

ORIGINAL



Statement of Qualifications

# DESIGN + BUILD

## I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE I

City of Chesapeake, Virginia  
State Project No. 0064-131-811, P101, R201, C501,  
B662-B669, D637, D638  
Federal Project No. NHPP-064-3(488)  
Contract ID Number: C00106692DB93

**OCTOBER 13, 2016**





## 3.2. LETTER OF SUBMITTAL

**DRAGADOS USA**





October 13, 2016

Jeffrey A. Roby, P.E., DBIA  
I-64 Southside Widening and High Rise Bridge, Phase 1  
1401 East Broad Street  
Richmond, VA 23219

**REFERENCE: Statement of Qualifications for I-64 Southside Widening and High Rise Bridge, Phase 1**

Dear Mr. Roby:

The Dragados | Flatiron High Rise Joint Venture (Dragados | Flatiron JV) Team is pleased to submit its Statement of Qualifications to the Virginia Department of Transportation (VDOT) for the design and construction of the I-64 Southside Widening and High Rise Bridge, Phase 1 Project (I-64 High Rise Bridge Project). A Joint Venture of Dragados USA, Inc. (Dragados) and Flatiron Constructors, Inc. (Flatiron) will be the Lead Contractor for this Project. HDR Engineering, Inc. (HDR) will be the Lead Designer with support from Moffatt & Nichol (M&N) and other local specialty firms in the role of Design Subconsultants.

Our Team offers the right combination of nationally recognized industry leaders with local knowledge, dedicated resources ready to address critical project elements, and successful national and international design-build experience in highway and bridge projects similar to the I-64 High Rise Bridge Project. Combined, the Lead Contractor and Lead Designer firms bring over 315 years of outstanding design and construction experience as premier highway and bridge design-builders in the United States and overseas and have built over 150 design-build projects globally.

We thrive on the design and construction of highway and bridge projects. Dragados' design-build project experience includes the award-winning, \$1.2B I-595 Corridor Roadway Improvements in Florida, the \$820M SH-288 Toll Lanes in Texas, and the \$760M Parallel Thimble Shoal Tunnel in the Hampton Roads area of Virginia which is being managed out of Dragados' Virginia Beach office. The ACS Group, Dragados' parent company, has been consistently ranked #1 over the last three years in *Engineering News-Record's* (ENR) magazine.

Flatiron is one of the largest highway and bridge builders in North America and is proud to have constructed some of our nation's landmarks, including the \$541M Arthur Ravenal, Jr. Bridge over the Cooper River in South Carolina, the \$334M Audubon Bridge in Louisiana, and the fast-tracked \$234M St. Anthony Falls I-35W Bridge in Minnesota. Flatiron is ranked #13 in Transportation, #5 in Highways, and #9 in Bridges in the country by ENR.

Dragados' and Flatiron's shared design-build roadway and bridge experience is underscored by the recently completed \$1.0B Northeast Anthony Henday Drive project in Alberta, Canada and the ongoing \$898M Harbor Bridge Replacement project in Texas, the longest main span cable-stayed bridge in the United States at 1,655 feet.

As for our Lead Designer, HDR's national and Virginia experience incorporates some of the most challenging technical design and innovation in highway and bridge projects; including the lead design of the \$3.4B Tappan

Zee Bridge project in New York, the \$2.2B I-4 Ultimate project in Florida, and the \$726M 95 Express Lanes Segment 1 project in Northern Virginia, among many others. HDR's large presence in the Hampton Roads area has been successfully servicing VDOT for over 30 years.

Our Team includes the following specialty subcontractors:

- **Alpha Construction and Engineering Corporation** – Responsible Charge Engineer
  - SWaM Certification No. 009964
- **Kleinfelder, Inc.** – Construction Quality Assurance

Major Design Subconsultant, M&N, has served as the lead designer of more than ninety VDOT bridges, the recently completed and iconic \$6.4B San Francisco Oakland East Bay Bridge (in joint venture) in California, and is widely recognized as the expert on Navy, port, vessel, and marine construction issues in the Hampton Roads area.

Other subconsultants in our Team will be:

- **Rinker Design Associates, P.C.** – Right-of-Way and Utilities
  - SWaM Certification No. 652784
- **Mattern & Craig, P.C.** – Signage, Pavement Marking, Lighting, and Signals
  - SWaM Certificate No. 625972
- **Precision Measurements, Inc.** – Surveying
  - DBE Certificate No. 005346
  - SWaM Certificate No. 5346
- **Harris Miller Miller & Hanson, Inc.** – Noise Abatement Analysis
  - DBE Certificate No. 665488

Dragados | Flatiron JV looks forward to working in partnership with VDOT to deliver a high quality, durable, reliable, and safe facility that will be an outstanding success to all the stakeholders and communities in the Tidewater area.

Sincerely,



Rafael de la Barreda  
Dragados USA Executive Vice President



**3.2.1 Full Legal Name and Address of the Offeror**

Dragados | Flatiron High Rise Joint Venture  
810 7th Avenue, 9th Floor. New York, NY 10019

**3.2.2 Name, Title, Address, Phone/Fax Numbers, and Email for Offeror’s Point of Contact**

**Rafael de la Barreda** – Dragados USA Executive Vice President  
810 7th A venue, 9th Floor. New York, NY I 0019  
Phone: 212-779-0900 / Fax: 212-764-6032 / Email: Rbarreda@Dragados-USA.com

**3.2.3 Name, Title, Address, and Phone/Fax Numbers for Offeror’s Principal Officer**

**Ignacio Segura** – Dragados USA Chief Executive Officer  
810 7th Avenue, 9th Floor. New York, NY 10019  
Phone: 212-779-0900 / Fax: 212-764-6032

**3.2.4 Offeror’s Legal Structure**

Design-Build Joint Venture between Dragados USA, Inc. and Flatiron Constructors, Inc. The Dragados | Flatiron High Rise JV will be joint and several. Due to this, the bonding approach will be to provide a single payment and performance bond to VDOT upon Project award.

**3.2.5 Full Legal Name of Lead Contractor and Designer**

**Lead Contractor for the Project:** Dragados | Flatiron High Rise Joint Venture, comprised of Dragados USA, Inc. and Flatiron Constructors, Inc.  
**Lead Designer for the Project:** HDR Engineering, Inc.

**3.2.6 Affiliated and Subsidiary Companies**

The Affiliated and Subsidiary Companies Form can be found in the Appendix.

**3.2.7 Debarment Forms**

Certification Regarding Debarment Form(s) Primary Covered Transactions and Certification Regarding Debarment Form(s) Lower Tier Covered Transactions can be found in the Appendix.

**3.2.8 Offeror’s VDOT Prequalification Status and Certification**

Lead Contractor and Lead Designer’s VDOT prequalification number and current VDOT prequalification status:

Firm Name	VDOT Prequalification No.	VDOT Prequalification Status
Dragados USA, Inc.	D1145	Probationary*
Flatiron Constructors, Inc.	F319	Currently Inactive*
Dragados   Flatiron High Rise JV (EIN No. 61-1802910)	JV079	Approved

\* VDOT waiver letters are attached to the Certificates of Prequalification and can be found in the Appendix.

**3.2.9 Surety Letter**

Letter of Surety for the Dragados | Flatiron JV can be found in the Appendix.

**3.2.10 DPOR Licenses and SCC Registrations**

Full size copies of the DPOR Licenses and SCC Registrations and Attachment 3.2.10 can be found in the Appendix.

**3.2.11 DBE Commitment**

The Dragados | Flatiron JV is committed to achieving an eight percent (8%) DBE participation goal for the entire value of the contract. We also understand Virginia SWaM goals per the Governor’s Executive Order No.20 and are committed to assisting VDOT in meeting those goals by maximizing SWaM subcontracting opportunities on this Project.



## 3.3 OFFEROR'S TEAM STRUCTURE

**DRAGADOS USA**



### 3.3 Offeror's Team Structure

#### 3.3.1 Key Personnel Identity and Information

**The Dragados | Flatiron High Rise JV (Dragados | Flatiron JV) brings to the I-64 Southside Widening and High Rise Bridge Project world-class North American and international design and construction experience for major design-build infrastructure projects.** Design-Build Project Manager Jose L. Conesa will lead the Dragados | Flatiron JV for the I-64 High Rise Bridge Project. **Jose brings more than 31 years of project management having worked as a Design-Build Project Manager (DBPM) on a number of highway and bridge design-build projects with an average value of \$730 million,** and he was also the Project Manager, from beginning to end, on the \$1.5 billion Autoroute 30 DBFOM project in Montreal, Canada, completed in 2013. Jose will be supported by carefully selected Key Personnel design-build delivery experts to successfully deliver the project to the Virginia Department of Transportation (VDOT). Our Key Personnel are all current employees of the Dragados | Flatiron JV (Lead Contractor), HDR Engineering (Lead Designer), Alpha Construction and Engineering Corporation (Responsible Charge Engineer), and Kleinfelder, Inc. (independent construction Quality Assurance firm).

Our JV Executive Committee, comprised of senior members of our Team, will oversee the Project's quality and safety programs, operating independently from production staff to ensure critical project elements are not compromised by production interests. Please see **Table 3.3.1** on the following page for further information on Key Personnel responsibilities. For the reporting relationship among Key Personnel, refer to the Project **Organizational Chart in Section 3.3.2.1.**

#### 3.3.2 Management Structure

Dragados USA, Inc. (Dragados) and Flatiron Constructors, Inc. (Flatiron) have formed The Dragados | Flatiron High Rise Joint Venture to meet Project challenges by using the **collective expertise of more than 145 years of heavy civil, highway, and bridge experience, including over 150 design-build projects completed globally.** As a subcontractor to our Team, Kleinfelder, Inc. (Kleinfelder) will provide independent construction quality assurance services while Alpha Corporation (Alpha) will serve in the Responsible Charge Engineer role.

**Bringing 100 years of extensive transportation design experience, HDR serves as Lead Designer** and will be further supported by major design subconsultant Moffatt & Nichol (M&N) and locally experienced engineering firms Mattern & Craig (signing, pavement marking, lighting, and signaling), Precision Measurements (surveying), and Harris Miller Miller & Hanson (noise abatement). Rinker Design Associates will provide utility coordination, landscape design, and right-of-way services.

##### 3.3.2.1 Organizational Chart

The Project Organizational Chart reflects the contractual relationships that govern the flow and management responsibilities of the Dragados | Flatiron JV (Lead Contractor), HDR (Lead Designer) and subcontractors and subconsultants. Multi-disciplinary task forces ensures coordination among the design, quality management, and construction disciplines.

Design and construction personnel are committed to the Project from Day 1 and will develop the design and identify constructability issues so that mitigation measures can be found early and the Team can proceed to optimize the design to better realize future benefits for the Project. Key Personnel from the design team will continue to stay committed to the Project after design is complete to support the construction team's efforts.

The reporting relationships and chain of command for the Dragados | Flatiron JV are shown in the Project Organizational Chart found on **page 7.**

##### 3.3.2.2 Functional Relationships

Dragados and Flatiron will enter into a joint venture agreement for the execution of the I-64 High Rise Bridge Project. The Dragados | Flatiron JV, as the Lead Contractor, will enter into a design-build agreement with VDOT, and is responsible for executing and completing the Project according to the agreement.

**VDOT will benefit from vertical corporate integration, the inherent alignment of interests, and facilitated decision-making process** that stems from Dragados and Flatiron's participation in the development and execution of all project disciplines. This vertically integrated approach comes from previous successful design-build experience, such as the \$898 million Harbor Bridge Replacement in Texas, where this organizational structure ensures alignment and shared objectives among disciplines.

This vertical alignment benefits the Project, VDOT, and

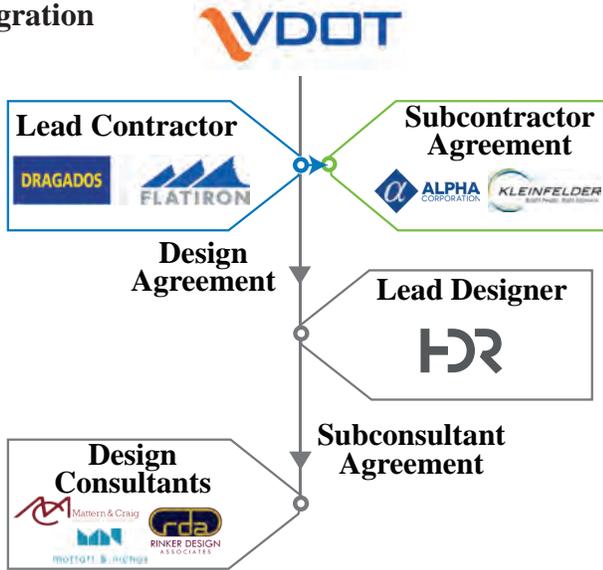
**Table 3.3.1 – Key Personnel Responsibilities.**

Role	Name	Firm	Responsibilities
<b>Design-Build Project Manager (DBPM)</b>	Jose L. Conesa	Dragados	Jose will provide overall project design, construction, quality management, and contract administration. He will be the single point of contact for the VDOT and will promote efficient communication and coordination between the design and construction teams and enforce safety and environmental compliance. Jose will use his design-build expertise in fostering innovative solutions to project design and construction means and methods.
<b>Responsible Charge Engineer (RCE)</b>	Fred Crozier, PE	Alpha	Fred will supervise and exercise a degree of independent control for design and construction. He will take full professional responsibility for engineering decisions related to the final product and be fully integrated into the Project Team. Fred will respond to issues related to design and/or construction engineering decisions. Fred has 25 years of experience working on large transportation programs and design-build projects for VDOT.
<b>Quality Assurance Manager (QAM)</b>	Richard Clarke, PE	Kleinfelder	Richard will report to the JV Executive Committee on all quality issues to ensure independence from construction operations and will coordinate with the JV's Quality Manager on Quality Assurance inspection, testing, and monitoring of the Lead Contractor's QC Program. 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 Richard (and the DBPM) will resolve issues raised by construction personnel. As QAM, Richard will hold the authority to stop work if quality issues warrant. QA Inspectors will report directly to him, and together with Richard will be assigned to the Project on a full-time basis for the duration of the construction operations. Richard has 39 years in construction on major highway transportation projects and acting as QAM on design-build projects for VDOT.
<b>Design Manager (DM)</b>	Mike Tugman, PE	HDR	Mike will report directly to the DBPM. He will maintain close communication with the DBPM and the Design-Build Coordinator and will coordinate all design disciplines, including subconsultants, ensuring the overall Project design conforms to the contract. All design disciplines report directly to Mike, who will provide VDOT with design plans for review and approval. He will also oversee the Design QA/QC program and communicate with the CM. He will be supported by Design Principal, Ken Aducci, PE; Deputy Design Manager, Claudia Walsh, PE; and Design QM Tom Morreale, PE, who will provide the independent design QA functions. Mike has 30 years of experience working on large transportation programs and design-build projects for VDOT.
<b>Construction Manager (CM)</b>	Steve DiMuro	Flatiron	Steve will report directly to the DBPM and will be on-site full-time for the duration of construction operations. His daily duties include managing the construction process through an accurate project baseline schedule that includes all QC activities to ensure materials used and work performed meet contract requirements and approved construction plans. He will coordinate weekly meetings with the QAM and QM to discuss all ongoing construction activities. Steve's heavy civil experience, with over 20 years serving on CM and General Superintendent roles in roadway and bridge construction, will be very valuable for this Project.
<b>Lead Structural Engineer</b>	Vijay Modi, PE	HDR	Vijay will report directly to the DM and be responsible for the design of all structures – the High Rise Bridge, other interstate overpass bridges, retaining walls, and drainage structures. He will be responsible for implementing the quality checking program for all structural design and plan production. An expert in VDOT standards, Vijay will be supported by expert structural engineers from HDR and M&N with experience on long-span bridges over navigable waterways, curved girder, and movable bridges. Vijay has 27 years of experience working for VDOT and HDR, all in the Hampton Roads Area, and his deep background managing new and movable bridge projects across Virginia makes him an unmatched choice to fill this role.
<b>Incident Management Coordinator (IMC)</b>	Brian Ballard	Flatiron	Brian will directly report to the CM and will be accountable for responding to all incidents within the project limits and serve as VDOT's IMC applying National Incident Management System principles and practices. Brian will be the point of contact for issues arising relative to incident management issues and will be onsite, full time, for the duration of construction operations. Brian's design-build experience since 2002 as a field superintendent and Maintenance of Traffic (MOT) supervisor will provide valuable expertise to this role.

all other project stakeholders by providing:

- **A commitment to quality and best value solutions that is embedded within our Team.** At all levels of the organization, the ultimate goal focuses on the long-term success of the Project.
- An efficient allocation of project risks within the Dragados | Flatiron JV that is driven by the **common goal of universal project success.**
- An effective partner comprised of experienced firms accustomed to working together across multiple disciplines. Please see Section 3.4 for our Teams shared project experience across the United States.

**Figure 3.3.1 – Functional Relationship Vertical Integration**



**Project Understanding**

The Dragados | Flatiron JV understands that VDOT seeks to improve capacity, enhance safety, improve ability for emergency evacuation routes, and increase the long-term viability of the entire I-64 corridor, and specifically with the I-64 High Rise Bridge Project. We have implemented a single integrated design-build team to collaborate with VDOT and all project stakeholders to provide innovative and environmentally sensitive design and construction solutions that support the widening of I-64 and the construction of a new High Rise Bridge. Our approach to achieve this relies on:

- Focused and efficient design-build management
- Team-based coordination of disciplines and quality of design
- Effective monitoring of environmental compliance and regulatory standards
- Dedicated and experienced Key Personnel
- Demonstrated project experience on numerous similar complex infrastructure projects

- Fulfillment of all commitments included in the Environmental Assessment
- Collaborative design-build partnership with VDOT and Project stakeholders

**Project Technical Approach**

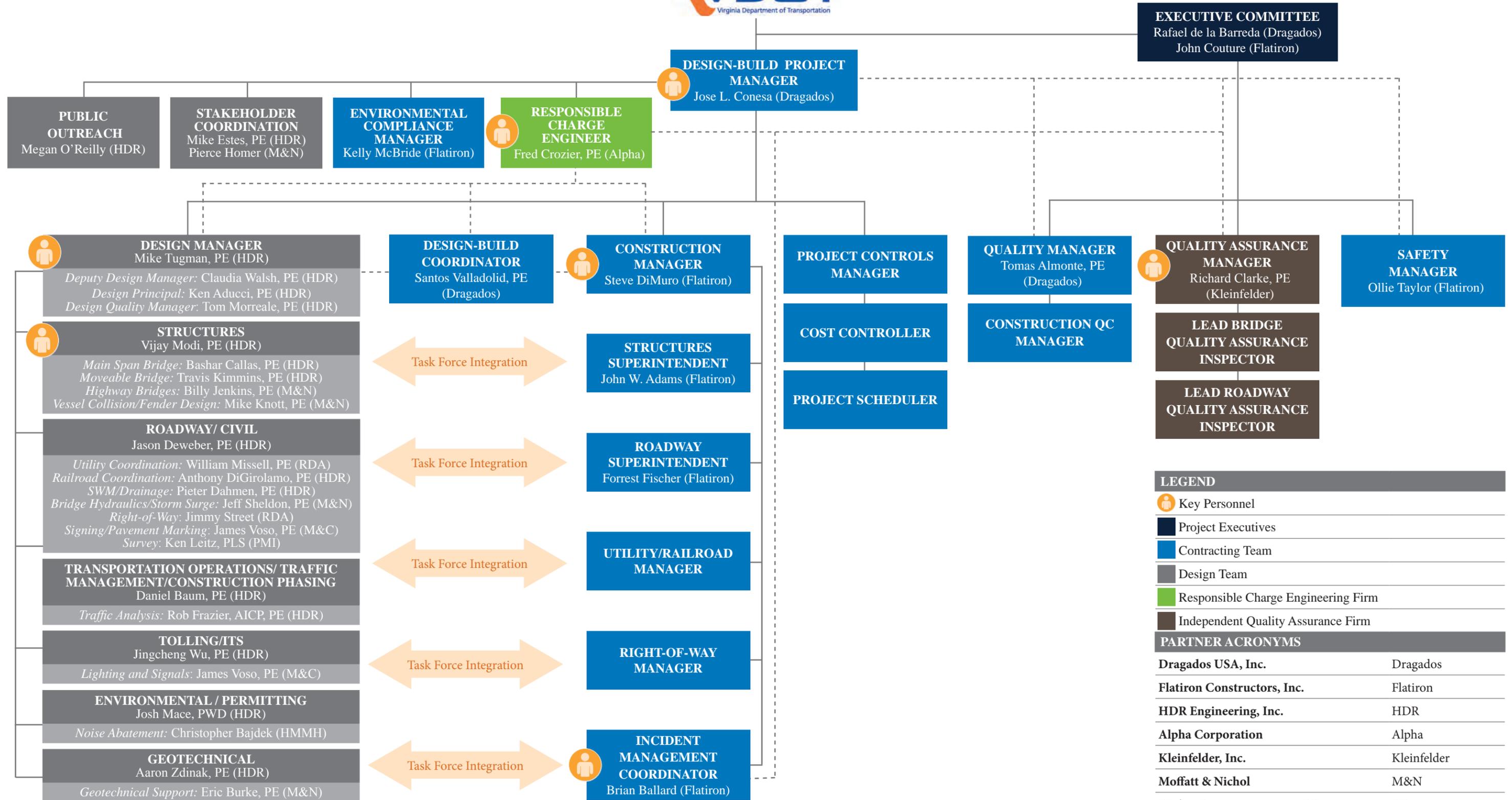
**The Dragados | Flatiron JV fosters and encourages collaborative discussions throughout the design-build process allowing VDOT unimpeded access to our design and construction.** During our procurement phase One-on-One meetings and Alternative Technical Concept reviews with VDOT, we will present clear and focused concepts that help clarify design intent, demonstrate our project understanding, address potential critical construction design elements, and present solutions to mitigation of project risks.

