td>
<td><strong>contractor identified as the Lead Designer for this</strong></td>
<td><strong>Prime designer from their Herndon, VA and Richmond, VA offices.</strong></td>
<td><strong>Performance</strong></td>
</tr>
</tbody>
</table>

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**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Survey
- Roadway
- Dual Lane Ramp
- Structure and Bridges
- Retaining Walls
- Sidewalk/Shared Use Path
- H&HA/ESC/SWM
- Traffic Control Devices
- TMP
- Utilities
- Public Relations
- QA/QC
- Constr. Eng./Insp.

**KEY PERSONNEL FOR ROUTE 606 INVOLVED ON THIS PROJECT**

- Rodney Hayzlett
- Randy Boice
PROJECT DESCRIPTION

JMT was responsible for complete design of four segments of the U.S. 113 corridor including which were all procured using the Design Build method of project delivery. The extremely flat grade in this region of Maryland presented a challenge to coordinate the drainage and stormwater management needs with the maintenance of traffic and erosion and sediment control requirements. Because of the abundance of wetlands in the area, an innovative approach to the removal of undercut was required. This was accomplished using a structural trenching box that is pulled along the grade to allow the contractor to work in the dry area behind the trench. Because of the aggressive schedule and the stringent State review process, JMT's managers and engineers were faced with the task of acquiring State approvals that allowed the contractor to start construction and meet the deadline scheduled. This was accomplished by adopting an innovative "segmental" approach to design. Major construction activities included new full depth pavement, wedge and leveling and resurfacing of the existing pavement and shoulders, reforestation, drainage systems, erosion and sediment controls and stormwater management facilities, and intersection lighting. Five small structures were either extended or rebuilt in the process of realigning the US 113 corridor.

Segment 1 - North of Goody Hill Road to South of Massey Branch - This 2.5-mile project consisted of the design and construction of two additional lanes along the existing U.S. 113 alignment to create a dual divided highway. The typical section of dualized highway included two 12-foot lanes, ten foot outside shoulders and a 34-foot median with double-faced W-beam traffic barrier. The project also included the design and construction of new service roads to maintain access to the adjoining residential and commercial properties. The existing 14'' x 6' single cell box culvert carrying Goody Hill Branch was extended under the new roadway, and a new 14' x 6' box culvert carrying Massey Branch was constructed. As well, the dual cell, 54 inch reinforced concrete pipe culvert carrying Porter Creek was extended under the new roadway.

Segment 2 - Hayes Landing Road to North of Goody Hill Road This, 2.5 mile segment, begins north of Goody Hill Road and ends just north of Hayes Landing Road. The improvements included constructing US 113 as a dual divided highway. The two additional lanes were constructed on the west side of the existing US 113 roadway and became the alternate southbound roadway. Existing US 113 became the northbound roadway. Intersection improvements included left and right turn lanes including acceleration and deceleration lanes. The typical section consist of 2, 24' roadways with 10' outside shoulders. The northbound and southbound traffic are separated by a 34' median which will include 4' paved shoulders, a 26' grass median and median w-beam traffic barrier. Access management roads were constructed to provide access to local businesses and residences. The existing 9' x 5' single cell box culvert carrying Beaverdam Creek/Poplar Town Branch was extended under the new roadway.

Segment 3 - Market Street to North of MD 365 (Public Landing Road) - This 4-mile project consisted of dualization of U.S. 113 from an undivided, two-lane highway (one lane in each direction) to a median divided, four-lane highway (two lanes in each direction). This fast track design-build project included the design of vertical and horizontal alignments for the mainline and intersecting roads, as well as a weigh and inspection station pull-off site. Included in the contract was the design of intersection control beacons at the two major intersections, MD 12/Snow Hill Road, and MD 365/Public Landing Road, and the extension of the 8’-3” x 6’-1” structural plate pipe arch. The typical section of dualized highway includes two 12’ lanes, ten foot outside shoulders and a 34’ median with double-faced W-beam traffic barrier.