Our Lead Designer HDR will apply to the I-64 High Rise Bridge Project innovative and practical roadway and bridge designs that effectively address project challenges.

As constructors, the Dragados | Flatiron JV understands the design-build philosophy and the type of constructability thinking that must guide both project design and construction. Our Team is committed to implementing means and methods appropriate for this type of work and evaluating associated cost, schedule, and impact risks. Recognizing the complexity of the Project, we will seek active, early engagement between our Team and VDOT to address constructability through comprehensive risk review and mitigation.

*This same approach was taken by several team members on the \$1.2 billion DBFOM I-595 Corridor Roadway Improvements in Florida, a project that went through a dynamic Alternative Technical Concept (ATC) process during the Procurement Phase that was able to reduce over \$200 million in cost from the FDOT’s estimate and help alleviate an already aggressive schedule.*

The Dragados | Flatiron JV brings to your Project **world-class North American and international design and construction experience for major roadway and bridge design-build projects.** In addition to the **outstanding track record that HDR and M&N brings to bridge and roadway project design** in the Hampton Road Region, we count on the support and participation of Dragados and Flatiron technical engineering departments to work closely with our design team to deliver a cost-effective, buildable solution. The combined resources offer international lessons learned and engineering acumen, multi-level technical



**LEGEND**

- Key Personnel
- Project Executives
- Contracting Team
- Design Team
- Responsible Charge Engineering Firm
- Independent Quality Assurance Firm

**PARTNER ACRONYMS**

Dragados USA, Inc.	Dragados
Flatiron Constructors, Inc.	Flatiron
HDR Engineering, Inc.	HDR
Alpha Corporation	Alpha
Kleinfelder, Inc.	Kleinfelder
Moffatt & Nichol	M&N
Rinker Design Associates, PC	RDA
Mattern & Craig, PC	M&C
Precision Measurements, Inc.	PMI
Harris Miller Miller & Hanson Inc.	HMMH

experience in all design-build project that include multi-span high clearance bridges and managed lane roadways, and access to nearly 1,000 engineering constructability experts worldwide.

### 3.3.2.3 Communication Among Participants

Our Design-Build Project Manager Jose L. Conesa will be VDOT’s single point-of-contact and will have the authority to fulfill all design, construction, quality management, and contract administration provisions in the agreement.

The interface between design and construction staff will begin early in the Procurement Phase as we work to define our preliminary design and start the development of innovative ATCs. Regularly scheduled Task Force meetings will be held during the procurement phase as we endeavor to find efficient and achievable design alternatives that create a positive impact on the overall project risk, cost and schedule.

**Figure 3.3.2 – Scope/ Key Personnel Interface**



To enhance interface and communication between the design and construction teams, the Dragados | Flatiron JV appointed Santos Valladolid, PE, as the Design-Build Coordinator. Santos, who brings over 10 years of experience working as the liaison between the design and construction teams, was Dragados’ Design-Build Coordinator on the \$558 million Southern Ohio Veterans Memorial Highway in Southern Ohio where he worked with HDR. Santos’ involvement will start during the Procurement Phase and continue until final design is completed. He will meet with the Design Manager (DM), at a minimum on a weekly basis, to review the status of design, interface segments, and coordination elements, provide constructability input from the construction team, and resolve any outstanding matters.

The Dragados | Flatiron JV will develop its technical proposal using Dragados’ Hampton Roads office at 5700 Thurston Avenue, Virginia Beach, VA 23455. To best integrate the Team during the design-build phase, we propose to co-locate during this period with VDOT, designers and construction personnel. Co-location

expedites decisions, promotes team meetings, and improves communication between the integrated design-build team and project stakeholders. We will begin the co-located mobilization process for an office facility close to the I-64 High Rise Bridge worksite soon after Project Award.

Key to cohesion and successful communication among our Team during the design-build process is our Project Management Plan (PMP). The PMP provides the basic structure of our organization, personnel roles and responsibilities, and a summary of daily management practices and procedures. It will ensure effective operational communication regardless of discipline, responsibility, or location.

#### PMP MAIN OBJECTIVES

- Reinforce commitment to safety as a primary goal
- Integrate design and construction into a cohesive team
- Minimize duplication of effort and create efficiency
- Simplify coordination efforts between various functions
- Establish interface procedures and protocols
- Establish an atmosphere of partnership with VDOT
- Achieve accountability, quality and value
- Comply with FHWA major project requirements

### 3.3.2.4 Quality Assurance/Quality Control Program

The Dragados | Flatiron JV’s approach to quality management is founded on the tenet that quality, safety, and environmental stewardship are fundamental core values within our organizations. Quality is deeply ingrained within our Team culture. From JV Executive Committee members to field personnel, every employee is empowered and strives to monitor and maintain quality in every aspect of the work.

Our Quality Management System (QMS) is based on a total lifecycle approach to quality planning and processes. We ensure that the design and construction work is performed to meet the objectives of the Project through a continuous quality improvement process.

Our Quality Management Plan (QMP), based on the principles of our QMS, stresses that quality is the responsibility of everyone involved in the Project. The three pillars of our QMS are:

- **Commitment:** Quality starts with having the right people for the right job. We have the right experience

and skills to implement our QMS, and we will do so in this Project.

- **Planning:** Before execution of the Work, the Team will ensure all Project requirements are incorporated in the QMP. Planning for quality requires an educated workforce that facilitates constant improvement.
- **Evaluation:** The Team will track, measure, and assess the design and the construction work performed, whether self-performed or subcontracted by means of daily inspection reports, testing results, and Weekly Quality Meetings.

The QMP consists of the Design Quality Management Plan (DQMP) and the Construction Quality Management Plan (CQMP). The following members of the Dragados | Flatiron JV will be provide the following people for these quality management roles:

- **Design Quality Manager Tom Morreale, PE (HDR):** Manages the design quality team and coordinates all design QA review activities for each discipline. Tom will report to the Design Manager and will govern the DQMP.
- **Quality Manager Tomas Almonte, PE (Dragados):** Oversees construction QC scope of work and administers the CQMP for the I-64 High Rise Bridge Project. Tomas will coordinate QA and QC testing and inspection activities with the construction team.
- **Quality Assurance Manager Richard Clarke, PE (Kleinfelder):** Working for an independent firm with no contractual relationship with the QC firm, Richard will conduct QA inspection and testing of all materials used and work performed on the Project. This includes monitoring the Dragados | Flatiron JV QC Program.

Tomas and Richard will both report directly to the JV Executive Committee to ensure full independence with the design and construction teams and at the same time full separation between construction QC and QA activities (See **Project Organizational Chart in Section 3.3.2.1**).

The QMP relies on input from both our design and construction teams as shown in the adjacent Scope/Key Personnel Interface chart. As experienced design-builders, we know that the benefits of a sound QMP start during the procurement phase through Final Acceptance by VDOT.

### *Processes and Procedures*

Our Team's commitment to the QMS begins with the JV Executive Committee and cascades through the entire

project organization. Simply put, **we provide the right people for each task, give them the organizational support to succeed, then guide their performance and assess the outcome.** This process results in quality projects that are simple to construct, easy to maintain, and durable.

Our inspection, testing, and monitoring program within our CQMP provides a uniform context for scheduling QC and QA inspection, testing, and sampling activities that result in identification of potential problems early on and provides quantitative data to facilitate selection of mitigating solutions. **We strive for “zero rework” and our processes and procedures are designed to do the work right the first time.** Examples of past construction quality procedures that we have developed and implemented include:

- Testing and Sampling Request Activities, a procedure that served to coordinate and schedule QC and QA testing and sampling activities in the field.
- Witness and Hold Point Inspection, a procedure that established the witness and hold point activities for QC and QA inspection on site.

Dragados successfully implemented this approach on the \$1.2 billion I-595 Corridor Roadway Improvements and \$558 million Southern Ohio Veterans Memorial design-build projects, on which proposed Quality Manager Tomas Almonte, PE, served in the same role.

Jose L. Conesa, our DBPM, will lead the QMP implementation to meet the Project and VDOT's quality standards (VDOT's Minimum Requirements for QA and QC on Design-Build & Public-Private Transportation Act Project) and all statutory and regulatory requirements governing the Project. Our Team's integrated communication model ensures that relevant information is transmitted throughout our organization in a timely and consistent manner. Regular meetings between key team members are central to this approach.

### *Improving the Quality Program*

Our QMS will undergo continuous improvement. We will plan the activities, execute the work, verify the quality, and make the necessary adjustments to the process so that the QMP improves. The identification of root causes of nonconformities is a fundamental part of this process. We utilize periodic QA audits to verify that all aspects of our QMP are being met, and to identify potential areas of improvement. In addition, our management regularly reviews and audits the QC process through our independent QA firm.



## 3.4 EXPERIENCE OF OFFEROR'S TEAM

**DRAGADOS USA**



### 3.4 Experience of the Offeror’s Team

The Dragados | Flatiron High Rise Joint Venture Team (Dragados | Flatiron JV or Team) has **successfully delivered some of the most challenging roadway and bridge projects in the United States**, many of which are design-build projects similar in scope and size to the I-64 Southside Widening and High Rise Bridge (I-64 High Rise Bridge Project) project. Our Team has a proven history of partnering with clients to provide exceptional results when faced with technical, environmental, and stakeholder challenges. As a result, we deliver high-quality projects safely, on time, and at a significantly lower price than our competitors.

We also have **unmatched experience delivering large, complex projects in congested urban areas and providing major infrastructure enhancements economically, efficiently, and with minimal impact** to mobility, resources, and the community. For each project, we bring valuable lessons learned and an experienced team of local design-build experts who understand the Virginia Department of Transportation (VDOT) and the goals of this project. Together, the Dragados | Flatiron Team currently has **over \$10 billion worth of work in North American transportation projects**, primarily design-build projects.

Our Team combines Dragados’ international heavy civil expertise with Flatiron’s North American bridge expertise. Dragados USA, Inc. (Dragados) is a wholly owned subsidiary of Dragados, S.A., the construction arm of the ACS Group, one of the world’s leading infrastructure contractors that has been **ranked #1 on Engineering News-Record (ENR) Top 250 International Contractors for the last three years.**

#### Top 250 International Contractors

Rank		Firm	2014 Total Revenue (\$Million)
2015	2014		
1	1	ACS Group (Dragados Holding Co.)	\$46,081.1
2	2	Hochtief AG (Flatiron Holding Co.)	\$31,118.8

Dragados has been active in civil construction since its inception in 1941, and our employees are experts at managing large, complex roadway and bridge design-build projects. Dragados is the **largest design-build contractor in the world with more than 100 design-build projects executed. Dragados has constructed**

**more than 1,500 bridges of all types totaling 932 miles in length, as well as 8,389 miles of new roads and highways delivered worldwide.** Recently concluded projects include \$1.2 billion DBFOMI-595 Corridor Roadway Improvements Project in Florida, and the \$1.5 billion DBFOM Autoroute 30 Project in Montreal, Quebec. Currently, Dragados is working with Flatiron Constructors, Inc. (Flatiron) to construct the \$898 million DBOM Harbor Bridge Replacement in Texas, a cable-stayed bridge that, once completed, will be the longest main span in the United States. In addition, Dragados has other design-build managed lane projects underway in Florida and Texas for a combined project cost of \$1.13 billion (see **Table 3.4.1** for a list of similar projects).

Flatiron is a leading transportation, energy, and water infrastructure contractor in North America, and **has completed two design-build projects valued at over \$6.5 billion, as well as over \$2.5 billion in DBFOM projects** including the southern access to the Golden Gate Bridge (120,000 AADT) in California as part of the \$400 million DBFOM Presidio Parkway Project. Flatiron, **consistently ranked as a Top 10 Bridge Builder by ENR, has extensive project experience in constructing bridges over navigable waterways**



#### I-35W MINNEAPOLIS BRIDGE REPLACEMENT

*“With the completion of the I-35W project, we have proven what many people at the start of the project thought not possible. Working together as partners, we’ve achieved excellence in design, construction, and communication.” – Jon Chiglo, Project Manager, MNDOT*

With the tragic collapse of the I-35W Bridge, MNDOT moved quickly to execute a design-build contract that called for completion of the new bridge in 15 months. A typical bridge project of this scale would be expected to take three years to complete. Construction work was performed in shifts with as many as 400 workers during the day, and 200 at night. On April 8, 2008, Flatiron reached the construction half-way point, and went on to construct the \$234 million bridge three months ahead of schedule and on budget, with no lost time due to safety accidents.

**and in environmentally sensitive areas**, such as the \$199 million design-build Washington Bypass in North Carolina, which was completed eight months ahead of schedule. Flatiron also has used innovative bridge construction techniques, like an overhead gantry for pile driving and beam erecting in top-down construction. Most recently, Flatiron teamed with HDR Engineering, Inc. (HDR) and was awarded the \$99 million design-build Winston-Salem I-40 Business/U.S. 421 project in North Carolina.

As a major subcontractor to the Dragados | Flatiron JV, Kleinfelder, Inc. (Kleinfelder) will be assisting the Team as our independent Construction Quality Assurance Firm, as well as providing key Quality Assurance Manager, Richard Clarke, PE. **Kleinfelder is an ENR Top 100 CM-for-Fee firm with the collective expertise of nearly 2,000 available employees and 70 global offices.** Alpha Construction and Engineering Corporation (Alpha) will be our Team's subcontractor providing the Responsible Charge Engineer role. **Alpha is an ENR Top 100 PM/CM firm and has managed a multitude of VDOT project specific and district-wide projects** with an aggregate construction value of over \$3 billion over the past 25 years.

Our Lead Designer HDR will manage the overall design for this project. Known worldwide for providing value-added, innovative solution for almost 100 years, **HDR is one of the largest design firms in the United States, ranked #6 by ENR in the Top 50 Transportation Designers listing, #2 by ENR in the Top 5 Bridge Designers, and #9 in the overall Top 500 Design Firms.** Led by its Hampton Roads-based staff, **HDR has extensive design-build experience with VDOT**, with the existing facility and with the communities around the Project. Successfully completed projects by HDR include the \$726 million 95 Express Lanes Segment 1 and the \$67 million I-495/Dulles Toll Road Interchange in Virginia.

As a major Design Subconsultant to HDR, Moffatt & Nichol (M&N) will be providing Stakeholder Coordination, Roadway, Bridge, and Marine Foundation design support. Working for VDOT since 1996, **M&N has completed more than 90 VDOT projects.** HDR and M&N have successfully teamed to deliver over 25 projects nationwide. Additionally, **the HDR and M&N team was the original consultant selected by VDOT to design the High Rise Bridge project** before the project was delayed and ultimately cancelled.



### RECENT TIDE GATE EXPERIENCE

M&N has designed tide gates, ranging from small passive systems (which are usually spec'd systems from a manufacturer) to much larger systems. Some examples of this experience include:

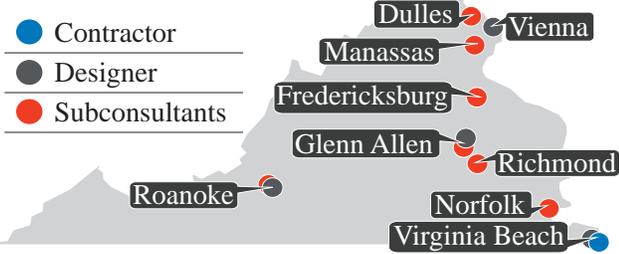
- Preliminary design of flood gates at The Hague and Pretty Lake as part of flood mitigation study for City of Norfolk, VA
- Pipemaker's Canal – designed new bridge and tide gate at confluence with Savannah River in Georgia.

Under subcontract to HDR are the following highly qualified and local subconsultants:

- **Rinker Design Associates, P.C. (RDA):** Utility Coordination and right-of-way (SWaM Certification # 652784). RDA has successfully managed the coordination of utilities on over 10 design-build projects in Virginia. Their ROW/land acquisition design-build experience includes appraisals, negotiations, and reviews on nearly 500 individual parcels over the past several years.
- **Mattern & Craig, P.C. (M&C):** Signing, Pavement Marking, Lighting, and Signaling (SWaM Certification # 625972). **M&C has been designing roadway projects for VDOT since 1986** and has worked with HDR for over 13 years.
- **Harris Miller Miller & Hanson, Inc. (HMMH):** Noise Abatement Analysis (DBE Certification # 665488). HMMH prepares acoustical designs of highway noise barriers. Recent VDOT experience in this role includes the I-66 Spot 2 and 3 Improvements Barrier Designs in Fairfax and Arlington Counties.
- **Precision Measurements, Inc. (PMI):** Surveying (SWaM Certification #5346/ DBE Certification #005346). Established in 1995, and with offices in Virginia Beach, Newport News, Richmond, and Chantilly, VA, PMI's current VDOT assignments include Route 33 multiple bridge replacement project in West Point.

**Our Team is firmly committed to meeting the 8% DBE participation goal for the entire value of the project** and will take all necessary and reasonable steps so that SWaM firms have the maximum opportunity to compete for and perform services on this project.

**Team Office Locations**



VDOT’s 2015 DBE Consultant of the Year, HDR has performed as Lead Designer on many of VDOT’s previous design-build projects, including the I-95 Express Lanes in Northern Virginia. HDR also has a significant history of working with Dragados and Flatiron. For instance, HDR joined Flatiron to form an award-winning team on the highly successful I-85 Yadkin River Bridge project in North Carolina.

**We bring a team with prior working experience on similar projects to the I-64 High Rise Bridge Project and under similar geotechnical and environmental**

**features.** Table 3.4.1 below summarizes our extensive experience working together along with other relevant managed lanes projects performed by any of our Team members. Each of these projects reflects our commitment to schedule, innovation, safety, and client partnership.

**Members of the Dragados | Flatiron Team JV have currently 17 offices and over 200 employees staffed in Virginia,** so design-build resources can be deployed immediately after Project Award.

**3.4.1 Lead Contractor Work History Forms**

Please see Attachment 3.4.1(a) for our Team’s recent relevant roadway and bridge construction experience.

**3.4.2 Lead Designer Work History**

Please see Attachment 3.4.1(c) and 3.4.1(d) for our relevant roadway and bridge design experience.

**TABLE 3.4.1: Experience Successfully Delivering Similar Projects**

Project Name and Location	Team Members	Cost	Delivery Method	Roadway Const./Widening	Bridge over Navigable Channel	Bridge Structures	Environmentally Sensitive Areas	Managed Lanes	Utility Relocation	Permitting	Complex MOT	Drainage/Stormwater	Stakeholder Relations
Harbor Bridge Replacement, Corpus Christi, TX	Dragados Flatiron	\$898M	DBOM		■	■	■		■	■			■
Northeast Anthony Henday Drive, Edmonton, AB, Canada	Dragados Flatiron	\$1.35B	DBFOM	■	■	■	■		■	■	■	■	■
High Speed Rail CP-2/3, Fresno, CA	Dragados Flatiron	\$1.23B	DBFOM			■	■		■	■		■	■
Southern Ohio Veterans Memorial Highway, Scioto County, OH	Dragados HDR	\$558M	DBFOM	■	■	■	■			■		■	■
Yadkin River Bridge, Salisbury, NC	Flatiron HDR	\$136M	DB	■	■	■	■		■	■	■	■	■
I-25 Bridges over Ilex & UPRR Railroad, Pueblo, CO	Flatiron HDR	\$56M	DB	■		■	■		■	■	■	■	■
Winston-Salem I-40 Business/U.S. 421, Winston-Salem, NC	Flatiron HDR	\$99M	DB	■	■	■	■			■		■	■
SH-288 Toll Lanes, Harris County, TX	Dragados	\$820M	DBFOM	■		■	■	■	■	■	■	■	■
SR-23 Toll Road, Jacksonville, FL	Dragados	\$150M	DB	■		■	■	■	■	■	■	■	■
I-75 Managed Lanes, Broward County, FL	Dragados	\$75M	DB	■		■	■	■	■	■	■	■	■
I-15 Managed Lanes, San Diego, CA	Flatiron	\$465M	DB	■		■	■	■	■	■	■	■	■
John J. Audubon Bridge, New Roads, LA	Flatiron	\$409M	DB		■	■	■					■	■
495 Dulles Toll Rd, Fairfax County, VA	HDR	\$67M	DB	■		■	■	■	■	■	■	■	■
I-4 Ultimate, Orlando, FL	HDR	\$2.32B	DBFOM	■		■	■	■	■	■	■	■	■
Tappan Zee Bridge, Westchester County, NY	HDR	\$3.14B	DB	■	■	■	■	■	■	■	■	■	■



## 3.5 SAFETY

**DRAGADOS USA**



## 3.5 Safety

### 3.5.1 Lead Contractor Qualifications

The Dragados | Flatiron High Rise Joint Venture Team (Dragados | Flatiron JV or Team) is **firmly committed to maintaining a safe and healthy work environment for construction personnel and the traveling public.**

The practices and standards contained in our Team's Safety Manual, based on ISO-14001 and OSHA 18001, will be implemented together with those of the Virginia Department of Transportation (VDOT) to develop a project specific Safety, Health and Environmental Management Plan (SHEMP).

As design and construction move forward, work activities are continually evaluated for safety hazards and environmental risks. Procedures in the SHEMP will be updated, as necessary, throughout the Project to reflect the most up-to-date policies to perform the work safely. The Safety Manager Ollie Taylor (Flatiron), reporting to the JV Executive Committee to ensure full independence from construction operations, will lead this review effort under the overall responsibility of the Design-Build Project Manager. Ollie has performed on the same role at the \$136 million award-winning Yadkin River Bridge in North Carolina.

Our goals for this project include:

- Safety will be our number one priority
- Zero fatalities, zero lost time injuries and zero recordable accidents
- Minimize the extent of personal injuries and other losses through an effective Crisis Management Plan
- Prevent recurring accidents/incidents through a program of analysis, lessons learned, and corrective actions

All contractor/subcontractor personnel share responsibility for safety and make safety the highest priority of their day-to-day work assignments. Our Team will implement a site specific SHEMP plan aimed at eliminating accidents, injuries, and property damage through stringent safety standards and behavior-based

**Flatiron's safety programs have been recognized as some of the nation's best in the nation by the Associated General Contractors of America. Flatiron has also been acknowledged by the Council on Certification of Health, Environmental and Safety Technologists for having the most STS-certified supervisors of any construction company.**

**Dragados is certified in OSHA 18001 Occupational Health and Safety Management System and 14001 Environmental Management System.**

safety processes. Safety program highlights include:

- **Compliance:** All contractor/subcontractor employees are trained and educated to comply with all Team, VDOT, state, federal and industry standards as a mandatory condition of employment. Compliance inspections and audits will be performed daily.
- **Orientations & Regular Meetings:** Each subcontractor employee will review the Safety Guidelines/Rules and Regulations and will receive the Team Site Specific Safety Orientation prior to start of work. Regular daily and weekly safety meetings are held with safety-specific topics that include reviewing project safety inspections and project specific safety information. Special training and education will be provided in regards to new programs and directives.
- **Inspections:** Scheduled and unscheduled safety inspections/audits will be conducted. Inspection findings and corrective actions taken or recommended will be provided to all employees at the daily and weekly Tool Box meetings.
- **Job Safety Analysis (Risk Assessments):** A Job Safety Analysis (JSA) and review is provided to ensure all crewmembers have the knowledge and tools required to complete each assigned task without incident on all field jobs.

A Crisis Management Plan will cover the project and emergency response information, evacuation, assembly and reporting procedures. Our design, scheduling, and construction methods will avoid exposure to risk for both workers and the traveling public. Our Team, including traffic management staff, will work with construction Management, VDOT Traffic and Operations staff, and emergency response agencies to develop the safest delivery of a successful I-64 High Rise Bridge project. For example, we will analyze the phasing plans for barricaded separation between workers and the traveling public, and work to limit the amount of construction access points that cause merging and confusion to highway users

For the Dragados | Flatiron Team JV's past safety performance, **please see Appendix for Attachment 3.5 – Lead Contractor Safety Qualifications Form.**



## 3.6 PROJECT RISKS

DRAGADOS USA



## 3.6 Project Risks

The design-build reconstruction of I-64 High Rise Bridge Project presents numerous challenges and associated unique risks. The Dragados | Flatiron High Rise Joint Venture Team (Dragados | Flatiron JV or Team) has identified the three most relevant and critical risks that could potentially negatively impact the successful delivery of this Project. **The risks are Corridor Access, Environmental Permitting and Mitigation, and Geotechnical.**

### 3.6.1 Three Unique Project Risks

#### Risk 1 – Corridor Access

##### Risk Identity

Our Team believes the **most critical risk for this Project is what we term Corridor Access.** The I-64 High Rise Bridge corridor is unique in its criticality to a variety of populations and services within the Hampton Roads area: public safety, maritime and roadway freight, national defense, local tourism economy, and residents. **Corridor access and work zone safety are also critical to our Team as we move construction materials into and out of the Tidewater area.** Preservation of corridor capacity to provide access to all of these issues and services is a significant risk to the Project's success.

Risk to maintaining current levels of service to these populations comes from the very construction which will ultimately reduce and mitigate these risks when complete. Construction along and adjacent to the corridor has the potential to reduce the currently poor daily Level of Service (LOS) further, resulting in potential emergency response delays and evacuation capacity in the event an evacuation is required from the Hampton Roads area.

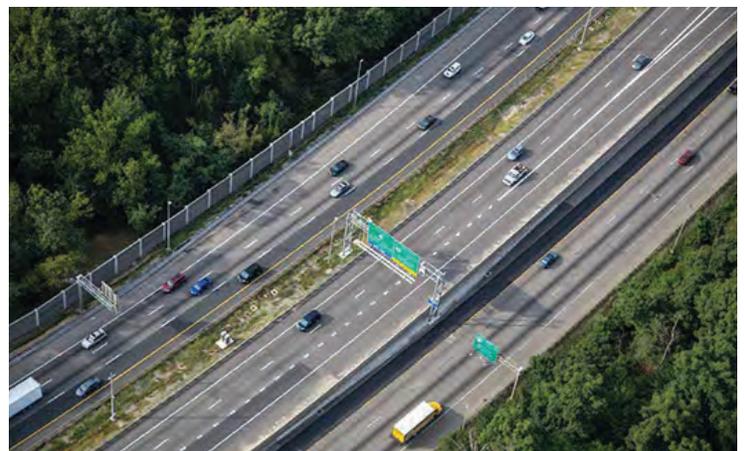
##### Risk Impact

Our Team recognizes the significant impacts that would ripple throughout the region if access to the I-64 corridor was impacted or disrupted. The I-64 corridor is a critical lifeline to Hampton Roads and from Hampton Roads to the nation. The project corridor has an Annual Average Daily Traffic volume in excess of 89,000 vehicles per day; has a high commercial truck percentage; is a busy commuter route; is a designated hurricane evacuation route; and is located in a popular tourist destination region.

Maintenance of Traffic (MOT) will be a significant consideration and therefore a major component of our characterization of corridor access. When the Dragados

| Flatiron JV begins construction operations, the risk of degraded corridor access for all users becomes much higher on a roadway that already experiences low levels of service. The current traffic LOS rating is a “D” or worse for the corridor, with the eastern approach to the High Rise Bridge being rated as “F”. The lack of lane continuity is largely a factor in the existing congestion. Also, the current crash rates on this corridor exceed the regional annual averages as well, compounding risk of degraded corridor access.

**Safe and efficient access to the work zone is critical to advancing construction activities on schedule while not further reducing the LOS for the traveling public.** Within this corridor, there are four interchanges (I-464, George Washington Highway, South Military Highway, and I-264/I-664) that will allow the Team access to additional roadways. While providing additional access points, these interchanges produce merge and weave areas within the work zone that can increase the likelihood of incidents. **Our Team will take great care in planning the work zone and monitoring these locations during construction.** For example, the HDR-designed 95 Express Lanes project added managed lanes to the I-95 median while providing safe access for over 150,000 vehicles per day. HDR worked closely with Virginia Department of Transportation (VDOT) throughout design and construction to develop and implement a thorough MOT plan and monitor it closely as the work advanced.



**Figure 3.6.1:** 95 Express Lanes Segment 1 Interior Median Design (VDOT)

Also, the directional split of peak hour traffic of I-64 is approximately 55/45; therefore, the corridor experiences two periods of heavy congestion during the weekdays. In addition to the weekday traffic, this corridor experiences

seasonal and weekend impacts. As part of this effort, **we will consider existing I-64 traffic patterns, high crash locations and daily and seasonal peak travel times to develop emergency and incident response contingency plans for the overall corridor access.**

I-64 corridor has been identified as a Virginia Hurricane Evacuation route for the communities of Virginia Beach, Suffolk, Norfolk, Chesapeake, and Portsmouth, in the event of a major storm occurrence. Impacts to this route for egress could create a significant safety risk. Safe, organized and efficient egress out of the potential storm landfall areas through an active construction zone is indeed a challenge.

### *Mitigation Strategy*

**Our Team will develop and employ innovative strategies (listed below) to limit impacts to the traveling public, minimize congestion and maintain mobility throughout the I-64 corridor for the duration of the construction.** We will partner with VDOT to look at all options to preserve and maintain corridor access and ensure safety.

#### *a. Coordination, MOT, and Rapid Response*

**The Dragados | Flatiron JV will work alongside VDOT's operational professionals to coordinate proposed work along the corridor.** This is of particular importance as VDOT looks to proactively evaluate the impacts planned lane closures have on the regional network and how these activities affect other operational, maintenance and construction work in the region.

Portable changeable message boards can suggest alternate routes and quickly communicate accurate, real time traffic conditions to the traveling public. We will provide an experienced Incident Management Coordinator who will be onsite full time for the duration of construction operations. **We will identify and meet regularly with third party stakeholders in the region,** including first responders, VDOT Traffic Operations Management, Virginia Department of Emergency Management, the USACOE, and the United States Coast Guard (USCG). **An effective Public Communications Plan and strong Public Outreach effort led by HDR's Megan O'Reilly will help keep motorists and other stakeholders informed of construction progress as well as upcoming changes to the traffic pattern.** In addition to traditional communication methods, our Team will utilize social media to apprise motorists and first responders of incidents, traffic pattern changes, lane

closures or other events and information.

The above mitigation strategies were successfully used by members of our Team on the \$1.2 billion I-595 DBFOM Corridor Roadway Improvements project in Florida. The scope of work on this project was very similar to the I-64 High Rise Bridge Project. A three pronged management approach was key in mitigating impacts to the traveling public during construction:

- A comprehensive coordination with transportation authorities, community groups, utility owners, and environmental agencies to avoid delays in the execution of the work
- Detailed Traffic Control Plans that minimized lane closures, maintained the speed on the corridor especially during peak hours, and promote a safe and efficient traffic flow
- A close collaboration between Dragados' Safety/MOT Team and the Concessionaire's Road Rangers provided rapid response in clearing accidents from the interstate roadway

These mitigation strategies resulted in maintaining high LOS during construction on this 10.5 mile corridor serving express lanes, express bus service, and a bike/pedestrian greenway.



**Figure 3.6.2: I-595 Corridor Roadway Improvements (FDOT)**

#### *b. Emergency Egress and Open Water*

**A potential major storm occurrence evacuation plan will be carefully developed and continually modified as the construction process advances** to ensure egress in the event of a potential storm, **and to recognize changing policies regarding mass evacuation, shelter-in-place, and lane reversal options.** Similarly, our design team has significant experience working with third parties in Hampton Roads



to avoid unplanned openings of the existing High Rise Bridge or major delays in marine construction activities due to industrial, military, or commercial activities on the Elizabeth River.

Our Team is well equipped to put together thoughtful and actionable emergency management plans for unique projects. An example of one of these unique projects is the \$760 million design-build Parallel Thimble Shoal Tunnel Project in the Chesapeake Bay, Virginia. Corridor Access and Egress, especially during major storm events in the Tidewater Region, is among the critical risks to successfully deliver this Project to the Chesapeake Bay Bridge-Tunnel District.

### *VDOT/ Other Agency Roles*

Given the potential of significant overlap among major construction and maintenance projects in the region, VDOT can provide a clearinghouse for ALL major construction and maintenance projects, latest storm and seasonal traffic projections, and any major military, industrial or freight movements in the region (i.e. I-64 Peninsula, I-64/264 Interchange, major bridge openings, tunnel maintenance). Providing this information in an open forum will help us build our individual strategies for lane closures, construction sequencing, public and stakeholder outreach, and avoidance of unplanned bridge openings or unnecessary limitations on marine construction.

### *Risk 2 – Project Schedule*

#### *Risk Identity*

Our Team identifies **Environmental Permitting and associated Mitigation** as the second significant risk to the project. In accordance with the Request for Qualifications, the **environmental work shall address all items necessary for the acquisition of water quality permits** in the name of the Design-Builder for the Project. As discussed in the Natural Resources Technical Report, permits are anticipated as a result of unavoidable impacts to streams and wetlands. Once 90% engineering design is complete, a Joint Permit Application (JPA) will be submitted and the wetland impacts will be calculated. The JPA will provide the basis upon which wetland compensation will be determined. Mitigation options for tidal stream or river impacts will be determined during the permitting stages through coordination with the appropriate agencies.

An Individual Permit will likely be required and will be acquired by following the JPA process. The

application will be submitted to Virginia Marine Resources Commission (VMRC), which acts as the clearinghouse and forwards the application to all appropriate agencies for comment and/or permit issuance, including the USACE, Virginia DEQ, and Local Wetland Boards. Furthermore, according to the Center for Coastal Resource Management, VMRC acts as the Local Wetland Board in the City of Chesapeake. Permits for grading and land disturbance, erosion and sediment control and stormwater management also will be required from the DEQ Virginia Stormwater Management Program and from City of Chesapeake.

Permitting for this Project will involve review from several agencies, each concerned with different resources. Below we describe potential areas of the permitting process which could affect the issuance of necessary permits and hence impact project schedule.

#### *a. Waters of the US (WOUS)*

The revised Environmental Assessment (EA) indicated that potential over 20.0 acres of wetlands, approximately 5,000 linear feet of non-tidal streams and approximately 2.0 acres of tidal streams could be affected by this project. In addition, ditching within the study area may be jurisdictional. **Prior to the submittal of a permit application, a jurisdictional determination by USACE to identify all WOUS including wetlands, utilizing the current methodology at that time, will be required.** USACE's review may result in changes in the delineation and possibly changes in the estimated impacts. **Additionally, permanent impact of bridge protection dolphins to the river will be included in the permitting process.** Obtaining the jurisdictional confirmation depends on the availability of USACE staff and there is the potential for impacts to project schedule if USACE staff is not readily available.

#### *b. Removal/ Redistribution of Elizabeth River Sediment*

The Elizabeth River has a long history of industrial activities and as such, the sediment of the river near the project location may contain hazardous constituents. Permitting agencies may be concerned with any removal or redistribution/ re-suspension of river sediment during the construction of the project. Due to the potential for hazardous materials in the sediment, regulatory agencies may require testing prior to construction and potential water quality monitoring during in water construction activities. It is possible that regulatory agencies could require temporary construction shut-down of in water

work if potential monitoring requirements are not met, which could affect project schedule.

We understand that options for disposal of dredge material must be explored since the USACE will not be able to accept the material at Craney Island Dredge Material Management Area, as this is for dredge disposal on navigation-related projects only. **We will coordinate with VDOT to develop an acceptable disposal plan.**

#### *c. Threatened and Endangered Species*

The revised EA indicates that the following species were identified as potentially present within two miles of the study area: Canebrake rattlesnake, Dismal Swamp southeastern shrew, Peregrine falcon, Atlantic sturgeon, and Northern long-eared bat.

The permitting agencies could request additional information or studies for any protected species in the project area during the permitting process. Of particular concern to project schedule is the Northern long-eared bat. Potential habitat occurs in the Project area and will be impacted. There is a potential that US Fish and Wildlife Service could require that a survey for presence of this bat in the project area be conducted and/or the implementation of a Time of Year Restriction on tree clearing from April 15 – September 15.

**Close coordination with the USFWS and the National Oceanic and Atmospheric Administration Fisheries Protected Resources Division will be necessary to secure necessary permits.**

#### *d. Coast Guard Permit*

USCG does not foresee anything that would prevent a bridge permit from being issued and has provided a Preliminary Navigation Clearance Determination (PNCD). This PNCD is not binding and does not constitute an approval or final agency action. The USCG is a cooperating agency and a final determination can only be made in accordance with regulation and after a complete bridge permit application is submitted.

#### *e. Submarine Cables*

Submarine cables have a bigger impact on the span lay out and schedule if they are in conflict or if damaged during construction.

#### *Risk Impact*

Unknown results from environmental permitting requirements, along with noise abatement studies, add risk to the meeting the project schedule. As described above, some risks will not be fully known

until additional design is performed and additional coordination with agencies is completed. For example, a final noise abatement study is required to be furnished and the noise barrier locations will not be known until completed. During the 95 Express Lanes project, an additional mile long noise barrier was required based on the final noise study that was not included in the draft evaluation. **Our Team has been successful in previous projects in working with the permitting agencies to negotiate permit conditions which will maintain construction schedule while still providing adequate protection to the natural environment.**

#### *Mitigation Strategy*

A WOUS mitigation plan will be required as part of the JPA process and obtaining permits for the project. Although the Dragados | Flatiron JV will make every effort to avoid or minimize potential impacts to wetlands and streams, unavoidable impacts to WOUS will occur. **Our mitigation strategy involves avoiding and minimizing direct impacts, and compensating for unavoidable impacts. Non-tidal stream impacts would be compensated through purchase of stream credits or onsite restoration of degraded streams.** The Unified Stream Methodology will be used to determine stream quality, assess stream impacts, and determine the compensation requirements. Mitigation of tidal stream or river impacts would be determined during the permitting stages with the appropriate agencies during the Section 404 permitting process with VMRC, USACE and DEQ.

Unavoidable impacts to wetlands from widening the existing roadway will occur adjacent to I-64. During final design, additional avoidance and minimization measures may be required by the USACE. **Our Team has extensive successful experience with providing avoidance and minimization measures through direct coordination with the USACE** on the Route 460 project in southeast Virginia. Once final design is complete, surface water impacts will be calculated and provide the basis for wetland and stream mitigation. Typical mitigation options include onsite mitigation and/or the purchase of mitigation credits. The purchase of wetland and/or stream mitigation credits from a commercial mitigation bank, or the use of existing credits from one of VDOT's mitigation banks, could be used to meet the mitigation requirements. Additionally, we understand that there is a commercial wetland bank along Liberty Road. The roadway widening of Liberty Road will be designed to ensure no impacts will occur to

the bank.

We understand that compensation will be required for unavoidable wetland and stream impacts, so **we will begin to identify potential compensation options and locations** for both tidal and non-tidal wetlands and streams within the impacted watersheds immediately. **We will also coordinate with the Elizabeth River Project to discuss their insight.**

While the facility currently does not have stormwater treatment facilities, **we will locate required stormwater quality facilities outside of jurisdictional waters. We will also incorporate the use of Low Impact Development facilities wherever feasible.**

For submarine cables, **the Team will consider performing underwater inspection upfront to confirm the cables location.**

*VDOT/ Other Agency Roles*

**Coordination between the Project Team and VDOT during the environmental permitting and mitigation process is crucial.** Field crews will be accessing the project site early for the jurisdictional determination. VDOT assistance along with coordination among cooperating agencies to assist our Team in navigating the challenging permitting process will facilitate timely permit approvals and mitigation acceptance. It is critical that we partner with VDOT to effectively and efficiently work with the key jurisdictional agencies such as the USACE, USCG, USFWS, VDEQ, VDGIF and VMRC in order to successfully meet the project schedule and environmental permitting requirements.

**Risk 3 – Geotechnical**

*Risk Identity*

Our Team identifies **Geotechnical** risk as the third significant risk to successful completion of the project. Geotechnical risk on a transportation project of this magnitude is critical because it begins at the earliest stages of the project and continues to broadly influence multiple design disciplines (roadway, bridge, drainage, hydraulics, environmental), as well as the earthwork, foundation installation, and pavement phases of construction.

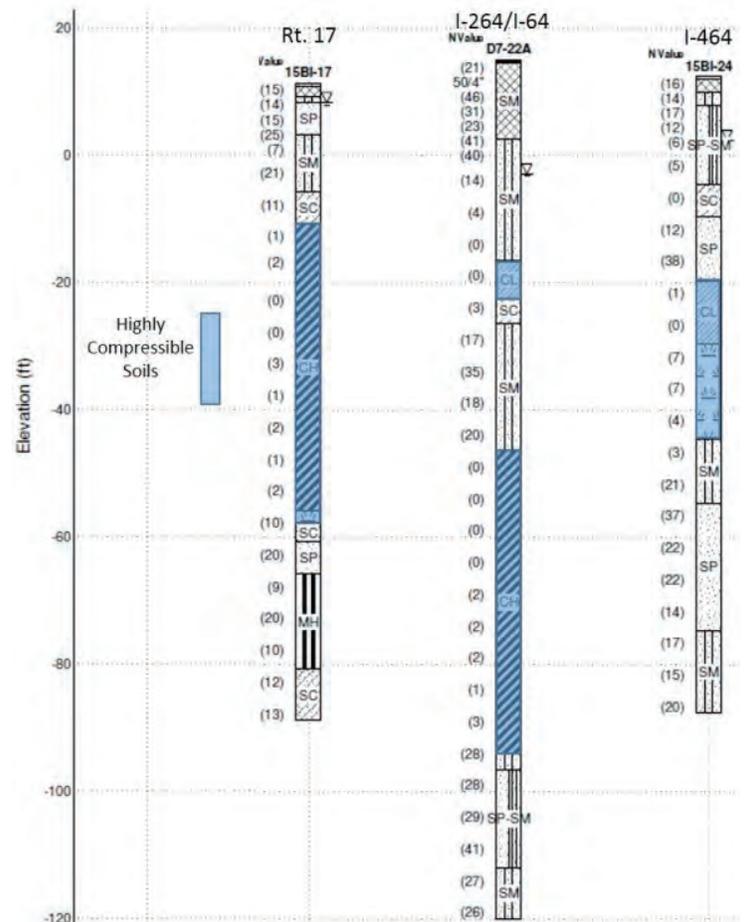
Specifically, **our geotechnical engineering expertise is strongly founded in solving the unique set of Coastal Plain of Virginia challenges posed by soft marine sediments of high compressibility and low shear strength.** We recognize and understand the adverse

impact these conditions have on subgrade suitability, embankment stability, deep foundations, construction schedules, and long-term performance of pavements. These challenges are compounded when working in close proximity to existing roadway and structures.

The subsurface conditions presented in the provided Geotechnical Data Report confirm our identification of this substantial risk. Significant thicknesses of very soft to soft fine-grained soils, as well as highly organic soils are concentrated in the vicinity of the Route 13, Route 17, Route 190 and I-64 interchanges with I-64. Similar soils were also observed in lesser thicknesses throughout the corridor. Accordingly, the Team believes that poor foundation soils are the primary geotechnical risk to the project.

*Risk Impact*

Poor foundation soils in the Chesapeake area of Virginia commonly have high compressibility and low shear strength. **Figure 3.6.3** provides an example of how poor foundation soils can negatively impact a project’s schedule, cost, and long-term performance.



**Figure 3.6.3:** Borings on poor foundation soils in Virginia

Undesirable or unsuitable soils near planned subgrade will be encountered within the project corridor. Inappropriate management of these materials can cause construction delays, particularly when a solution is widely and conservatively applied to project areas without considering spatial variation in subsurface conditions. Additionally, disposal of unsuitable materials will impact corridor access as well as safety, since the trucks required to haul the materials offsite will have to travel along public roadways.