Segment 4 - North of Jarvis Road to Delaware Line This 11.6M, 2.3 mile section of US 113 starts north of Jarvis Road and ends at the Delaware state line. The project consisted of the design and construction of US 113 dualized on new alignment as a dual divided highway. The scope of work also included design and construction of several service roads to maintain access to residential and commercial properties along the corridor and the extension of the existing box culvert carrying Carey Branch. Coordination with the Delaware Department of Transportation and the adjacent construction contract for Phase 2 of US 113 relocated was also required of the D-B Team. This was accomplished by adopting an innovative "segmental" approach to design. The project was designed in segments in conjunction with the maintenance of traffic schemes.

PROJECT BENEFITS

The project separates the northbound and southbound traffic to make the US 113 corridor safer, and to alleviate the higher than normal traffic accident history.

EVIDENCE OF PERFORMANCE

"The Bramble-JMT Design-Build Team has partnered extraordinarily well with the MSHA." - John Zanetti, MSHA's Project Manager
**LEAD DESIGNER - WORK HISTORY FORM**

**LIMIT 1 PAGE PER PROJECT**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
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<td>FAIRFAX COUNTY PARKWAY [SINGLE CONTRACT] Fairfax, VA</td>
<td>Cherry Hill Construction</td>
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<td>Phases I/II 12/ 2010</td>
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<td>$85,472</td>
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<td></td>
<td>Phone: 703. 404.6217</td>
<td>Phase IV 07/2011</td>
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<td>Project Manager: Robert A. Morris, PE</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Phone: 703.259.2734</td>
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<tr>
<td></td>
<td></td>
<td>Email: <a href="mailto:robert.morris@dot.gov">robert.morris@dot.gov</a></td>
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</table>

**PROJECT DESCRIPTION**

JMT was responsible for complete design of the 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. JMT will also be providing supplemental services to finalize conveyance of the right of way from the Army to VDOT.

To meet the requirements of BRAC the FCP project had an extremely aggressive schedule of 750 calendar days to design, permit, relocate utilities, and construct the Parkway. The design team initiated design upon notice of award beginning in Oct. 2008 and delivered approval for construction plans that allowed construction of the western end (west of Accotink Creek) of the project to commence in April 2009. Full plan approval for the remainder of the contract was received on Aug. 2009, approximately 3 months ahead of schedule. This accelerated design schedule allowed earlier construction starts that enabled the opening of Phases I/II on Sep. 20, 2010, nearly a month ahead of scheduled. The project corridor begins at Rolling Rd/Franconia-Springfield Pkwy, and proceeds southeastward on a new alignment and ends just east of Fullerton Rd. The design included a new interchange at FCP and Barta Rd for access to North Loop Rd (NGA interior roadway network) within the new NGA facility. Extensive design collaboration/coordination with the U.S. Army for this access point was required and included coordination for security lighting, overheight vehicle detection, geometry/utility connections. A majority of this roadway was located on the southern portion of the Fort Belvoir North Area. The work involved in the Pkwy included: grading, drainage and paving, bridges, noise walls, lighting, traffic signals, landscaping, signing/striping and extensive environmental services. The environmental challenges were further complicated by the fast-track schedule, involvement of multiple stakeholders, and complex environmental and regulatory issues. The FCP alignment cut through the Fort Belvoir North Area and crossed five former firing ranges and testing sites including three RCRA sites that had significant environmental challenges were further complicated by the fast-track schedule, involvement of multiple stakeholders, and complex environmental and regulatory issues. The project also included widening of I-95 to accommodate a new exit lane designed as a certified Defense Access Road that provides direct access to the NGA. The D-B Design Team completed the following design work, as directed by the EFLHD:

- **Base Option** – Design of a 4-lane divided, limited access highway, designed to facilitate future widening to 6-lanes within the project ROW; Relocation of portions of Rolling Rd; Interchange at FCP with Barta Road; New Bridges at Fullerton Rd, Accotink Creek/Barta Rd; multipurpose trail alongside a portion of the road.
- **Option No. 3 – Conver. of Ramp A Loop D at the Barta Rd Interchange**
- **Option No. 2** – Provided an access road for approx. 1.0 mile beginning at the existing exit ramp connecting SB I-95 to WB FCP to a new alignment to the W. South Loop Rd (Dar), included widening of existing Br. 675.
- **Option No. 3** – Consisted of constructing Ramp C of the Houdanot Drive interchange. This ramp was approximately 0.3 miles long and provides access from Fullerton Rd. to southbound FCP.