Placing new embankment fill against an existing embankment for roadway widening can induce differential settlement. In our experience on past projects, this differential settlement will typically manifest itself along the longitudinal boundary between new and old embankments. While this may not become evident until years after construction, the differential movement can lead to cracks in the pavement and disruptions in drainage that are costly to maintain or mitigate over the design life of the pavement structure.

### *Mitigation Strategy*

The strategy to mitigate geotechnical risk on the project begins with planning an appropriate subsurface investigation. Our geotechnical investigation will supplement the existing data, as well as comply with the most recent version of VDOT's Manual of Instruction. We will submit our design-level exploration plan and approach document to VDOT for concurrence at this early stage to reduce the potential for schedule delays.

A multi-faceted exploration consisting of traditional soil test borings and in-situ testing (such as Cone Penetrometer Test (CPT) and Dilatometer soundings) can characterize subsurface conditions more efficiently along the alignment. Once critical areas are identified with the CPT soundings, the sampling efforts of the drilling rigs can be directed more efficiently. The laboratory testing program will be designed to augment the field explorations and provide important site-specific data relative to the identified risks. **Our thorough geotechnical characterization will support less conservative analysis and more efficient design.**

HDR executed this approach on the I-64/I-264 Interchange project in nearby Norfolk and Virginia Beach, VA. This allowed us to identify thick layers of highly compressible material early in the design phase of the project and complete preliminary feasibility analyses. When HDR presented its findings to VDOT,

the originally planned tall embankments were changed to bridge structures supported by deep foundations. The large predicted settlements, long wait periods, and costly ground improvements were the major drivers behind the change in design direction.

Soft and compressible soils are typically mitigated using above- or below-ground improvement technologies and methods. Options may include stone columns to reinforce soft soils, prefabricated vertical drains to speed up consolidation settlement, surcharging to reduce secondary settlements, or lighter / lightweight fill materials to reduce driving loads. Secondary compression can be controlled to within the contract tolerances through the use of surcharging placed to the appropriate height and duration. Field monitoring of settlement and movements is critical to confirm design assumptions and guide the scheduling of earthwork and paving operations.

Identification of unsuitable materials is critical to a successful management plan. Through appropriately detailed site investigations and characterization of materials, the Team will work to maximize the reuse of excavated materials. This may include the augmentation of soft, wet clay soils with lime/admixtures to produce reusable material.

On the 95 Express Lanes project, HDR identified unsuitable soils consisting of Potomac Formation clays and silts and chemically aggressive weathered rock during the design phase of the project. HDR successfully engineered the reuse of some of these materials into embankment fills onsite, thus reducing the costs associated with hauling and disposing material offsite. On the same project, HDR used lightweight aggregate to construct a portion of embankment widening over a culvert extension to control differential settlement and ensure the drainage element performed as designed.

### *VDOT/ Other Agency Roles*

VDOT's role in the geotechnical aspects of the project begins with providing a Geotechnical Design Report and Pavement Condition Report. The Team will review the preliminary data thoroughly to aid in identification of major geotechnical risk factors that influence the design and schedule aspects of the project. **The Team will work with VDOT during the scope validation period to determine if the preliminary data adequately characterizes the geotechnical risk factors at the site.**

Coordination between our Team and VDOT during

the subsurface exploration program is critical. Crews will be accessing the project site via the existing interstate roadway, which will require limited MOT that is coordinated through VDOT Traffic Operations Center. **The Dragados | Flatiron JV understands the importance of early coordination with Norfolk Southern and the Belt Line railroads.** HDR and M&N are currently leading extensive rail coordination efforts for the Department of Rail and Public Transportation, and both firms have worked directly on Norfolk Southern and Belt Line projects in the Hampton Roads area. Flatiron and HDR are currently executing the ILEX project in Colorado, a \$69 million design-build project involving extensive railroad coordination.

**Conclusion**

The Dragados | Flatiron JV carefully considered the major elements of work for the I-64 High Rise Bridge Project and determined that the three most critical

risks for our Team to mitigate for a successful delivery of the project are **Corridor Access, Environmental Permitting and Mitigation and Geotechnical.** In making this determination we considered many other potential risks – including utility relocation, right-of-way acquisition, public and agency coordination, stormwater management, etc. Continual risk evaluation, assessment and mitigation will be required. Therefore, we proposed to conduct formal Risk Workshops in partnership with VDOT and other stakeholders at key points during the project. These workshops will allow us to formulate a comprehensive Risk Management Plan that will include a Risk Register which will track and monitor project risk and its associated mitigation strategies throughout the Design-Build Phase. **Table 3.6.1**, below, highlights our experience mitigating these three risks on previous projects.

**TABLE 3.6.1: Risk Mitigation on Similar Projects**

Design-Build Project	Firm	Risk #1			Risk #2	Risk #3
		Interstate Widening	ADT > 75K	Complex MOT	Environmentally Sensitive Worksite	Poor Foundation Soils
<b>I-595 Corridor Roadway Improvement</b> , Broward County, FL	Dragados	■	■	■	■	■
<b>Autoroute 30</b> , Montreal, QC, Canada	Dragados	■	■	■	■	■
<b>SH-288 Toll Lanes</b> , Harris County, TX	Dragados	■	■	■	■	
<b>I-287 Cross Westchester Expressway Ph. III</b> , Westchester County, NY	Dragados	■	■	■		
<b>SR-23 Toll Road</b> , Jacksonville, FL	Dragados	■			■	■
<b>I-75 Managed Lanes Segment E</b> , Miami-Dade County, FL	Dragados	■	■	■	■	■
<b>I-405</b> , Kirkland, WA	Flatiron	■	■	■	■	
<b>Harbor Bridge Replacement</b> , Corpus Christi, TX	Flatiron	■		■	■	■
<b>Port Mann Bridge - Highway 1</b> , Vancouver, BC, Canada	Flatiron	■	■	■	■	■
<b>I-15 Managed Lanes</b> , San Diego, CA	Flatiron	■	■	■	■	
<b>95 Express Lanes</b> , Prince William and Stafford Counties, VA	HDR	■	■	■	■	■
<b>495 Express Lanes</b> , Fairfax County, VA	HDR	■	■	■		■
<b>Bonner Bridge</b> , Outer Banks, NC	HDR	■		■	■	■
<b>I-4 Ultimate</b> , Orange and Seminole Counties, FL	HDR	■	■	■	■	■
<b>Foothills Parkway</b> , Great Smoky Mountains National Park, TN	HDR	■			■	■
<b>Tappan Zee Bridge</b> , Westchester and Rockland Counties, NY	HDR	■	■	■	■	■



# APPENDICES

**DRAGADOS USA**





## 3.1.2 SOQ CHECKLIST

**DRAGADOS USA**



**ATTACHMENT 3.1.2**

**Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 20-page limit?</b>	<b>SOQ Page Reference</b>
<b>Statement of Qualifications Checklist and Contents</b>	Attachment 3.1.2	Section 3.1.2	no	A-1 to A-4
<b>Acknowledgement of RFQ, Revision and/or Addenda</b>	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	A-5
<b>Letter of Submittal (on Offeror's letterhead)</b>				1-3
Authorized Representative's signature	NA	Section 3.2.1	yes	2
Offeror's point of contact information	NA	Section 3.2.2	yes	3
Principal officer information	NA	Section 3.2.3	yes	3
Offeror's Corporate Structure	NA	Section 3.2.4	yes	3
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	3
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	A-6 to A-8
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	A-9 to A-19
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	A-20 to A-24
Evidence of obtaining bonding	NA	Section 3.2.9	no	A-25 to A-44

**ATTACHMENT 3.1.2**

**Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 20-page limit?</b>	<b>SOQ Page Reference</b>
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	A-45 to A-47
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	A-48 to A-56
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	A-57 to A-66
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	A-66 to A-69
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	3
<b>Offeror's Team Structure</b>				4-9
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	8
Key Personnel Resume – DBPM	Attachment 3.3.1(a)	Section 3.3.1.1	no	A-70 to A-71
Key Personnel Reference – DBPM	Attachment 3.3.1(b)	Section 3.3.1.1	no	A-72
Key Personnel Resume – RCE	Attachment 3.3.1(a)	Section 3.3.1.2	no	A-73 to

**ATTACHMENT 3.1.2**

**Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 20-page limit?</b>	<b>SOQ Page Reference</b>
				A-74
Key Personnel Reference – RCE	Attachment 3.3.1(b)	Section 3.3.1.2	no	A-75
Key Personnel Resume – QAM	Attachment 3.3.1(a)	Section 3.3.1.3	no	A-76 to A-77
Key Personnel Reference – QAM	Attachment 3.3.1(b)	Section 3.3.1.3	no	A-78
Key Personnel Resume – DM	Attachment 3.3.1(a)	Section 3.3.1.4	no	A-79 to A-80
Key Personnel Reference – DM	Attachment 3.3.1(b)	Section 3.3.1.4	no	A-81
Key Personnel Resume – CM	Attachment 3.3.1(a)	Section 3.3.1.5	no	A-82 to A-83
Key Personnel Reference – CM	Attachment 3.3.1(b)	Section 3.3.1.5	no	A-84
Key Personnel Resume – Lead Structural Engineer	Attachment 3.3.1(a)	Section 3.3.1.6	no	A-85 to A-86
Key Personnel Reference – Lead Structural Engineer	Attachment 3.3.1(b)	Section 3.3.1.6	no	A-87
Key Personnel Resume – IMC	Attachment 3.3.1(a)	Section 3.3.1.7	no	A-88 to A-89
Key Personnel Reference – IMC	Attachment 3.3.1(b)	Section 3.3.1.7	no	A-90
Organizational chart	NA	Section 3.3.2	yes	7
Organizational chart narrative	NA	Section 3.3.2	yes	4

**ATTACHMENT 3.1.2**

**Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 20-page limit?</b>	<b>SOQ Page Reference</b>
<b>Experience of Offeror's Team</b>				10-12
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	A-91 to A-95
Subcontractor Work History Form	Attachment 3.4.1(b)	Section 3.4	no	N/A
Lead Designer Work History Form	Attachment 3.4.1(c)	Section 3.4	no	A-96 to A-98
Subconsultant Work History Form	Attachment 3.4.1(d)	Section 3.4	no	N/A
<b>Safety</b>				13
Lead Contractor Safety Qualifications Form	Attachment 3.5	Section 3.4	no	A-99 to A-106
<b>Project Risk</b>				14-20
Identify and discuss three critical risks for the Project	NA	Section 3.6	yes	14-20



## 2.10 FORM C-78-RFQ

**DRAGADOS USA**



ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION

PROJECT: 1-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

State Project No. 0064-131-811, P101, R201, C501, 8662-B669, 0637, D638

Federal Project No. NHPP-064-3(488)

Contract ID Number C00106692DB93

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 (SQQ) submission date shown herein. Failure to include this acknowledgement in the SQQ may result in the rejection of your SQQ.

By signing this Attachment 2.10, the Offerer 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 - August 16, 2016  
(Date)
- 2. Cover letter of RFQ Addendum No. 1 09/16/2016  
(Date)
- 3. Cover letter of RFQ Addendum No. 2 10/04/2016  
(Date)



SIGNATURE

October 11, 2016

DATE

Rafael de la Barrera Mingot

PRINTED NAME

Authorized Officer of  
DragadosIFlatiron High Rise JV

TITLE



## 3.2.6 LIST OF AFFILIATED AND SUBSIDIARY COMPANIES

**DRAGADOS USA**



**ATTACHMENT 3.2.6**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

**Affiliated and Subsidiary Companies of the Offeror**

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

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

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
Affiliate (Grandparent)	Actividades de Construccion y Servicios, S.A. (ACS)	Avenida de Pio XII, 102 28036 Madrid, Spain
Affiliate (Parent)	Dragados, S.A.	Ave. Camino Santiago, 50, 28050 Madrid, Spain
Affiliate (Sister)	Dragados Inversiones USA, Inc.	810 Seventh Ave. 9th Floor, New York, NY 10019
Affiliate (Sister)	Dragados Construction USA, Inc.	810 Seventh Ave. 9th Floor, New York, NY 10019
Affiliate (Sister)	Geotecnia y Cimientos, S.A.	Ave. Camino Santiago, 50, 28050 Madrid, Spain
Affiliate (Sister)	Vias y Construcciones, S.A.	Orense, 11 - 2nd Floor 28020 Madrid, Spain
Affiliate (Sister)	Drace Infraestructuras, S.A.	Ave. Camino Santiago, 50, 28050 Madrid, Spain
Affiliate (Sister)	Dragados Canada, Inc.	150 King St. W, Toronto, Ontario M5H1J9 Canada
Affiliate (Sister)	Newark Real Estate Holdings, Inc.	810 Seventh Ave. 9th Floor, New York, NY 10019
Affiliate (Sister)	Schiavone Construction Co. LLC	150 Meadowlands Pkwy Secaucus, NJ 07094
Affiliate (Sister)	John P. Picone, Inc.	31 Garden Lane, Lawrence, NY 11559
Affiliate (Sister)	Pulice Construction, Inc.	2033 W Mountain View Rd., Phoenix, AZ 85021
Affiliate (Sister)	Prince Contracting LLC	10210 Highland Manor Dr, Tampa, FL 33610
Affiliate (Sister)	J.F. White Contracting Company	10 Burr Street, Farmingham, MA 01701
Affiliate (Sister)	Geocisa USA, Inc.	810 Seventh Ave. 9th Floor, New York, NY 10019







## 3.2.7 DEBARMENT FORMS

**DRAGADOS USA**



ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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.

	September 29, 2016	Executive Vice President
Signature	Date	Title
Dragados USA, Inc.		
Name of Firm		

**EXPLANATION TO CERTIFICATION REGARDING DEBARMENT**

Dragados USA, Inc. ("DUSA"), maintains the highest standards of integrity, responsibility, and business ethics in its operations, has an ethics and compliance department implementing comprehensive policies and procedures, and has accurately certified to its responsibility in the accompanying form. In the interest of complete transparency, the following information is provided:

(i) On or about March 1, 2010, Yonkers Contracting Co., Inc. ("Yonkers"), received a records subpoena from the United States Attorney for the Southern District of New York and addressed to Yonkers and/or Yonkers/Dragados Joint Venture (a joint venture between Yonkers and Dragados USA, Inc.) in connection with certain Disadvantaged/Minority/Women Business Enterprise subcontractors for the New York State Department of Transportation I-287 (Cross-Westchester Expressway) Project D260081 and the Metropolitan Transportation Authority Bridges and Tunnels Contract TN-83 (Orthotropic Deck Rehabilitation at the Throgs Neck Bridge). Dragados USA, Inc., was not served with said subpoena and was not involved with the Throgs Neck Bridge project. Upon information and belief, Yonkers has complied with the subpoena and Yonkers dealt with the investigation in an ongoing manner. Moreover, the United States of America (the "Government") had informed Yonkers/Dragados Joint Venture (the "Joint Venture") that the Government was investigating certain potential civil causes of action against Yonkers and the Joint Venture under the False Claims Act, 31 U.S.C. §§ 3729 et seq., other federal statutes, and the common law, arising in connection with the submission of claims regarding the use of Disadvantaged Business Enterprises ("DBEs") on the Cross-Westchester Expressway/I-287 (Contract SH CWE 56-1) Project. Upon information and belief, on November 3, 2015, the US Attorney commenced a federal civil law suit against Yonkers only, alleging DBE fraud/False Claims Act and seeking treble damages (neither DUSA or the Joint Venture are named as defendants). Upon information and belief, on November 6, 2015, Yonkers entered into a civil settlement agreement and non-prosecution agreement with the US Attorney for \$2.6 Million (neither DUSA nor the Joint Venture are parties to these agreements).

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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.

	10/6/16	Vice President, Large Projects Division
Signature	Date	Title
Flatiron Constructors, Inc.		
Name of Firm		

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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

09/26/2016  
\_\_\_\_\_  
Date

Kenneth Aducci, PE, Sr. Vice President  
\_\_\_\_\_  
Title

HDR Engineering, Inc.  
\_\_\_\_\_  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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

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

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

	<u>9/29/16</u>	<u>President &amp; CEO</u>
Signature	Date	Title

Harris Miller Miller & Hanson Inc.  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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

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

Elvone Jay                      9/29/2016                      President  
Signature                      Date                      Title

Precision Measurements, Inc.  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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

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

<u>Richard Wells</u>	<u>10/10/16</u>	<u>SENIOR VICE PRESIDENT</u>
Signature	Date	Title
<u>KLEINFELDER, INC.</u>		
Name of Firm		

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

- 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.

 28-Sept-2016 Southeast Regional Manager  
Signature Date Title  
Alpha Corporation  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

- 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.

C E Burke  
Signature                      Date

Business Unit Leader  
Title

MOFFATT + NICHOL  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

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.

Michael S. Agre                      9/23/16                      Vice President  
Signature                              Date                                      Title

Mattern & Craig, Inc.  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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.

 9/27/2016 \_\_\_\_\_ CEO \_\_\_\_\_  
Signature Date Title

Rinker Design Associates, P.C. \_\_\_\_\_  
Name of Firm



# OFFEROR'S VDOT PREQUALIFICATION CERTIFICATE

**DRAGADOS USA**



## Divita, Isabel

---

**From:** Heredero Rodriguez, Gabriel Santiago  
**Sent:** Monday, October 03, 2016 2:36 PM  
**To:** Zozaya, Victor; Divita, Isabel; Walker, Jodi; Sandman, Tonya; Pamplona Gardeta, Angel; Stoddard, Denny  
**Subject:** FW: Your assigned Joint Venture # is JV079

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Gabriel Heredero | **DRAGADOS USA** | 810 Seventh Avenue, 9th Floor | New York, NY 10019  
Phone: 212-779-0900 Ext. 217 | Mobile 305-215-6593 | Email: [gsherederor@dragados-usa.com](mailto:gsherederor@dragados-usa.com)

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**From:** Prequalification (VDOT) [<mailto:Prequalification@VDOT.Virginia.gov>]  
**Sent:** Monday, October 03, 2016 2:22 PM  
**To:** Barreda Mingot, Rafael de la  
**Cc:** Heredero Rodriguez, Gabriel Santiago; DePorter, Katie  
**Subject:** Your assigned Joint Venture # is JV079

Dear Dragados USA, Inc.  
And Flatiron Constructors, Inc.

Thank you for submitting the Joint Venture agreement to the Prequalification Office.  
We have processed the paperwork and the Joint Venture: Dragados|Flatiron High Rise JV and is assigned the # **JV079**.

Please feel free to contact me if there are any concerns.

Thank-you

*Suzanne Lucas*, CAPM

State Prequalification Supervisor  
Construction Division  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219  
(804)-786-2941

Email: [Prequalification@VDOT.Virginia.gov](mailto:Prequalification@VDOT.Virginia.gov)

## Herederero Rodriguez, Gabriel Santiago

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**From:** Silies, Don E. (VDOT) <Don.Silies@VDOT.Virginia.gov>  
**Sent:** Wednesday, October 05, 2016 1:54 PM  
**To:** Herederero Rodriguez, Gabriel Santiago  
**Cc:** Lucas, Suzanne F., CAPM (VDOT)  
**Subject:** FW: I-64 Southside Widening and High Risebridge, Phase 1 - Dragados Request for Waiver  
**Attachments:** Dragados\_Request\_for\_Waiver\_Updated.pdf

I have reviewed the qualifications of Dragados USA and I find them acceptable to perform this work. I therefore waive the bidding restriction imposed by your current prequalification status. I look forward to your Proposal.

*Don E. Silies*

Director of Contracts

(804) 786-1630



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**From:** Herederero Rodriguez, Gabriel Santiago [<mailto:gshederor@dragados-usa.com>]  
**Sent:** Tuesday, October 04, 2016 1:14 PM  
**To:** Silies, Don E. (VDOT)  
**Cc:** Prequalification (VDOT)  
**Subject:** RE: I-64 Southside Widening and High Risebridge, Phase 1 - Dragados Request for Waiver

Suzanne, Don,

Please find attached a revised waiver request package with projects completed by Dragados USA.

Best regards,

Gabriel Herederero | **DRAGADOS USA** | 810 Seventh Avenue, 9th Floor | New York, NY 10019  
Phone: 212-779-0900 Ext. 217 | Mobile 305-215-6593 | Email: [gshederor@dragados-usa.com](mailto:gshederor@dragados-usa.com)

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**From:** Herederero Rodriguez, Gabriel Santiago  
**Sent:** Monday, October 03, 2016 11:48 PM  
**To:** Don Silies ([don.silies@vdot.virginia.gov](mailto:don.silies@vdot.virginia.gov))  
**Cc:** 'Prequalification (VDOT)'  
**Subject:** I-64 Southside Widening and High Risebridge, Phase 1 - Dragados Request for Waiver

Dear Don,

Attached please find the formal letter from Dragados requesting the letter of waiver for the I-64 Southside Widening and High Risebridge, Phase 1, along with 3 projects sheets and owner testimonials.

Please don't hesitate to contact me direct with any questions, concerns or additional information needed.

We look forward to hearing from you.

## Divita, Isabel

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**Subject:** FW: Vendor # D1145:Dragados USA, Inc. / Your firm is Prequalified (Probationary) level with VDOT-

**Attachments:** Prequal\_Probationary\_12102015.pdf

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**From:** Prequalification (VDOT) [<mailto:Prequalification@VDOT.Virginia.gov>]  
**Sent:** Friday, September 30, 2016 2:23 PM  
**To:** Barreda Mingot, Rafael de la  
**Cc:** Silies, Don E. (VDOT); Motley, Dennis W. (VDOT); Heredero Rodriguez, Gabriel Santiago  
**Subject:** Vendor # D1145:Dragados USA, Inc. / Your firm is Prequalified (Probationary) level with VDOT-

Dragados USA, Inc.

According to our records your firm meets the requirements to be assigned the “**Prequalified (Probationary)**” Level. Attached is an informational worksheet how this level was determined for your firm’s review.

Your firm’s expiration date will be posted online by next Friday at 2pm on the “ [Current Prequalified Highway Contractors’ List\\*](#) “

This email is official notification that your firm is prequalified with VDOT. It may take 3 weeks to receive a certificate from our office.

Please let me know if your firm needs for me to send an email to notify anyone else of your firm’s prequalification.

Thank-you for being prequalified with VDOT.

*Suzanne Lucas*

State Prequalification Supervisor  
Construction Division  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219  
(804)-786-2941

Email: [Prequalification@VDOT.Virginia.gov](mailto:Prequalification@VDOT.Virginia.gov)

Webpage: <http://www.virginiadot.org/business/const/prequal.asp>

**From:** Silies, Don E. (VDOT) [<mailto:Don.Silies@VDOT.Virginia.gov>]  
**Sent:** Tuesday, September 13, 2016 11:55 AM  
**To:** DePorter, Katie  
**Cc:** Lucas, Suzanne F., CAPM (VDOT); Patel, Shailendra G., P.E. (VDOT)  
**Subject:** RE: I-64 High Rise Request for Waiver

Good afternoon Katie,

I am so pleased to learn that your firm is interested in working with VDOT again. I have reviewed the qualifications of Flatiron Constructors, Inc. and I find them acceptable for the purpose of bidding this project. Therefore, I hereby waive the bidding restriction on your firm for this project. I look forward to your bid.

***Don E. Silies***

**Director of Contracts**

(804) 786-1630



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**From:** DePorter, Katie [<mailto:KDeporter@flatironcorp.com>]  
**Sent:** Tuesday, September 13, 2016 12:24 PM  
**To:** Silies, Don E. (VDOT)  
**Subject:** I-64 High Rise Request for Waiver

Good Morning Don,

Attached please find the formal letter from Flatiron requesting the letter of waiver for I-64 High Rise, along with 3 projects sheets and owner testimonials. We have additional projects we are happy to submit if you feel there is a need. Please feel free to contact me direct with any questions, concerns or additional information needed.

We look forward to hearing from you

Have a Great Day!

**Katie DePorter**  
**Flatiron Small and Disadvantage Business Manager/  
Licensing Manager**  
**385 Interlocken Crescent Blvd.**  
**Suite 900**  
**Broomfield, CO 80021**

**Office: 720-494-8095**  
**Mobile: 970-371-5177**  
**Fax: 720-494-8095**

***Build the Best. Be the Best***



COMMONWEALTH OF VIRGINIA



# CERTIFICATE OF QUALIFICATION

## FLATIRON CONSTRUCTORS, INC.

Vendor Number: F319

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

**PREQUALIFIED (CURRENTLY INACTIVE)**

Your firm specializes in the noted Classification(s):

**MAJOR STRUCTURES; MARINE CONSTRUCTION; BRIDGE REPAIRS; EXCAVATING**

Issue Date: August 18, 2016

Suzanne FR Lucas, State Prequalification Officer

This Rating and Classification will Expire: May 31, 2017

Don E. Silles, Director of Contracts

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



# SURETY LETTER

**DRAGADOS USA**



**LIBERTY MUTUAL INSURANCE COMPANY  
ZURICH AMERICAN INSURANCE COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
THE CONTINENTAL INSURANCE COMPANY  
BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY  
AMERICAN HOME ASSURANCE COMPANY  
TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA  
FEDERAL INSURANCE COMPANY**

September 29, 2016

Commonwealth of Virginia - Department of Transportation (VDOT)  
Central Office Mail Center -Loading Dock Entrance  
1401 E. Broad Street  
Richmond, Virginia 23219  
Attention: Brenda L. Williams

RE: The joint venture Contractor "Dragados | Flatiron High Rise JV" consisting of:  
Dragados USA, Inc., and  
Flatiron Constructors, Inc.  
Request for Qualifications – I-64 Southside Widening and High Rise Bridge, Phase 1 – Design-Build Project  
Anticipated Contract Value: \$480 million

To Whom It May Concern:

We understand that Dragados | Flatiron High Rise JV is submitting a Statement of Qualifications (SOQ) for the captioned project and this surety letter is written in support of this team. The undersigned surety companies ("the Co-Sureties") are pleased to consider contract bonds for Dragados | Flatiron High Rise JV for this project.

The Co-Sureties for Dragados | Flatiron High Rise JV hereby confirm that this team is capable of obtaining the 100% Performance and 100% Labor and Material Payment Bond in the amount of the anticipated contract value for this Project and any warranty periods as provided in the Contract Documents in the event that this team is the successful bidder and enters into a contract for this Project.

The Co-Sureties have the pleasure of extending surety credit to Dragados | Flatiron High Rise JV. We have complete confidence in the technical ability and financial capacity of this team and we have regularly supported the companies making up this team individually on projects considerably larger than this Project. We have no doubt in their ability to satisfactorily complete the referenced project. Each of the Co-Sureties is licensed to conduct surety business in the Commonwealth of Virginia and each surety company below exceeds the minimum requirements of an A.M. Best Company rating of A minus and Financial Size Category VIII or better.

Actual approval of performance and payment bonds will be subject to review and approval of the contract terms, conditions and bond forms and the application of such other underwriting criteria as may be pertinent at the time such bonds are requested by Dragados | Flatiron High Rise JV

Sincerely,

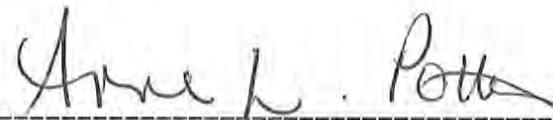
Liberty Mutual Insurance Company **A.M. Best Rating A Financial Size Category XV**  
Zurich American Insurance Company **A.M. Best Rating A+ Financial Size Category XV**  
Fidelity and Deposit Company of Maryland **A.M. Best Rating A+ Financial Size Category XV**  
The Continental Insurance Company **A.M. Best Rating A Financial Size Category XV**  
Berkshire Hathaway Specialty Insurance Company **A.M. Best Rating A++ Financial Size Category XV**  
American Home Assurance Company **A.M. Best Rating A Financial Size Category XV**  
Travelers Casualty and Surety Company of America **A.M. Best Rating A+ Financial Size Category XV**  
Federal Insurance Company **A.M. Best Rating A+ Financial Size Category XV**

  
Andrea E. Gorbett, Attorney-In-Fact

**ACKNOWLEDGEMENT OF SURETY**

STATE OF New York,  
COUNTY OF Nassau,)

ON THE 29<sup>th</sup> DAY OF September, 2016 , BEFORE ME PERSONALLY CAME Andrea E. Gorbert TO ME KNOWN, WHO, BEING BY ME DULY SWORN, DID DEPOSE AND SAY THAT (S)HE RESIDES AT Suffolk County, NY THAT (S)HE IS THE ATTORNEY-IN-FACT OF Zurich American Insurance Company, Fidelity and Deposit Company of Maryland, Liberty Mutual Insurance Company, The Continental Insurance Company, Berkshire Hathaway Specialty Insurance Company, Travelers Casualty and Surety Company of America, Federal Insurance Company, American Home Assurance Company THE CORPORATION DESCRIBED IN AND WHICH EXECUTED THE ABOVE INSTRUMENT; THAT (S)HE KNOWS THE SEAL OF SAID CORPORATION; THAT ONE OF THE SEALS AFFIXED TO THE FOREGOING INSTRUMENT IS SUCH SEAL; THAT IT WAS SO AFFIXED BY ORDER OF THE BOARD OF DIRECTORS OF SAID CORPORATION; AND THAT (S)HE SIGNED HIS/HER NAME THERETO BY LIKE ORDER.



Notary Public

ANNE L. POTTER  
NOTARY PUBLIC-STATE OF NEW YORK  
No. DiPO6283845  
Qualified in Queens County  
My Commission Expires June 17, 2017

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

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

Certificate No. 7455526

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Andrea E. Gorbett; Anne Potter; Beverly A. Woolford; Jennifer L. Jakaitis; Nancy Schnee; Susan A. Welch; Valorie Spates

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 17th day of August, 2016.

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

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



STATE OF PENNSYLVANIA ss  
COUNTY OF MONTGOMERY

On this 17th day of August, 2016, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



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

By: Teresa Pastella  
Teresa Pastella, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this \_\_\_\_\_ day of \_\_\_\_\_, 20SEP 29 2016.



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

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

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



LIBERTY MUTUAL INSURANCE COMPANY  
**FINANCIAL STATEMENT — DECEMBER 31, 2015**

<b>Assets</b>	<b>Liabilities</b>
Cash and Bank Deposits..... \$753,038,641	Unearned Premiums..... \$6,580,520,311
*Bonds — U.S Government..... 1,547,613,446	Reserve for Claims and Claims Expense..... 16,917,138,677
*Other Bonds..... 11,088,162,545	Funds Held Under Reinsurance Treaties..... 210,794,503
*Stocks..... 9,919,835,033	Reserve for Dividends to Policyholders..... 358,033
Real Estate..... 295,926,247	Additional Statutory Reserve..... 29,659,093
Agents' Balances or Uncollected Premiums..... 4,487,501,643	Reserve for Commissions, Taxes and
Accrued Interest and Rents..... 120,872,424	Other Liabilities..... <u>2,789,478,276</u>
Other Admitted Assets..... <u>14,130,266,527</u>	<b>Total..... \$26,527,948,893</b>
<b>Total Admitted Assets..... <u>\$42,343,216,506</u></b>	Special Surplus Funds..... \$67,890,944
	Capital Stock..... 10,000,000
	Paid in Surplus..... 8,829,183,823
	Unassigned Surplus..... 6,908,192,846
	<b>Surplus to Policyholders..... <u>15,815,267,613</u></b>
	<b>Total Liabilities and Surplus..... <u>\$42,343,216,506</u></b>



\* Bonds are stated at amortized or investment value; Stocks at Association Market Values.  
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2015, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 15th day of March, 2016.

*TAMIKOLAJEWSKI*

\_\_\_\_\_  
 Assistant Secretary

**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 **GERALD F. HALEY, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Nancy SCHNEE, Andrea E. GORBERT, Valorie SPATES, Beverly A. WOOLFORD, Anne POTTER and Susan A. WELSH, all of Jericho, New York, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

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

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 19th day of August, A.D. 2016.

**ATTEST:**

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



By: *Eric D. Barnes*

*Secretary  
Eric D. Barnes*

State of Maryland  
County of Baltimore

*Gerald F. Haley*

*Vice President  
Gerald F. Haley*

On this 19th day of August, A.D. 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **GERALD F. HALEY, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

*Constance A. Dunn*

Constance A. Dunn, Notary Public  
My Commission Expires: July 9, 2019



**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 \_\_\_\_ day of SEP 29 2016, 20\_\_\_\_.

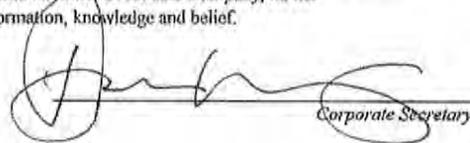


Michael Bond, Vice President

**ZURICH AMERICAN INSURANCE COMPANY**  
**COMPARATIVE BALANCE SHEET**  
**ONE LIBERTY PLAZA, 165 BROADWAY, 32nd FLOOR, NEW YORK, NY 10006**  
**As of December 31, 2015 and December 31, 2014**

	<u>12/31/2015</u>	<u>12/31/2014</u>
<b>Assets</b>		
Bonds	\$ 17,260,128,973	\$ 17,933,136,241
Preferred Stock	-	-
Common Stock	3,457,354,146	3,213,266,911
Real Estate	743,791,691	-
Other Invested Assets	2,048,959,102	2,602,435,930
Short-term Investments	403,620,083	707,396,303
Receivable for securities	86,823,468	20,334,654
Cash and cash equivalents	182,127,374	9,155,828
Securities lending reinvested collateral assets	86,554,110	167,993,212
Employee Trust for Deferred Compensation Plan	153,274,854	140,606,132
Total Cash and Invested Assets	<u>\$ 24,422,633,801</u>	<u>\$ 24,794,325,211</u>
Premiums Receivable	\$ 3,598,435,742	\$ 3,317,513,374
Funds Held with Reinsurers	1,906,522	2,357,701
Reinsurance Recoverable	521,790,582	492,689,841
Accrued Investment Income	123,257,424	116,594,177
Federal Income Tax Recoverable	1,045,367,647	941,023,188
Due from Affiliates	200,022,690	83,375,591
Other Assets	558,041,597	561,819,983
Total Assets	<u>\$ 30,471,456,005</u>	<u>\$ 30,309,699,066</u>
<b>Liabilities and Policyholders' Surplus</b>		
<b>Liabilities:</b>		
Loss and LAE Reserves	\$ 14,173,584,657	\$ 13,922,765,027
Unearned Premium Reserve	4,463,409,342	4,502,895,029
Funds Held with Reinsurers	203,459,214	191,291,330
Loss In Course of Payment	386,200,590	306,093,345
Commission Reserve	120,630,088	79,627,248
Federal Income Tax Payable	93,480,741	115,512,376
Remittances and Items Unallocated	178,038,986	123,759,621
Payable to parent, subs and affiliates	69,640,403	154,224,298
Provision for Reinsurance	44,528,436	59,189,897
Ceded Reinsurance Premiums Payable	939,196,923	721,709,366
Securities Lending Collateral Liability	86,554,110	167,993,212
Other Liabilities	1,947,276,015	1,949,229,453
Total Liabilities	<u>\$ 22,705,999,505</u>	<u>\$ 22,294,290,202</u>
<b>Policyholders' Surplus:</b>		
Common Capital Stock	\$ 5,000,000	\$ 5,000,000
Paid-In and Contributed Surplus	4,394,131,321	4,394,131,321
Surplus Notes	-	-
Special Surplus Funds	56,772,000	57,824,000
Cumulative Unrealized Gain	430,546,047	572,072,362
Unassigned Surplus	2,879,007,132	2,986,381,181
Total Policyholders' Surplus	<u>\$ 7,765,456,500</u>	<u>\$ 8,015,408,864</u>
Total Liabilities and Policyholders' Surplus	<u>\$ 30,471,456,005</u>	<u>\$ 30,309,699,066</u>

I, Dennis F. Kerrigan, Corporate Secretary of ZURICH AMERICAN INSURANCE COMPANY do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company, on the 31st day of December, 2015, according to the best of my information, knowledge and belief.

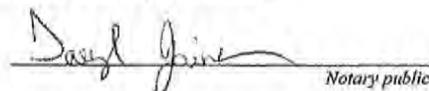
  
 \_\_\_\_\_  
 Corporate Secretary

State of Illinois  
 County of Cook

} SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2016.



  
 \_\_\_\_\_  
 Notary public

**FIDELITY AND DEPOSIT COMPANY**

OF MARYLAND

600 Red Brook Blvd., Suite 600, Owings Mills, MD 21117

**Statement of Financial Condition**

As Of December 31, 2015

**ASSETS**

Bonds .....	\$ 142,878,497
Stocks .....	22,315,096
Cash and Short Term Investments.....	337,835
Reinsurance Recoverable .....	24,731,651
Other Accounts Receivable.....	19,935,844
<b>TOTAL ADMITTED ASSETS .....</b>	<b>\$ <u>210,198,923</u></b>

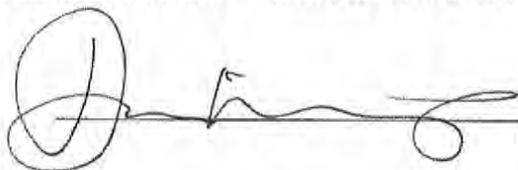
**LIABILITIES, SURPLUS AND OTHER FUNDS**

Reserve for Taxes and Expenses .....	\$ 46,436
Ceded Reinsurance Premiums Payable .....	40,456,309
Securities Lending Collateral Liability .....	0
<b>TOTAL LIABILITIES .....</b>	<b>\$ 40,502,745</b>
Capital Stock, Paid Up .....	\$ 5,000,000
Surplus .....	<u>164,696,178</u>
Surplus as regards Policyholders.....	169,696,178
<b>TOTAL .....</b>	<b>\$ <u>210,198,923</u></b>

Securities carried at \$57,996,983 in the above statement are deposited with various states as required by law.

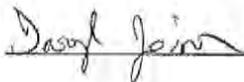
Securities carried on the basis prescribed by the National Association of Insurance Commissioners. On the basis of market quotations for all bonds and stocks owned, the Company's total admitted assets at December 31, 2015 would be \$212,137,795 and surplus as regards policyholders \$171,635,049.

I, DENNIS F. KERRIGAN, Corporate Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company on the 31st day of December, 2015.

  
 \_\_\_\_\_  
 Corporate Secretary

State of Illinois }  
 City of Schaumburg } SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2016.

  
 \_\_\_\_\_  
 Notary Public



**POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT**

**Know All Men By These Presents**, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Nancy Schnee, Valorie Spates, Andrea E Gorbert, Beverly Woolford, Anne Potter, Individually, of Jericho, NY  
Debra A Deming, Vivian Carti, Evangelina L Dominick, Cynthia Farrell, Sandra Diaz, Edward Reilly, Peter Healy,  
Susan A Welsh, Individually, of New York, NY**

its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts -**

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Board of Directors of the insurance company.

**In Witness Whereof**, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 26th day of August, 2016.

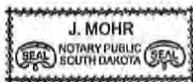


The Continental Insurance Company

*Paul T. Bruflat*  
Paul T. Bruflat Vice President

State of South Dakota, County of Minnehaha, ss:

On this 26th day of August, 2016, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.



My Commission Expires June 23, 2021

*J. Mohr*  
J. Mohr Notary Public

**CERTIFICATE**

I, D. Bult, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance company printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this \_\_\_\_\_ day of SEP 29 2016, \_\_\_\_\_.



The Continental Insurance Company

*D. Bult*  
D. Bult Assistant Secretary

THE CONTINENTAL INSURANCE COMPANY  
 Radnor, Pennsylvania  
 Statement of Net Admitted Assets and Liabilities  
 December 31, 2015

ASSETS

Bonds	\$ 1,029,630,968
Stocks	154,739,571
Cash and short-term investments	246,391,807
Receivables for securities	18,845
Investment income due and accrued	14,125,269
Amounts recoverable from reinsurers	122,240,351
Funds held by or deposited with reinsured companies	1,850,091
Net deferred tax asset	73,791,202
Premiums and considerations	23,054,396
Other assets	1,019,110
<b>Total Assets</b>	<b>\$ 1,666,861,610</b>

LIABILITIES AND SURPLUS

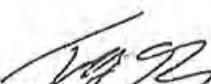
Losses	\$ 774,879,701
Loss adjustment expense	36,650,259
Other expenses	736,867
Unearned premiums	-
Ceded reinsurance premiums payable (net of ceding commissions)	27,199,039
Provision for reinsurance	76,000,000
Other liabilities	(717,874,026)
<b>Total Liabilities</b>	<b>\$ 197,591,840</b>

Surplus Account:

Capital paid up	\$ 53,566,360
Gross paid in and contributed surplus	1,423,436,994
Special Surplus	136,028,695
Unassigned funds	(143,762,279)
Surplus as regards policyholders	\$ 1,469,269,770
<b>Total Liabilities and Capital</b>	<b>\$ 1,666,861,610</b>

I, Troy Wray, Assistant Vice President of The Continental Insurance Company hereby certify that the above is an accurate representation of the financial statement of the Company dated December 31, 2015, as filed with the various Insurance Departments and is a true and correct statement of the condition of The Continental Insurance Company as of that date.

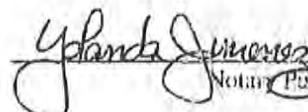
The Continental Insurance Company

By   
 Assistant Vice President

Subscribed and sworn to me this 21st day of March, 2016.

My commission expires:



  
 Notary Public

**BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)**

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 5.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

**NATIONAL INDEMNITY COMPANY (BY-LAWS)**

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

**NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)**

Resolved, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) to remove at any time any such Attorney-in-fact and revoke the authority given him.

**NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)**

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

**NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)**

Resolved, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) to remove at any time any such Attorney-in-fact and revoke the authority given him.



### Power Of Attorney

#### BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131, and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Andrea E. Gorbert, Beverly A. Woolford, Anne Potter, Nancy Schnee, Valorie Spates, 390 North Broadway of the city of Jericho State of New York**, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

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 hereto this date of November 18, 2014. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively.

BERKSHIRE HATHAWAY SPECIALTY  
INSURANCE COMPANY,

By:

David Fields, Executive Vice President



NATIONAL INDEMNITY COMPANY,  
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,

By:

David Fields, Vice President



NOTARY

State of Massachusetts, County of Suffolk, ss:

On this 18th day of November, 2014 before me appeared David Fields, Executive Vice President of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY and Vice President of NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



Notary Public

I, Brennan Neville, the undersigned, Assistant Secretary of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, I have hereunto affixed the seals of said companies this date of September 29, 2016.



Assistant Secretary

To verify the authenticity of this Power of Attorney please contact us at BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, 100 Federal Street, 20<sup>th</sup> Floor, Boston, MA 02110 | (617) 936-2971 or by email at [Courtney.Walker@bhspecialty.com](mailto:Courtney.Walker@bhspecialty.com). THIS POWER OF ATTORNEY IS VOID IF ALTERED. To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at [claimsnotice@bhspecialty.com](mailto:claimsnotice@bhspecialty.com), via fax to (617) 507-8259, or via mail.

# BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY

1314 Douglas Street, Suite 1400, Omaha, Nebraska 68102

## ADMITTED ASSETS\*

	<u>12/31/2015</u>	<u>9/30/2015</u>	<u>12/31/2014</u>
Total invested assets	\$ 3,186,498,049	\$ 3,136,760,813	\$ 3,496,596,431
Premium & agent balances (net)	111,888,220	87,914,911	1,575,140
All other assets	73,200,653	57,838,968	23,436,525
<b>Total Admitted Assets</b>	<u>\$ 3,371,586,922</u>	<u>\$ 3,282,514,692</u>	<u>\$ 3,521,608,096</u>

## LIABILITIES & SURPLUS\*

	<u>12/31/2015</u>	<u>9/30/2015</u>	<u>12/31/2014</u>
Loss & loss exp. unpaid	\$ 33,586,302	\$ 22,748,711	\$ 7,856,614
Unearned premiums	62,997,856	33,154,834	454,617
All other liabilities	230,891,273	195,785,652	279,153,584
<b>Total Liabilities</b>	<u>327,475,431</u>	<u>251,689,197</u>	<u>287,464,815</u>
<b>Total Policyholders' Surplus</b>	<u>3,044,111,491</u>	<u>3,030,825,495</u>	<u>3,234,143,281</u>
<b>Total Liabilities &amp; Surplus</b>	<u>\$ 3,371,586,922</u>	<u>\$ 3,282,514,692</u>	<u>\$ 3,521,608,096</u>

\* Assets, liabilities and surplus are presented on a Statutory Accounting Basis as promulgated by the NAIC and/or the laws of the company's domiciliary state.

A.M. Best: A++ Rating

Standard & Poor's: AA+ Rating

**POWER OF ATTORNEY**

**American Home Assurance Company**  
**National Union Fire Insurance Company of Pittsburgh, PA.**  
Principal Bond Office: 175 Water Street, New York, NY 10038

Power No. 30967

No. 01-B-31965

**KNOW ALL MEN BY THESE PRESENTS:**

That American Home Assurance Company, a New York corporation, and National Union Fire Insurance Company of Pittsburgh, PA., a Pennsylvania corporation, does each hereby appoint

---Nancy Sohnee, Beverly A. Woolford, Anne Potter,  
Valorie Spates, Andrea E. Gorbert of Jericho, New York---

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. have each executed these presents

this 17th day of June, 2016



*Michael C. Fay*

Michael C. Fay, Vice President

STATE OF NEW YORK )  
COUNTY OF NEW YORK ) ss.

On this 17th day of June, 2016 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

*Juliana Hallenbeck*

**JULIANA HALLENBECK**  
Notary Public - State of New York  
No. 01HA6125671  
Qualified in Bronx County  
My Commission Expires April 18, 2017

**CERTIFICATE**

Excerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. on May 18, 1976:

"RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

"RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance and other contract of indemnity and writing obligatory in the nature thereof;

"RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

I, Martin Bogue, Assistant Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, PA. do hereby certify that the foregoing excerpts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney are in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation



this day of **SEP 29 2016**

*Martin Bogue*

Martin Bogue, Assistant Secretary

**American Home Assurance Company**

Executive Offices  
175 Water Street  
New York, NY 10038

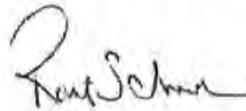
**STATUTORY  
FINANCIAL STATEMENT**  
as of DECEMBER 31, 2015

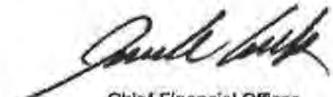
Assets		Liabilities	
Bonds.....	\$ 16,338,690,432	Reserve for Losses and Loss Expense.....	\$ 13,170,909,334
Stocks.....	277,998,251	Reserve for Unearned Premiums.....	3,180,709,950
Cash & Short-Term Investments.....	131,195,277	Reserve for Expenses, Taxes, Licenses and Fees.....	238,131,835
Other Invested Assets	5,347,909,012	Provision for Reinsurance.....	34,266,349
Agents' Balances or Uncollected Premiums....	1,714,001,178	Funds Held Under Reinsurance	
Funds Held by Ceding Reinsurers.....	183,889,240	Treaties.....	1,378,845,798
Reinsurance Recoverable on Loss Payments.	337,695,238	Other Liabilities.....	1,460,232,417
Equities & Deposits in Pools & Associations.	12,106,360	<b>TOTAL LIABILITIES.....</b>	<b>19,463,095,683</b>
Other Admitted Assets.....	<u>1,760,410,583</u>	Capital Stock.....	28,815,918
		Surplus.....	<u>6,611,983,970</u>
<b>TOTAL ASSETS .....</b>	<b>\$===== 26,103,895,571</b>	<b>TOTAL POLICYHOLDERS' SURPLUS.....</b>	<b>6,640,799,888</b>
		<b>TOTAL LIABILITIES AND POLICYHOLDERS' SURPLUS .....</b>	<b>\$ 26,103,895,571</b>

Bonds and stocks are valued in accordance with the basis adopted by the National Association of Insurance Commissioners. Securities carried at \$726,436,692 in the above statement are deposited as required by law or otherwise pledged.

**CERTIFICATE**

Robert Scott Higgins Schimek, President, and Joseph Daniel Cook, Chief Financial Officer, of American Home Assurance Company being duly sworn, each for himself deposes and says that they are the above described officers of the said Company and that on the 31st day of December, 2015, the Company actually possessed the assets set forth in the foregoing statement and that such assets were available for the payment of losses and claims and held for the protection of its policyholders and creditors, except as hereinbefore indicated, and that the foregoing statement is a correct exhibit of such assets and liabilities of said Company on the 31st day of December, 2015, according to the best of their information, knowledge and belief respectively.

  
President

  
Chief Financial Officer

STATE OF NEW YORK  
COUNTY OF NEW YORK

)} SS.:

On this 23 day of March 2016, before me came the above named officers of American Home Assurance Company to me known to be the individuals and officers described herein, and acknowledged that they executed the foregoing instrument and affixed the seal of said corporation thereto by authority of their office.

31078 (3/03) 

**JOHN K. SCHILD**  
Notary Public, State of New York  
No. 01SC5053075  
Qualified in Kings County  
Commission Expires December 11, 2017



POWER OF ATTORNEY

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

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

Attorney-In Fact No. 231293

Certificate No. 006961131

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

Nancy Schnee, Andrea E. Gorbert, Valorie Spates, Beverly A. Woolford, Anne Potter, Jennifer L. Jakaitis, and Susan A. Welsh

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

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 31st day of August, 2016.

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

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



State of Connecticut
City of Hartford ss.

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

On this the 31st day of August, 2016, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2021.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

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

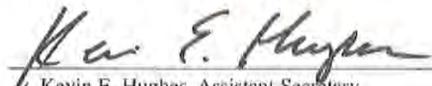
**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this \_\_\_\_\_ day of SEP 29 2016, 20 \_\_\_\_.

  
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2015

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 54,550,881	UNEARNED PREMIUMS	\$ 862,633,464
BONDS	3,600,572,638	LOSSES	735,725,171
STOCKS	245,901,111	LOSS ADJUSTMENT EXPENSES	278,900,106
INVESTMENT INCOME DUE AND ACCRUED	43,905,720	COMMISSIONS	35,398,814
OTHER INVESTED ASSETS	3,560,975	TAXES, LICENSES AND FEES	11,351,717
PREMIUM BALANCES	200,990,913	OTHER EXPENSES	39,466,667
NET DEFERRED TAX ASSET	65,751,196	CURRENT FEDERAL AND FOREIGN INCOME TAXES	15,158,620
REINSURANCE RECOVERABLE	22,532,968	REMITTANCES AND ITEMS NOT ALLOCATED	4,995,722
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	11,772,178	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	33,959,553
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	29,658,492	RETROACTIVE REINSURANCE RESERVE ASSUMED	898,144
OTHER ASSETS	5,685,697	POLICYHOLDER DIVIDENDS	9,080,181
		PROVISION FOR REINSURANCE	3,834,904
		ADVANCE PREMIUM	1,572,635
		PAYABLE FOR SECURITIES	8,000,000
		PAYABLE FOR SECURITIES LENDING	11,772,178
		CEDED REINSURANCE NET PREMIUMS PAYABLE	26,036,328
		ESCHEAT LIABILITY	664,927
		OTHER ACCRUED EXPENSES AND LIABILITIES	1,858,650
		TOTAL LIABILITIES	\$ 2,081,307,981
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,760
		OTHER SURPLUS	1,683,312,026
		TOTAL SURPLUS TO POLICYHOLDERS	\$ 2,103,595,786
TOTAL ASSETS	\$ 4,184,903,769	TOTAL LIABILITIES & SURPLUS	\$ 4,184,903,789

STATE OF CONNECTICUT )  
 COUNTY OF HARTFORD ) SS.  
 CITY OF HARTFORD )

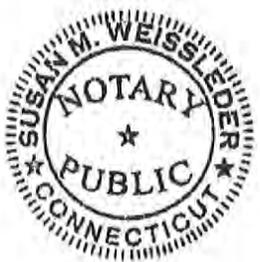
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS SECOND VICE PRESIDENT, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2015.

*Michael J. Doody*  
 SECOND VICE PRESIDENT

*Susan M. Weissleder*  
 NOTARY PUBLIC

SUSAN M. WEISSLEDER  
 Notary Public  
 My Commission Expires November 30, 2017

SUBSCRIBED AND SWORN TO BEFORE ME THIS 18TH DAY OF MARCH, 2016





**Chubb  
Surety**

**POWER  
OF  
ATTORNEY**

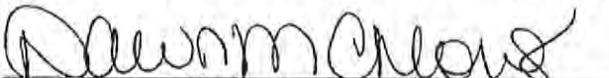
**Federal Insurance Company  
Vigilant Insurance Company  
Pacific Indemnity Company**

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

Know All by These Presents, That **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, and **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, do each hereby constitute and appoint **Andrea E. Gorbert, Anne Potter, Nancy Schnee, Valorie Spates and Beverly A. Woolford of Jericho, New York**-----

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

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** have each executed and attested these presents and affixed their corporate seals on this **6<sup>th</sup>** day of **May, 2016**.

  
Dawn M. Chloros, Assistant Secretary

  
David B. Norris, Jr., Vice President



STATE OF NEW JERSEY

ss.

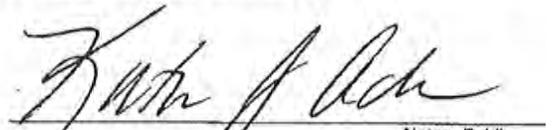
County of Somerset

On this **6<sup>th</sup>** day of **May, 2016** before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY**, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By- Laws of said Companies; and that she signed said Power of Attorney as Assistant Secretary of said Companies by like authority, and that she is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal



**KATHERINE J. ADELAAR  
NOTARY PUBLIC OF NEW JERSEY  
No. 2318685  
Commission Expires July 16, 2019**

  
Notary Public

**CERTIFICATION**

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

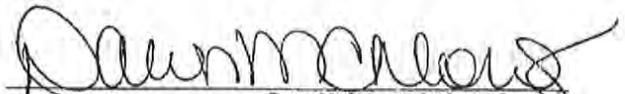
"Except as otherwise provided in these By-Laws or by law or as otherwise directed by the Board of Directors, the President or any Vice President shall be authorized to execute and deliver, in the name and on behalf of the Corporation, all agreements, bonds, contracts, deeds, mortgages, and other instruments, either for the Corporation's own account or in a fiduciary or other capacity, and the seal of the Corporation, if appropriate, shall be affixed thereto by any of such officers or the Secretary or an Assistant Secretary. The Board of Directors, the President or any Vice President designated by the Board of Directors may authorize any other officer, employee or agent to execute and deliver, in the name and on behalf of the Corporation, agreements, bonds, contracts, deeds, mortgages, and other instruments, either for the Corporation's own account or in a fiduciary or other capacity, and, if appropriate, to affix the seal of the Corporation thereto. The grant of such authority by the Board or any such officer may be general or confined to specific instances."

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

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

Given under my hand and seals of said Companies at Warren, NJ this **SEP 29 2016**



  
Dawn M. Chloros, Assistant Secretary

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

# FEDERAL INSURANCE COMPANY

## STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2015

(in thousands of dollars)

<i>ASSETS</i>		<i>LIABILITIES AND SURPLUS TO POLICYHOLDERS</i>	
Cash and Short Term Investments.....	\$ 687,917	Outstanding Losses and Loss Expenses .....	\$ 12,174,848
United States Government, State and Municipal Bonds .....	9,544,097	Unearned Premiums.....	3,726,665
Other Bonds.....	4,491,238	Dividends Payable to Stockholder.....	1,400,000
Stocks .....	692,901	Ceded Reinsurance Premiums Payable.....	329,694
Other Invested Assets.....	<u>2,187,839</u>	Provision for Reinsurance .....	35,560
		Other Liabilities.....	<u>1,295,093</u>
TOTAL INVESTMENTS .....	<u>17,603,992</u>	TOTAL LIABILITIES .....	<u>18,961,860</u>
Investments in Affiliates:			
Chubb Investment Holdings, Inc. ....	3,679,770	Capital Stock.....	20,980
Pacific Indemnity Company.....	2,930,246	Paid-In Surplus.....	3,106,809
Executive Risk Indemnity Inc.....	1,267,144	Unassigned Funds .....	<u>10,150,916</u>
Chubb Insurance Investment Holdings Ltd....	1,020,650		
CC Canada Holdings Ltd.....	590,955		
Great Northern Insurance Company .....	469,230	SURPLUS TO POLICYHOLDERS.....	<u>13,278,705</u>
Chubb Insurance Company of Australia Ltd.	404,845		
Vigilant Insurance Company.....	306,232		
Chubb European Investment Holdings SLP ..	294,200		
Other Affiliates .....	566,480		
Premiums Receivable .....	1,659,749		
Other Assets .....	<u>1,447,072</u>		
TOTAL ADMITTED ASSETS .....	<u>\$ 32,240,565</u>	TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	<u>\$ 32,240,565</u>

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.  
At December 31, 2015, investments with a carrying value of \$546,611,273 were deposited with government authorities  
as required by law.

State, County & City of New York, — ss: ..

Dawn M. Chloros, Assistant Secretary \_\_\_\_\_ of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2015 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2015.

Subscribed and sworn to before me  
this March 11, 2016.

*Jeanette Shipsey*  
\_\_\_\_\_  
Notary Public

JEANETTE SHIPSEY  
Notary Public, State of New York  
No. 02SH5074142  
Qualified in Nassau County  
Commission Expires March 10, 2019

*Dawn M. Chloros*  
\_\_\_\_\_  
Assistant Secretary



## 3.2.10 SCC AND DPOR INFORMATION TABLES

**DRAGADOS USA**



## ATTACHMENT 3.2.10

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

### 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.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Dragados USA, Inc.	F1790874	Foreign Corporation	Active	810 Seventh Ave., 9 <sup>th</sup> Floor New York, NY 10019	Class A Contractor H/H	2705143969	1/31/2018
Flatiron Constructors, Inc.	F1787565	Foreign Corporation	Active	385 Interlocken Crescent, Suite 900 Broomfield, CO 80021	Class A Contractor H/H	2705142856	9/30/2017
HDR Engineering, Inc.	F048460-2	Foreign Corporation	Active	249 Central Park Avenue, Suite 201 Virginia Beach, VA 23462	Engineering	0411000028	2/28/2018
HDR Engineering, Inc.	F048460-2	Foreign Corporation	Active	4470 Cox Road, Suite 200, Glen Allen, VA 23060	Engineering	0411000192	2/28/2018
HDR Engineering, Inc.	F048460-2	Foreign Corporation	Active	5228 Valleypointe Pkwy, Suite 2 Roanoke, VA 24019	Engineering	0411000602	2/28/2016
HDR Engineering, Inc.	F048460-2	Foreign Corporation	Active	2600 Park Tower Drive, Suite 100 Vienna, VA 22180	Engineering	0411000770	2/28/2016
Alpha Construction and Engineering Corp.	F0378606	Foreign Corporation	Active	21351 Ridgetop Cir. Suite 200 Dulles, VA 20166	Engineering	0411000633	2/28/2018
HMMH	CIS0436	Foreign Corporation	Active	N/A	N/A	N/A	N/A
Mattern & Craig, Inc.	0231378-1	Domestic	Active	701 First St., S.W. Roanoke, VA 24016	Engineering/ Surveying	0407003038	12/31/2017

### ATTACHMENT 3.2.10

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

#### SCC and DPOR Information

Moffatt & Nichol	F0582397	Foreign Corporation	Active	1100 Boulders Parkway Suite 500 Richmond, VA 23225	Engineering	0407002877	12/31/2017
Moffatt & Nichol	F0582397	Foreign Corporation	Active	800 World Trade Center 101 West Main Street Norfolk, VA 23510	Engineering	0411000532	02/28/2018
Moffatt & Nichol	F0582397	Foreign Corporation	Active	4700 Falls of Neuse Suite 300 Raleigh, NC 27609	Engineering	0411001090	02/28/2018
Precision Measurements, Inc.	0450436-1	Domestic Corporation	Active	851 Seahawk Circle, Suite 103 Virginia Beach, VA 23452	LS	0407003345	12/31/2017
Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	9385 Discovery Boulevard Suite 200 Manassas, VA 20109	Engineering, Land Surveying (HQ)	0405000502	12/31/2017
Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	9385 Discovery Boulevard Suite 200 Manassas, VA 20109	Real Estate Appraisal Business	4008001684	02/28/2017
Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	4301 Dominion Boulevard Suite 100 Glen Allen, VA 23060	Engineering, Land Surveying (Branch)	041000220	02/28/2018
Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	4301 Dominion Boulevard Suite 100 Glen Allen, VA 23060	Real Estate Appraisal Business	4008001801	04/30/2018
Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	927 Maple Grove Drive Suite 105 Fredericksburg, VA 22407	Engineering, Land Surveying (Branch)	0410000156	02/28/2018

**ATTACHMENT 3.2.10**

**State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638**

**SCC and DPOR Information**

Rinker Design Associates, P.C.	0227062-7	Domestic Corporation	Active	9385 Discovery Boulevard Suite 200 Manassas, VA 20109	Real Estate Appraisal Business	4008001684	02/28/2017
Kleinfelder, Inc.	F195490	Private	Active	550 West C Street STE 1200, San Diego, CA 92101	Corporation	0407006943	12/31/2017

**DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)**

Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
HDR Engineering, Inc.	Mike Tugman	Virginia Beach, VA	3237 Sunnybrook Lane Virginia Beach, VA 23452	PE	0402021470	07/31/2018
HDR Engineering, Inc.	Vijay Modi	Virginia Beach, VA	4540 Church Point Place Virginia Beach, VA 23455	PE	0402020733	01/31/2018
Alpha Construction and Engineering Corp.	Fred Crozier	Virginia Beach, VA	1436 Roosevelt Street Morgantown, WV 26505	PE	0402045291	10/31/2016
Rinker Design Associates, Inc.	Timothy Butler	Fredericksburg, VA	925 Dispatch Road Quinton, VA 23141	CGREA	4001001792	06/30/2018
Kleinfelder, Inc.	Richard Layne Clarke	Onsite - TBD	Williamsburg, VA 23188	PE	0402040981	05/31/2017

## Virginia State Corporation Commission Registrations

# Commonwealth of Virginia



## State Corporation Commission

### CERTIFICATE OF GOOD STANDING

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

That Dragados USA, Inc., a corporation incorporated under the law of Delaware, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on May 18, 2009; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*July 1, 2016*

*Joel H. Peck, Clerk of the Commission*

CISECOM

Document Control Number: 1607015540

# Commonwealth OF Virginia



## State Corporation Commission

### CERTIFICATE OF GOOD STANDING

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

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

That it obtained a certificate of authority to transact business in Virginia from the Commission on April 16, 2009; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*July 14, 2016*

*Joel H. Peck, Clerk of the Commission*

CISECOM

Document Control Number: 1607146051

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,*

November 19, 1987

*This is to Certify, that* HDR Engineering, Inc.

*a corporation organized under the laws of* Nebraska

*having complied with all the requirements of law, is hereby authorized to transact business in the State of Virginia in so far as not in conflict with and subject to the laws of the State.*



*State Corporation Commission*

*Attest:*

*William J. Bridge*

FIRST ASSISTANT

*Clerk of the Commission*



Commonwealth of Virginia  
**State Corporation Commission**

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**ALPHA CONSTRUCTION AND ENGINEERING CORPORATION**

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- Give Us Feedback

**Business Entities**

**UCC or Tax Liens**

**Court Services**

**Additional Services**

**General**

SCC ID: F0378606  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: MD  
 Date of Formation/Registration: 1/16/1981  
 Status: Active  
 Shares Authorized: 10000

**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](#)

**Principal Office**

21351 RIDGETOP CIRCLE  
 SUITE 200  
 DULLES VA20166

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**Registered Agent/Registered Office**

CT CORPORATION SYSTEM  
 4701 COX ROAD, SUITE 285  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/4/2013



Commonwealth of Virginia  
**State Corporation Commission**

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[ismith@rdacivil.com](#) | [Profile](#) | [Log O](#)



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Business Entity Details**

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**Rinker Design Associates, P.C.**

**General**

SCC ID: 02270627  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 2/24/1982  
 Status: Active  
 Shares Authorized: 20000

**Select an action**

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

9385 DISCOVERY BOULEVARD  
 SUITE 200  
 MANASSAS VA20109

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**Registered Agent/Registered Office**

JOHN S WISIACKAS  
 ODIN FELDMAN & PITTLEMAN PC  
 1775 WIEHLE AVENUE STE 400  
 RESTON VA 20190  
 FAIRFAX COUNTY 129  
 Status: Active  
 Effective Date: 8/27/2012

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, December 6, 2000*

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

**Harris Miller Miller & Hanson Inc.**

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



*State Corporation Commission*

*Attest:*

*Clerk of the Commission*

CIS0436

# Commonwealth of Virginia



## State Corporation Commission

I Certify the Following from the Records of the Commission:

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

The date of incorporation is July 01, 1982.

Nothing more is hereby certified.