**PROJECT BENEFITS**

- 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.
- Conducted extensive coordination process to satisfy the varying and diverse needs of the major stakeholders.
- Extensive Public Relations Campaign and Partnering Approach to Project was Key to Successful Implementation of a Year Long Detour of Existing Ramp

**EVIDENCE OF PERFORMANCE**

The project was recognized by ACEC/VA, ACEC/MD and ACEC/MW with “Awards of Excellence” and was the VTCA Winning Project for VDOT projects greater than $10M. In addition key staff members of JMT received “Star Partner” awards for their exceptional dedication, teamwork, and professionalism in support of the project's goals by the National Geospatial-Intelligence Agency (NGA) and USACE. To facilitate feedback from the public, the team established a Website through which public comments could be submitted. One comment reflects the efforts made by all who were associated with the project. “I am amazed at the pace of the Fairfax County Parkway Extension project, and to all those who are involved in any aspect of this project, I want to thank you for all you are doing!” - J. Thompson
ATTACHMENT 3.4.1(c)
DAM CONSTRUCTION WORK HISTORY FORM
**ATTACHMENT 3.4.1(c)**

**DAM CONSTRUCTION - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
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<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Dam Construction Specialist for this procurement (in thousands)</th>
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<tbody>
<tr>
<td>OLMSTED NAVIGATIONAL LOCK AND DAM Olmsted, KY</td>
<td>USACE</td>
<td>Name of Client/Owner: U. S. Army Corps of Engineers Louisville District Phone: 618.742.6456 Project Manager: Richard J. Schipp Phone: 618.742.6456 Email: <a href="mailto:Richard.j.Schipp@lrl02.usace.army.mil">Richard.j.Schipp@lrl02.usace.army.mil</a></td>
<td>03/2002</td>
<td>03/2002</td>
<td>223,913</td>
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**PROJECT DESCRIPTION**

The Olmsted Lock Replacement Project started in 1995 as a joint venture project with Guy F. Atkinson, Dillingham, and LANE. Approximately 692,000 cubic yards of structural concrete with more than 61,000,000 pounds of reinforcing steel were needed to replace an outdated lock on the Ohio River approximately 25 miles northwest of Paducah, Kentucky. Constructed for the Louisville District of the U.S. Army Corps of Engineers, the 26 monolith lock walls are 54 feet high and 14 feet thick with a 52-foot-wide middle wall. Steel H-piling was another major to the construction of the project involving over 542,000 lineal feet (103 miles) along with more than 202,160 lineal feet of steel sheet piling (includes WYE Sections, Z-Pile, S-Pile). In addition to the large volume of piling, concrete and reinforcing steel, more than 1,400,000 cubic yards of backfill materials were placed prior to "watering up" the new lock. When completed the project placed in to service two 110-foot x 1200-foot lock chambers with a total width of the overall structure of 326 feet by a total length of 1578 feet. These chambers are filled and emptied by three (3) culverts: one (1) each in the land & river walls and two (2) each in the middle wall. All culverts are typically 14 feet wide by 18 feet tall with an approximate minimum chamber fill time of eight (8) minutes.

**PROJECT BENEFITS**

- Replacement of an obsolete lock facility
- The new lock is able to accommodate increased shipping traffic of a larger size
- River traffic queue at the lock was minimized by increased capacity of the new facility

**EVIDENCE OF PERFORMANCE**

The owner’s Project Manager, Richard J. Schipp, awarded LANE a performance survey score of 5 (Very Good) on a scale of 1(Unsatisfactory) to 6(Exceptional) remarking “I respect their dedication to get the job done. Their team had the experience to get performance meeting the contract requirements.”
ATTACHMENT 3.4.1(d)
DAM DESIGN WORK HISTORY FORM
### Project Name & Location

**COUNTRY CLUB POND** Phoenix, Maryland

### Narrative describing

**Landscape Design**
- Topographical Surveys
- Structural Design
- Geotechnical Engineering Services
- Dam Breach Analysis
- H/H Analysis
- Retrofit of SWM Facilities
- Feasibility Analysis for Repair and Post Construction Services