92 FEB 26 PM 2  
BRYANT DILLON  
SECRETARY OF STATE

Signed and Sealed at Richmond  
on this Date: February 20, 1992



*William J. Bridge*

William J. Bridge, Clerk of the Commission

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, January 24, 2014*

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

**Moffatt & Nichol, Inc. (USED IN VA BY: MOFFATT & NICHOL)  
(Formerly known as: Moffatt & Nichol Engineers, Inc. (USED IN VA.  
BY: Moffatt & Nichol, Engineers))  
Date of Qualification: March 6, 2000**

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



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
*Clerk of the Commission*



# Commonwealth of Virginia



## State Corporation Commission

### CERTIFICATE OF GOOD STANDING

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

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

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

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



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

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



Commonwealth of Virginia  
**State Corporation Commission**

Vi

**CISM0180**

CORPORATE DATA INQUIRY

09/22/16

10:33:58

CORP ID: F195490 - 0 STATUS: 00 ACTIVE STATUS DATE: 04/10/15  
 CORP NAME: **Kleinfelder, Inc.**

DATE OF CERTIFICATE: 02/25/2014 PERIOD OF DURATION: INDUSTRY CODE: 00  
 STATE OF INCORPORATION: CA CALIFORNIA STOCK INDICATOR: S STOCK  
 MERGER IND: CONVERSION/DOMESTICATION IND:  
 GOOD STANDING IND: Y MONITOR INDICATOR:  
 CHARTER FEE: 2000.00 MON NO: MON STATUS: MONITOR DTE:  
 R/A NAME: CORPORATION SERVICE COMPANY

STREET: BANK OF AMERICA CENTER 16TH FL AR RTN MAIL:  
 1111 E MAIN ST

CITY: RICHMOND STATE : VA ZIP: 23219-0000

R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 02/25/14 LOC : 216

ACCEPTED AR#: 216 52 5651 DATE: 07/08/16 RICHMOND CITY

CURRENT AR#: 216 52 5651 DATE: 07/08/16 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
16	1,700.00					1,000,000

(Screen Id:/Corp\_Data\_Inquiry)

# Virginia Department of Professional and Occupational Regulations Licenses

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
01-31-2018

**NUMBER**  
2705143969

**BOARD FOR CONTRACTORS  
 CLASS A CONTRACTOR  
 \*CLASSIFICATIONS\* H/H**



**DRAGADOS USA INC**  
 810 SEVENTH AVENUE  
 9TH FLOOR  
 NEW YORK, NY 10019



*Jay W. DeBoer*  
 Jay W. DeBoer, Director

*Status can be verified at <http://www.dpor.virginia.gov>*

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DPOR-LIC (05/2015)  
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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
**CLASS A BOARD FOR CONTRACTORS  
 CONTRACTOR**

**\*CLASSIFICATIONS\* H/H**  
**NUMBER: 2705143969 EXPIRES: 01-31-2018**

**DRAGADOS USA INC**  
 810 SEVENTH AVENUE  
 9TH FLOOR  
 NEW YORK, NY 10019

*Status can be verified at <http://www.dpor.virginia.gov>*



(FOLD)

DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

EXPIRES ON  
**09-30-2017**

NUMBER  
**2705142856**

**BOARD FOR CONTRACTORS  
 CLASS A CONTRACTOR  
 \*CLASSIFICATIONS\* H/H**



**FLATIRON CONSTRUCTORS INC**  
 385 INTERLOCKEN CRESCENT  
 900  
 BROOMFIELD, CO 80021



*Jay W. DeBoer*  
 Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)  
(DETACH HERE)

**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
**CLASS A BOARD FOR CONTRACTORS  
 CONTRACTOR**

\*CLASSIFICATIONS\* H/H  
 NUMBER: 2705142856 EXPIRES: 09-30-2017

FLATIRON CONSTRUCTORS INC  
 385 INTERLOCKEN CRESCENT  
 900  
 BROOMFIELD, CO 80021



(FOLD)

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

EXPIRES ON  
**02-28-2018**

NUMBER  
**0411000028**

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

PROFESSIONS: ENG



**HDR ENGINEERING INC**  
 249 CENTRAL PARK AVE STE 201  
 VIRGINIA BEACH, VA 23462



*Jay W. DeBoer*  
 Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation

**BOARD FOR AP/ELSCIDLA  
 BUSINESS ENTITY BRANCH OFFICE REGISTRATION**  
 NUMBER: 0411000028 EXPIRES: 02-28-2018  
 PROFESSIONS: ENG  
 HDR ENGINEERING INC  
 249 CENTRAL PARK AVE STE 201  
 VIRGINIA BEACH, VA 23462



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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
02-28-2018

**NUMBER**  
0411000192

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

**PROFESSIONS: ENG**



**HDR ENGINEERING INC**  
 4470 COX ROAD  
 SUITE 200  
 GLEN ALLEN, VA 23060




*Status can be verified at <http://www.dpor.virginia.gov>*

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
02-28-2018

**NUMBER**  
0411000602

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

**PROFESSIONS: ENG**



**HDR ENGINEERING INC**  
 5228 VALLEYPONTE PKWY STE 2  
 ROANOKE, VA 24019




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(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
02-28-2018

**NUMBER**  
0411000770

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

**PROFESSIONS: ENG**



**HDR ENGINEERING INC**  
 2600 PARK TOWER DRIVE  
 SUITE 100  
 VIENNA, VA 22180




*Status can be verified at <http://www.dpor.virginia.gov>*

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DPOR-LIC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000633

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

PROFESSIONS: ENG

ALPHA CONSTRUCTION & ENGINEERING CORPORATION  
 ALPHA CORPORATION  
 295 BENDIX RD STE 340  
 VIRGINIA BEACH, VA 23452

Status can be verified at <http://www.dpor.virginia.gov>

Jay W. DeBoer, Director

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DPOR-LIC (05/2015)  
(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA  
 Department of Professional and Occupational Regulation

BOARD FOR AP/ELSC/DLA  
 BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
 NUMBER: 0411000633 EXPIRES: 02-28-2018  
 PROFESSIONS: ENG  
 ALPHA CONSTRUCTION & ENGINEERING CORPORATION  
 ALPHA CORPORATION  
 295 BENDIX RD STE 340  
 VIRGINIA BEACH, VA 23452

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-PC (05/2015)

License Details	Related Licenses	
	<p style="margin-left: 40px;"><b>Name</b> MATTERN &amp; CRAIG, INC.</p> <p style="margin-left: 40px;"><b>License Number</b> 0407003038</p> <p style="margin-left: 40px;"><b>License Description</b> Business Entity Registration</p> <p style="margin-left: 40px;"><b>Firm Type</b> Corporation</p> <p style="margin-left: 40px;"><b>Rank</b> Business Entity</p> <p style="margin-left: 40px;"><b>Address</b> 701 FIRST STREET SW, ROANOKE, VA 24016</p> <p style="margin-left: 40px;"><b>Initial Certification Date</b> 1991-12-06</p> <p style="margin-left: 40px;"><b>Expiration Date</b> 2017-12-31</p>	
<p style="font-size: x-small;">The license information in this application was last updated at Mon Sep 19 02:50:19 EDT.</p> <p style="font-size: x-small;">License Lookup legal disclaimer</p>		

**HMMH**

77 South Bedford Street  
Burlington, Massachusetts 01803  
781.229.0707  
www.hmmh.com

October 7, 2016

HDR Inc.  
249 Central Park Avenue, Suite 201  
Virginia Beach, VA 23462

Subject: Non DPOR Services - High Rise Bridge

Reference: HMMH Project Number 125040.121

To Whom It May Concern:

The scope of services provided by Harris Miller Miller & Hanson Inc. (HMMH) is not a regulated profession licensed by the Department of Professional and Occupational Regulation (DPOR).



Sincerely yours,

**Harris Miller Miller & Hanson Inc.**

Mary Ellen Eagan  
President and CEO

**COMMONWEALTH of VIRGINIA**

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2017

NUMBER

0407002877

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

PROFESSIONS: ENG



**MOFFATT & NICHOL INC**  
1100 BOULDERS PKWY STE 500  
RICHMOND, VA 23225

  
Jay W. DeBoer Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**

**02-28-2018**

**NUMBER**

**0411000532**

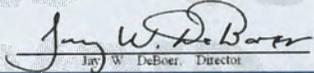
**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
 AND LANDSCAPE ARCHITECTS  
 BUSINESS ENTITY BRANCH OFFICE REGISTRATION**

PROFESSIONS: ENG



**MOFFATT & NICHOL INC**  
 800 WORLD TRADE CENTER  
 NORFOLK, VA 23510



  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)  
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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation

BOARD FOR AP/ELSCIDLA  
 BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
 NUMBER: 0411000532 EXPIRES: 02-28-2018  
 PROFESSIONS: ENG  
 MOFFATT & NICHOL INC  
 800 WORLD TRADE CENTER  
 NORFOLK, VA 23510



(FOLD)

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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**

**02-28-2018**

**NUMBER**

**0411001090**

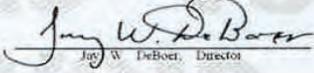
**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
 AND LANDSCAPE ARCHITECTS  
 BUSINESS ENTITY BRANCH OFFICE REGISTRATION**

PROFESSIONS: ENG



**MOFFATT & NICHOL INC**  
 1616 E MILLBROOK RD  
 STE #160  
 RALEIGH, NC 27609



  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (05/2015)

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 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
12-31-2017

**NUMBER**  
0407003345

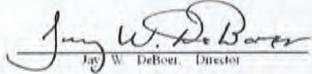
**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION**

PROFESSIONS: LS



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



  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

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**DPOR** COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA  
 BUSINESS ENTITY REGISTRATION  
 NUMBER: 0407003345 EXPIRES: 12-31-2017  
 PROFESSIONS: LS  
 PRECISION MEASUREMENTS INC  
 851 SEAHAWK CIR  
 SUITE 103  
 VIRGINIA BEACH, VA 23452



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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
02-28-2018

**NUMBER**  
0410000156

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

PROFESSIONS: ENG, LS



**RINKER DESIGN ASSOCIATES PC**  
 927 MAPLE GROVE DR STE 105  
 FREDERICKSBURG, VA 22407



  
Jay W. DeBoer, Director

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DPOR-LIC (05/2015)  
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**DPOR** COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA  
 PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION  
 NUMBER: 0410000156 EXPIRES: 02-28-2018  
 PROFESSIONS: ENG, LS  
 RINKER DESIGN ASSOCIATES PC  
 927 MAPLE GROVE DR STE 105  
 FREDERICKSBURG, VA 22407



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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
04-30-2018

**NUMBER**  
4008001739

**REAL ESTATE APPRAISER BOARD  
 APPRAISAL BUSINESS REGISTRATION**



**RINKER DESIGN ASSOCIATES PC**  
 927 MAPLE GROVE DR STE 105  
 FREDERICKSBURG, VA 22407



  
Jay W. DeBoer, Director

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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation

**REAL ESTATE APPRAISER BOARD  
 APPRAISAL BUSINESS REGISTRATION**  
 NUMBER: 4008001739 EXPIRES: 04-30-2018

**RINKER DESIGN ASSOCIATES PC**  
 927 MAPLE GROVE DR STE 105  
 FREDERICKSBURG, VA 22407



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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
02-28-2018

**NUMBER**  
0410000220

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

**PROFESSIONS: ENG**



**RINKER DESIGN ASSOCIATES PC**  
 4301 DOMINION BOULEVARD, SUITE 100  
 GLEN ALLEN, VA 23060



  
Jay W. DeBoer, Director

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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation

**BOARD FOR APESCIDLA  
 PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION**  
 NUMBER: 0410000220 EXPIRES: 02-28-2018  
 PROFESSIONS: ENG  
**RINKER DESIGN ASSOCIATES PC**  
 4301 DOMINION BOULEVARD, SUITE 100  
 GLEN ALLEN, VA 23060



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DPOR-PC (05/2015)

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DPOR-PC (05/2015)

**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

EXPIRES ON  
04-30-2018

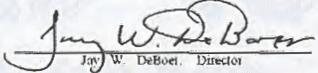
NUMBER  
4008001801

**REAL ESTATE APPRAISER BOARD  
 APPRAISAL BUSINESS REGISTRATION**



**RINKER DESIGN ASSOCIATES P C**  
 4301 DOMINION BOULEVARD  
 SUITE 100  
 GLEN ALLEN, VA 23060





*Jay W. DeBoer*  
 Jay W. DeBoer, Director

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**DPOR COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation

**REAL ESTATE APPRAISER BOARD  
 APPRAISAL BUSINESS REGISTRATION**  
 NUMBER: 4008001801 EXPIRES: 04-30-2018

**RINKER DESIGN ASSOCIATES P C**  
 4301 DOMINION BOULEVARD  
 SUITE 100  
 GLEN ALLEN, VA 23060



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DPOR-LIC (05/2015)  
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DPOR-PC (05/2015)

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 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

EXPIRES ON  
12-31-2017

NUMBER  
0405000502

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

PROFESSIONS: ENG, LS



**RINKER DESIGN ASSOCIATES PC**  
 9385 DISCOVERY BOULEVARD, STE 200  
 MANASSAS, VA 20109





*Jay W. DeBoer*  
 Jay W. DeBoer, Director

*Status can be verified at <http://www.dpor.virginia.gov>*

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

EXPIRES ON  
02-28-2017

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

NUMBER  
4008001684

REAL ESTATE APPRAISER BOARD  
APPRAISAL BUSINESS REGISTRATION

RINKER DESIGN ASSOCIATES PC  
9385 DISCOVERY BOULEVARD  
SUITE 200  
MANASSAS, VA 20109



Jay W. DeBoer, Director

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## DPOR License Lookup License Number 0402021470

### License Details

<b>Name</b>	TUGMAN, MICHAEL FREDERICK
<b>License Number</b>	0402021470
<b>License Description</b>	Professional Engineer License
<b>Rank</b>	Professional Engineer
<b>Address</b>	VIRGINIA BEACH, VA 23452
<b>Initial Certification Date</b>	1990-07-16
<b>Expiration Date</b>	2018-07-31

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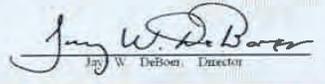
**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
01-31-2018

**NUMBER**  
0402020733

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

 **VIJAY R MODI**  
 4540 CHURCH POINT PL  
 VIRGINIA BEACH, VA 23455

  
  
 Jay W. DeBoer, Director

*Status can be verified at <http://www.dpor.virginia.gov>*

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DPOR-LIC (05/2015)

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

**EXPIRES ON**  
10-31-2016

**NUMBER**  
0402045291

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

**FREDERICK PAUL CROZIER**  
 1436 ROOSEVELT STREET  
 MORGANTOWN, WV 26505

  
  
 Jay W. DeBoer, Director

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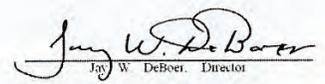
**COMMONWEALTH of VIRGINIA**  
 Department of Professional and Occupational Regulation  
 9960 Mayland Drive, Suite 400, Richmond, VA 23233  
 Telephone: (804) 367-8500

**EXPIRES ON**  
09-30-2018

**NUMBER**  
4001001792

**REAL ESTATE APPRAISER BOARD  
 CERTIFIED GENERAL REAL ESTATE APPRAISER**

 **TIMOTHY O BUTLER**  
 925 DISPATCH RD  
 QUINTON, VA 23141

  
  
 Jay W. DeBoer, Director

*Status can be verified at <http://www.dpor.virginia.gov>*

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

# DPOR License Lookup

## License Number 0407006943

### License Details

<b>Name</b>	KLEINFELDER INC
<b>License Number</b>	0407006943
<b>License Description</b>	Business Entity Registration
<b>Firm Type</b>	Corporation
<b>Rank</b>	Business Entity
<b>Address</b>	550 WEST C STREET STE 1200, SAN DIEGO, CA 92101
<b>Initial Certification Date</b>	2016-09-07
<b>Expiration Date</b>	2017-12-31

### Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402041806	CRISP, JEFFERY B	Professional Engineer License	Engineering	2017-12-31

Showing 1 to 1 of 1 entries

<sup>1</sup> The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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# DPOR License Lookup License Number

0402040981

## License Details

<b>Name</b>	CLARKE, RICHARD LAYNE
<b>License Number</b>	0402040981
<b>License Description</b>	Professional Engineer License
<b>Rank</b>	Professional Engineer
<b>Address</b>	WILLIAMSBURG, VA 23188
<b>Initial Certification Date</b>	2005-05-10
<b>Expiration Date</b>	2017-05-31

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DPOR License Lookup build 1,192 (built 2016-06-23 09:13:05).



3.3.1a and 3.3.1b  
**KEY PERSONNEL  
RESUME AND  
REFERENCE  
FORMS**

**DRAGADOS USA**



**ATTACHMENT 3.3.1(a)**

**DRAGADOS USA**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Jose Luis Conesa</b> <b>Project Manager</b>
b. Project Assignment: <b>Design-Build Project Manager</b>
c. Name of Firm with which you are now associated: <b>Dragados Canada, Inc.</b> (Sister company of Dragados USA, Inc., Member of the Lead Contractor)
d. Employment History: With this Firm <u>31</u> Years With Other Firms <u>0</u> Years  <b>Firm 1: Dragados Canada, Project Manager, 2008 – Present</b> Jose Luis Conesa is an energetic leader with more than 31 years of bridge and highway engineering and construction experience with the Dragados' Group of Companies. Over the 8 years that Mr. Conesa has spent with Dragados Canada, he has added to his already extensive experience in the construction of high profile design-build bridges and highways two of the most renowned North American transportation projects: the \$2.0 billion Champlain Bridge Corridor Project and the \$1.5 billion Autoroute 30 in Montreal, Canada. On these projects, Mr. Conesa served respectively as the Constuction Manager and Project Manager and his duties included overseeing overall Project design, construction quality management and Contract administration.  <b>Firm 2: Dragados S.A., Project Manager, 1985-2008</b> He joined Dragados S.A. in 1985 and was quickly promoted to Project Manager. Since then, Mr. Conesa has been in charge of major infrastructure projects in Europe, South America and Africa, totaling over \$5B in construction. During his time with Dragados S.A., he was the Project Manager, among other design-build projects, for the \$111 million M-45 Highway Connector in Spain and the \$412 million N25 Waterford Bypass in Ireland. During his time with Dragados S.A., he overcame the challenges of working in unfamiliar settings, and was able to deliver his projects on time and on budget while meeting all Project Manager responsibilities.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:  <b>Jose Luis holds a Master's Degree in Civil Engineering from the Polytechnic University of Madrid in 1983.</b>
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.  <b><u>New Bridge for the St. Lawrence Corridor Project, Montreal, Canada</u></b> <b>Key Personnel Role:</b> Construction Manager <b>Experience with Current Firm:</b> Yes <b>Project/Assignment Duration:</b> 2012-Present <b>Design/Construction Value:</b> \$2.0 billion <b>Project Description:</b> The New Bridge for the St. Lawrence Corridor Project (NBSL Corridor Project) includes the design, build, finance, operation and maintenance of a 5 mile stretch of highway that includes the new 2.1-mile long Champlain Bridge, a cable-stayed bridge that spans the St. Lawrence River and links the Île des Soeurs in the St. Lawrence River to the Montreal borough of Verdun, as well as the replacement of the existing Île des Soeurs Bridge. A section of the Champlain Bridge spans an international seaway and navigation channel, the St. Lawrence Seaway. In addition, approximately 2.7 miles of highway links to these new bridges as well as an open road with electronic tolling system.  <b>Responsibilities:</b> Mr. Conesa is a leading expert in design-build segmental, cable-stayed, and steel girder bridges and highway transportation projects. He is currently the Construction Manager for the New Bridge for St. Lawrence project

(Dragados Canada is not the lead partner within the Lead Contractor so thus the reason why he is not serving on the Project Manager role), which is similar to the I-64 High Rise Bridge Project insofar both have a strong bridge component over a navigable channel and under sensitive environmental areas. He is responsible for the delivery of safe and durable bridge works, coordination between the various construction disciplines, environmental monitoring and compliance, scheduling, and mentoring and providing his technical expertise to the Design Team to maximize the Team's efforts.

**Autoroute 30, Montreal, Canada:**

**Key Personnel Role:** Project Manager

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2008-2012

**Design/Construction Value:** \$1.5 billion

**Project Description:** The Autoroute 30 Project (A-30) was one of the largest projects in Canada and was funded partially by a significant contribution from the Canadian Government, making this an extremely high-profile job similar to the I-64 High Rise Bridge Project. The A-30 was designed to alleviate congestion through local routes in the City of Montreal by providing a direct route for through-traffic between Toronto, western Ottawa and eastern Quebec City. The Project involves the construction of a 26.5 mile, four-lane highway and the consolidation of highways 10,15, 20, 30, 40 and 540 into a more effective road network. The Project also includes the construction of two major bridges: one over the St. Lawrence River (1.16-mile, multi-span, concrete girder bridge) and the other over the Beauharnois Channel (1.53-mile, multi-span, concrete box-girder bridge). Similar to the I-64 High Rise Bridge Project, the A-30 involved the construction of a new highway in a urban setting and two major bridges over an international seaway and navigation channel.

**Responsibilities:** Mr. Conesa was the Project Manager where, aside from the overall management of the Project's construction, he was responsible and accountable for all aspects of the project implementation, including environmental monitoring, safety, risk management, schedule, quality, cost, change management and stakeholders management. He successfully integrated and coordinated work between multiple disciplines and design-build teams in the Project. Mr. Conesa anticipated the Project challenges and constraints and timely provided innovative solutions and oriented approaches for the successful completion of the project. He leveraged relationships with labor unions and subcontractors to augment capacity towards meeting tight schedule deadlines.

**The N25 Waterford Bypass, City of Waterford, Ireland:**

**Key Personnel Role:** Project Manager

**Experience with Current Firm:** No

**Project/Assignment Duration:** 2006-2008

**Design/Construction Value:** \$412 million

**Project Description:** The N 25 Waterford Bypass, in the City of Waterford in Ireland, included the design and construction of a 14.5 mile, four-lane highway including 7.3 miles of access roads, and 27 reinforced concrete, precast concrete and composite overpass and underpass structures. A special feature of this project was a 1,452-foot cable-stayed bridge over the Suir River with a single 759-foot-tall pylon and a deck surface of 17,000 square yards. The Suir River Bridge, the longest span bridge and tallest bridge structure in Ireland, now serves as a landmark for the City of Waterford. So similar to the I-64 High Rise Bridge Project the N25 Waterford Bypass had a similar combination of high capacity roadway construction and signature bridge structures over a navigable channel under strict environmental regulation.