**Access Analysis**
- Easement Documents and Site Documents (Engineer-In-Charge)
- Construction Management Services
- Preparation of NRI/FSD and FCP Documents
- Construction Management Services (Engineer-In-Charge)
- Easement Documents and Site Access Analysis
- Post Construction Services
- Constructability Analyses

### Similarities in Scope and Complexity

- Feasibility Analysis for Repair and Retrofit of SWM Facilities
- H/H Analysis
- Dam Breach Analysis
- Geotechnical Engineering Services
- Structural Design
- Topographical Surveys
- Non-Tidal Wetland Regulatory
- Landscape Design
- Agency Approvals Permits
- Preparation of NRI/FSD and FCP
- Preparation of Solicitation Documents
- Construction Management Services (Engineer-In-Charge)
- Easement Documents and Site Access Analysis
- Post Construction Services
- Constructability Analyses

### Key Personnel for Route 606 Involved in this Project

- Mike Leffler
- Paul Clement

### Similarities in Scope and Complexity

**Route 606 Involved on** Phoenix, Maryland

### Key Personnel for

**HILLENDALE COUNTRY CLUB POND RENOVATIONS**

**Name of Client:** Hillendale Country Club
- Phone: 410.592.8011
- Project Manager: Mike Martino
- Phone: 410.790.6500
- Email: martinomg@comcast.net

**PROJECT SCOPE**

JMT was selected to assist the Hillendale Country Club with the challenging task of designing and permitting the expansion and repairs to their irrigation pond (Pond A) and stormwater detention pond (Pond B). JMT worked closely with the club, MDE, Maryland Dam Safety and DEPRM to develop a solution that avoided total reconstruction of the pond, minimized interruption of play, and provided environmental enhancements to the pond and site in a cost effective manner. In addition to the pond renovation services, the project involved the relocation of the existing pump house and installation of a new irrigation system for the club. During construction, JMT performed Construction Management services and served as the Engineer-In-Charge per Maryland Dam Safety Requirements. P er the permit requirements after completion of rehabilitation of the dam, JMT was tasked with performing annual dam safety inspections and preparing inspection report per Maryland Dam Safety requirements.

**PROJECT DESCRIPTION**

The project solution involved the construction of a diversion channel, draining of the pond, excavation to provide a significant increase in storage capacity and installation a geo-synthetic liner on the upstream dam slope to mitigate seepage through and below the dam. The geotechnical investigation analysis and evaluation determine that seepage through the embankment dam and its foundation was occurring due to the presence of a gravelly layer. In order eliminate seepage through the dam and its foundation, the embankment’s upstream face was lined with an impervious synthetic liner. Also, a cool water release was installed to minimize thermal impacts to the receiving waters downstream. In order to meet the Forest Conservation Requirements, a stand of white pine trees just north of the pond, previously destroyed by a tornado and overrun with invasive species, was cleared, regarded with the dredged pond material, and planted with specimen native trees and shrubs, creating a new and higher quality forest stand on the site. The location of the new pump house required renovations to one set of tees and regarding and construction of the access road to the pumphouse and cart path.

**PROJECT BENEFITS**

- Pond capacity was increased to a level that would better serve the golf courses needs during the dry times of the year.
- Seepage through and below the embankment dam was substantially reduced allowing the normal pool to be maintained in the wetter times of the year as well as the dry times of the year.
- A clay liner was installed along the upstream face of the embankment to minimize seepage through the embankment and prevent piping of fill material from the embankment and protect the embankment.
- The design included a new riser structure with a cool water release pipe to allow water from the bottom of the pond be released during periods when there is no flow over the control weir.
- The surface flow from a side channel was redirected away from the embankment and in a riprap channel to protect the embankment from erosion.
- Portions of the golf course were regarded and reforested to repair damages from a high wind storm event

**Evidence of Performance**

As part of the dam inspection, the owner of the dam was interviewed and they were very happy with the results of the dam rehabilitation/retrofit as the volume of water stored in the pond during the dry seasons is way better than it was before the rehabilitation/retrofit.

Following the completion of the project per the permit issued by Maryland’s Department of the Environment for waterway construction, annual dam inspections were performed by JMT. The dam inspection indicated that the integrity of the dam and spillways were intact and performing as intended and the seepage that had previously been observed has been adequately corrected.