**Responsibilities:** Mr. Conesa's main responsibilities as the Project Manager of the N25 Waterford Bypass were planning, execution, and controlling of all aspects of the project. Besides leading the overall project design, construction, and quality management, he was the principal driver of environmental, community outreach, and safety initiatives to meet the Contract requirements. During his three years on this project he was Owner's point of contact regarding municipal permits and approvals and site specific environmental aspects. Mr. Conesa provided overall strategy to secure labor-trade agreements and benefits, and planned the project resources based on the local market capacity ensuring that the project agreement specified standards were integrated into the design and construction processes. Under Mr. Conesa's management, the Project was successfully completed 10 months ahead of schedule.

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

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

Mr. Conesa is currently assigned to the NBSL Corridor Project in Montreal, Canada as the Construction Manager. The Project roadway and bridge structures will be substantially advanced by early 2018, slightly after NTP is granted on the I-64 High Rise Bridge Project (assuming no delays in the procurement), making him available and 100% dedicated to the I-64 High Rise Bridge Project.

**ATTACHMENT 3.3.1(b)****KEY PERSONNEL REFERENCE FORM**

<b>PROJECT NAME</b>	<b>POSITION HELD ON THE PROJECT</b>	<b>DURATION IN THAT POSITION</b>	<b>NAME OF REFERENCE</b>	<b>REFERENCE'S LOCATION</b>	<b>NAME OF REFERENCE'S EMPLOYER</b>	<b>REFERENCE'S TITLE/POSITION</b>	<b>REFERENCE'S PHONE</b>	<b>REFERENCE'S EMAIL ADDRESS</b>
New Champlain Bridge Corridor Project	Jose Luis Conesa, Construction Manager	2012-Current	Doug Balmer	Montréal, Québec, Canada	Arup	Advisor to Infrastructure Canada	+1 (514) 448-6694	<a href="mailto:douglas.balmer@arup.com">douglas.balmer@arup.com</a>
Autoroute 30	Jose Luis Conesa, Project Manager	2008-2012	Sandra Sultana	Montréal, Québec, Canada	Ministere des Transports de Quebec	Director	+1 (514) 873-4377, ext. 2200	<a href="mailto:sclerier@na30.ca">sclerier@na30.ca</a>
N25 Waterford Bypass	Jose Luis Conesa, Project Manager	2006-2008	Donal Minnock	Waterford City, Ireland	National Roads Authority	Project Manager	+353.1.660 2511	<a href="mailto:mkennedy@nra.ie">mkennedy@nra.ie</a>

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



**ATTACHMENT 3.3.1(a)**

*(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)*

**KEY PERSONNEL RESUME FORM**

<p><b>Brief Resume of Key Personnel anticipated for the Project.</b></p>
<p>a. Name &amp; Title:  <b>Fred Crozier, P.E.</b>  <b>Senior Project Manager</b></p>
<p>b. Project Assignment:  <b>Responsible Charge Engineer</b></p>
<p>c. Name of Firm with which you are now associated:  <b>Alpha Corporation</b></p>
<p>d. Employment History: With this Firm <u>9</u> Years With Other Firms <u>25</u> Years</p> <p><b>Firm 1: Alpha Corporation, Senior Project Manager/Responsible Charge Engineer/Quality Assurance Manager, July 2007 – Present</b>  Fred Crozier is a Senior Project Manager, serving as a Quality Assurance Manager, Responsible Charge Engineer and Project Manager on Design-Build, PPTA, and Design-Bid Build transportation projects in Virginia and Maryland. Responsibilities have included performing the full responsibilities of a QA Manager on three VDOT Design-Build projects and VDOT’s Route 28 PPTA projects/program, including ensuring compliance with all requirements of the plans, specifications, QA/QC Plan and Minimum Requirements for QA and QC on Design-Build and PPTA Projects. Setting up Inspection and Testing frequencies and quality oversight program. Participate in all phases of the Design-Build Project, from Commencement, Scope Validation, design reviews, construction, and project close-out. Facilitated constructability reviews, progress meetings, Preparatory Meetings, and AR Plan implementation meetings. Issued non-conformance reports, and oversaw correction of deficiencies. Oversaw inspection and testing frequencies, and daily diaries, checklists, and test reporting. Implemented QA/QC Plan requirements. Monitored the Materials certification process, checking for conformance, issuing material certifications, and maintaining the Materials Book. Provided oversight for QA Inspection personnel. Reviewed and certified monthly Pay Applications. Working for an Owner, assisted in the assembly of an Owner’s independent assurance program, including setting up testing and inspection frequencies, hiring a team of inspectors to perform field monitoring and comparison testing, and coordination with project stakeholders. Provided dispute resolution and claims analysis on District Wide and State Wide term services contracts. Provided construction engineering support for various contracts.</p> <p><b>Firm 2: Johnson, Mirmiran &amp; Thompson, Branch Manager, February 2005-January 2007</b>  Fred managed JMT’s branch office in Morgantown, WV. Activities included providing and supervising Construction Management &amp; Construction Inspection staffing for West Virginia Division of Highways contracts and projects, including major roadway and bridge projects. Oversaw QA inspection and testing services in accordance with required frequencies. Ensured inspectors were equipped and trained, and performed services in accordance with all specifications, policies and guidelines. Provided field support for construction staff, including recommendations for resolution of field issues and changed conditions.</p> <p><b>Firm 3: Maryland State Highway Administration, District 6-District Engineer, 1997-2004</b>  Fred served as senior administrator of all SHA activities in District 6 (western Maryland), including project development, construction, maintenance, and traffic operations. Coordinated with state, county, and local elected officials and staff to develop and deliver SHA’s Consolidated Transportation Program, which included major projects, safety improvements, system preservation, community enhancements, and environmental enhancements. Supervised the construction management staff (ADE, Area Engineer, Project Engineers, Inspectors). Reviewed and approved change orders (e.g. changes to scope of work, quantities, unit prices, schedule, design modifications). Reviewed claims and negotiated settlements with contractors. Served as liaison with other SHA offices, other agencies, news media and elected officials. Assumed overall responsibility for the construction process. Managed over \$200 million in construction projects, including corridor improvements along I-81, I-70 and I-68. Performed public relations and led community/PR meetings to advise public of upcoming work. Prior to his appointment as District Engineer, Fred also served in several roles from 1984 to 1997, including Assistant District Engineer-Maintenance, Area Construction Engineer and Project Engineer.</p>
<p>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:  <b>Fred Crozier holds a Bachelor's Degree in Civil Engineering from West Virginia University in 1984.</b></p>
<p>f. Active Registration: Year First Registered/ Discipline/VA Registration #:  <b>Professional Engineer / Virginia / 2008 / #045291</b></p>

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

**Route 460 Corridor Improvements Design-Build Project, VDOT, Petersburg to Suffolk, VA:**

**Key Personnel Role:** Consultant Assistant Project Manager-Construction/Responsible Charge Engineer

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2012-2013

**Design/Construction Value:** \$1.4 billion

**Project Description:** This project entails the new construction of approximately 55 miles of four-lane divided limited access highway between Petersburg and Suffolk, Virginia. It is anticipated that there will be two flyover interchanges at the project termination and seven diamond interchanges in between. The project will extend from the existing U.S. Route 460 near its interchange with Interstate 295 (I-295) in Prince George County to the U.S. Route 58 bypass just south of the existing U.S. Route 460 in the City of Suffolk. The corridor alignment for this project runs south of the existing U.S. Route 460 for its entirety and has been approved by the Commonwealth Transportation Board.

**Responsibilities:** During the pre-construction phase, Fred participated in design and construction engineering risk assessment evaluation and development of mitigation strategies to minimize potential time delays, additional work and claims. In addition to this he developed cost estimates and participated in negotiations with the Design-Builder to establish pricing for additional work required by the Owner. Reporting to the Design-Build Project Manager, Fred was fully integrated among the project team including specialty subcontractors and subconsultants.

**Route 28 Corridor Improvements (PPTA), Fairfax and Loudoun Counties, VA:**

**Key Personnel Role:** Responsible Charge Engineer/Quality Assurance Manager

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2008-Present

**Design/Construction Value:** \$350+million

**Project Description:** This \$350-million plus program, which is being done under the Public Private Partnership Act (PPTA) that includes the widening of Route 28 from six (6) to eight (8) lanes and the construction of ten (10) high-capacity grade separated interchanges at major intersections on Route 28 between Interstate 66 and Route 7. The program also includes improvement to feeder roadways, creating 4-lane divided highways where two lane roadways had existed and construction of new roadways, including Atlantic Boulevard, Belfort Park, and the 4-phase Pacific Boulevard extension to Russell Branch Parkway.

**Responsibilities:** Fred has supervised the QA effort on the project since 2008, and is currently serving as QA Manager for the completion of the Pacific Boulevard extension, completion of Innovation Avenue and its interchange with Route 28, and the completion of Route 28 mainline widening to 8 lanes. He is responsible for ensuring that all work and materials, testing and sampling are performed in conformance with contract requirements and the “approved for construction” plans and specifications. As part of the auditing program, he ensures that plans are signed and sealed by qualified professionals consistent with applicable licensing regulations by the Virginia Department of Professional and Occupational Regulations. Fred implemented the requirements of the QA/QC Plan, including accepting and rejecting work, overseeing QA inspection and testing processes, participating in regular progress meetings, reviewing QC documentation, and certifying monthly payment applications.

**Route 17 Dominion Boulevard, VDOT, Chesapeake, VA:**

**Key Personnel Role:** Responsible Charge Engineer

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2011-2011

**Design/Construction Value:** \$300+ million

**Project Description:** This \$300+ million project involves bridge and roadway improvements along Dominion Boulevard/U.S. 17 from existing improved U.S. 17 (2.6 miles south of Cedar Road) to the I-64/I-464/Oak Grove Connector Interchange, for a total project length of 5.9 miles. The proposed improvements include widening of Dominion Boulevard to a four-lane divided toll roadway, replacement of the existing Steel Bridge and construction of grade-separated interchanges at Cedar Road, relocated Bainbridge Road and Great Bridge Boulevard.

**Responsibilities:** Fred as Responsible Charge Engineer served as part of the preconstruction constructability review team reviewing construction sequence, staging, permits, materials and costs. Answering questions relevant to engineering decisions relating to design or construction was among Fred’s duties in this project. He provided various recommendations for improvement of alignment configuration, contract interfaces, construction of interchanges, and operational efficiencies relating to the final work product.

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

Fred is currently working as Responsible Charge Engineer/Quality Assurance Manager for the remaining portions of the Route 28 PPTA project, which is scheduled to be completed Spring 2017. This makes him fully available for the I-64 Southside Widening and High Rise Bridge Project, Phase I.



**ATTACHMENT 3.3.1(b)**

**KEY PERSONNEL REFERENCE FORM**

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
Route 28 Corridor Improvements	Fred Crozier, Responsible Charge Engineer/QA Manager	8 Years	Jalal Masumi	Fairfax, VA	VDOT	Deputy Project Manager	703-259-2215	<a href="mailto:Jalal.Masumi@vdot.virginia.gov">Jalal.Masumi@vdot.virginia.gov</a>
Route 28 & Innovation Ave Interchange	Fred Crozier, Responsible Charge Engineer	12 months	Bill Atkins	Fairfax, VA	VDOT	Construction Manager	703-259-2939	<a href="mailto:William.Atkins@VDOT.Virginia.gov">William.Atkins@VDOT.Virginia.gov</a>
Route 17 Dominion Blvd	Fred Crozier, Responsible Charge Engineer	3 months	Rick Correa, PE	Chesapeake, VA	VDOT	Design Project Manager	757-494-5486	<a href="mailto:Ricardo.Correa@VDOT.Virginia.gov">Ricardo.Correa@VDOT.Virginia.gov</a>

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



**ATTACHMENT 3.3.1(a)**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)

**KEY PERSONNEL RESUME FORM**

<p><b>Brief Resume of Key Personnel anticipated for the Project.</b></p>
<p>a. Name &amp; Title:  <b>Mr. Richard Clarke, PE</b>  <b>Vice President Operations (Millstone, Inc.)</b></p>
<p>b. Project Assignment:  <b>Quality Assurance Manager (QAM)</b></p>
<p>c. Name of Firm with which you are now associated:  <b>Millstone, Inc.</b></p>
<p>d. Employment History: With this Firm <u>3</u> Years With Other Firms <u>39</u> Years  Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p><b>Firm 1: Millstone, Inc. VP Operations, June 2013 – Present</b>  Richard was responsible for project management including quality control, schedules, and budgets for large hotel construction.</p> <p><b>Firm 2: Quinn Consulting Services, Inc., June 2013 – Present</b>  Richard served as the Quality Assurance Manager for the \$800M I-95 Express Lanes in North Virginia in which he also managed quality assurance staff.</p> <p><b>Firm 3: RK &amp; K, LLP, 2010 – 2012</b>  Richard served as Quality Assurance Manager for the \$75M I-82 Truck Climbing Lane Project for VDOT. He was also responsible for management of the quality assurance staff.</p> <p><b>Firm 4: Value Place Hotels, 2005 – 2009</b>  As Vice President for Construction Management, Richard managed numerous hotel construction projects.</p> <p><b>Firm 5: Koch Performance Roads, 2003 – 2005</b>  Richard served as Senior Project Manager for the \$39M Highway 63, D/B NW Missouri Project.</p> <p><b>Firm 6: SE Johnson Companies, Inc., 2000 – 2003</b>  Richard served as Area Manager and was responsible for project management, quality control, schedules, and budgets.</p>
<p>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:  <b>Richard holds a Bachelor of Science Degree in Civil Engineering from the University of Kentucky in 1972.</b></p>
<p>f. Active Registration: Year First Registered/ Discipline/VA Registration #:  <b>Professional Engineer / Virginia / 2006 / #402040981</b></p>
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <p><b><u>I-95 Express Lanes Segment 1, Prince William County, Virginia. (VDOT)</u></b>  <b>Key Personnel Role:</b> Quality Assurance Manager  <b>Experience with Current Firm:</b> No  <b>Project/Assignment Duration:</b> 2012-2013  <b>Design/Construction Value:</b> \$726 million  <b>Project Description:</b> Roadway widening and construction of toll lanes in Northern Virginia. The Segment 1 project included nine miles of reversible Express Lanes in the I-95 median. The new ingress/egress ramps included two flyovers from the Express Lanes to the southbound I-95 general purpose lanes and one northbound slip ramp from I-95 to the Express Lanes. The Segment 1 project included over 4.5 miles of new storm drainage pipe, analysis and design of stormwater management basins for water quality and quantity control. The scope also involved the development of signing, lighting, pavement marking and sequence of construction/maintenance of traffic plans.</p> <p><b>Responsibilities:</b> As the QAM on this project Richard was responsible for QA inspection and testing of all materials used including monitoring of the contractor’s QC program. He managed the QA staff to promote strict adherence to the approved QA Plan. Richard was in charge of approving Field Design Changes and Notice of Design Changes. His</p>

duties included to interpret Contract specifications and review and approve submittals and monthly pay requests. Richard conducted design and construction audits on the Lead Contractor's team to ensure all work and materials were following the approved for construction plans and specifications. He was the quality liaison with VDOT representatives (GEC) performing oversight IV and IA inspections. He audited construction QC procedures and QC inspections and monitored that QC & QA staff met the testing frequency as set forth in the Contract requirements.

**I-81 Truck Climbing Lane Project, Rock Bridge County, Lexington, VA. (VDOT)**

**Key Personnel Role:** Quality Assurance Manager

**Experience with Current Firm:** No

**Project/Assignment Duration:** 2010-2012

**Design/Construction Value:** \$75 million

**Project Description:** This project involved the construction of a "slow" lane for trucks to climb vertical grade. The project is located on the northbound lanes of I-81 from mile marker 195.6 to 202.5 in the Fairfield area, which is north of Lexington. The 6.97 mile-long project added a truck-climbing lane in this location, replaced the bridges at Route 716, Route 712 and Route 710, improved existing left and right shoulders, plus updated guardrails, guardrail transitions and ended treatments to meet current Federal Highway standards. This location on I-81 northbound has one of the longest and steepest uphill grades, higher than average crashes compared to other uphill grades, and low operating speeds for trucks within the VDOT Staunton District. In 2009 the average traffic volume on I-81 in this area was 45,500 vehicles per day. The average traffic volume is projected to increase to 68,650 vehicles per day by the year 2029.

**Responsibilities:** As the QAM on this project Richard was responsible for QA inspection and testing of all materials used including monitoring of the contractor's QC program. He managed the QA staff to adhere to the approved QA Plan. He was also responsible for approving all contractor RFI's, for the correct interpretation of the Contract specifications, and for approving design submittals and pay requests. He was the quality liaison with VDOT representatives performing oversight IV and IA inspections. Richard administered the material record books for the project including tracking the QC testing results and related documentation per the approved QC Plan. He led the Preparatory Meetings for all major construction operations at start up and received weekly updates from the contractor. As part of the constructability reviews, Richard participated in contractor schedule reviews using Primavera P6 and conducted weekly progress meetings with the project team including subcontractors.

**US Highway 63, Design Build, Adair / Macon counties in Northern Missouri. (MoDOT)**

**Key Personnel Role:** Senior Project Manager

**Experience with Current Firm:** No

**Project/Assignment Duration:** 2003-2005

**Design/Construction Value:** \$39 million

**Project Description:** Design and construction of a multilane facility northeast of Kansas City, MO.

**Responsibilities:** As Senior Project Manager Richard administered the design-build process to deliver this multilane highway. He coordinated and managed inspection personnel, reviewed final project design, approved construction layout, administered the earthwork scope (with 1.2 million cubic yards), and led the drainage, lime stabilization, base stone and asphalt pavement works. Richard was the key individual in reviewing, approving and monitoring project CPM schedule, subcontracts, change orders and RFIs. He directed subcontractors assigned to various items of work as to schedule, materials and construction sequencing plan interpretation. Richard was the main point of contact with MoDOT and led the public relations with project Stakeholder such as the City, State and Federal Government. Richard successful leadership was pivotal in completing the project ahead of schedule and under budget.

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

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

If awarded this contract, Mr. Clarke has agreed in written commitment to join Kleinfelder, Inc. solely for the purpose of fulfilling the role of QAM for this project. He is currently serving on a Vice President for Operations role so he is not committed or assigned to a specific project. He will be on the Project site full time during the duration of construction operations. He will have no other assignments for the duration of this Project.



**ATTACHMENT 3.3.1(b)**  
**KEY PERSONNEL REFERENCE FORM**

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-95 Express Lanes in Northern VA	Richard Clarke, QAM	11 Months	Ming Ching	7006 Little River Turnpike, Annandale, VA 22003	CKI & Associates, Inc.	President	703-906-0172	cki@msn.com
I-81 Truck Climbing Lane	Richard Clarke, QAM	2 Years	Lee Yowell	81 Mosher Street, Baltimore, MD 21217	Rummel, Klepper & Kahl, LLP	Associate	804-239-3956	lyowell@rkk.com
Highway 63, Design Build, multilane highway in Adair / Macon counties in Northwest Missouri	Richard Clarke, Senior Project Manager	2 Years	Jim Schmidt	4111 East 37th Street North, Wichita, Kansas 67220	Koch Performance Roads, Inc.	President	316-250-5157	Schmid3j@kochind.com

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



**ATTACHMENT 3.3.1(a)**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Mike Tugman</b> <b>Sr. Vice President/Transportation Business Group Manager</b>
b. Project Assignment: <b>Design Manager</b>
c. Name of Firm with which you are now associated: <b>HDR Engineering, Inc.</b>
d. Employment History: With this Firm <u>30</u> Years With Other Firms <u>0</u> Years  <b>Firm 1: HDR, Sr. VP/Transportation Business Group Manager, 1987 - Present</b> With 30 years of experience, Mr. Tugman has extensive design experience in all disciplines of traffic and roadway engineering. In his tenure at HDR, he has successfully completed many urban and rural highways, roadway intersections and interchanges, and storm drainage designs. In addition, Mr. Tugman has project management and task leader experience on projects ranging from small, fast-paced projects to large, multi-disciplined highway projects. Mr. Tugman’s experience also includes management of multidiscipline Design-Build projects for interstate managed lane projects with maintenance of traffic under heavy ADT, complex geometrics, roadway widening within restricted right of way and congested urban streets requiring complete rehabilitation.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:  <b>North Carolina State University, NC / BS / 1987 / Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:  <b>1990 / Professional Engineer / 0402021470</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project.  <b><u>VDOT, 95 Express Lanes Design-Build, Stafford and Prince William Counties, VA</u></b> <b>Key Personnel Role:</b> Design Manager <b>Experience with Current Firm:</b> Yes <b>Project/Assignment Duration:</b> 04/2011 to 09/2015 <b>Design/Construction Value:</b> \$925 million <b>Project Description:</b> HDR was Lead Designer for Segment 1 of this \$925 million DBFOM project. This project included the engineering design, plan development, and engineering coordination during construction for 9 miles of two reversible HOT/HOV lanes on new alignment in the Interstate 95 median. Project scope included concept development, preliminary and final design for 7 bridges, including 2 interchange flyovers, access management, 9 retaining walls, structure demolition, geotechnical engineering, drainage including over 4 miles of new pipe, stream relocation, innovative stormwater management, erosion and sediment control, signing, roadway lighting, pavement marking, ITS and tolling infrastructure, utility relocation and coordination, right of way acquisition services, 5 miles of new noise barriers and complex maintenance of traffic during heavy interstate ADT.  <b>Responsibilities:</b> Mr. Tugman was the Design Manager for this project and was responsible for the overall management, quality, design and post-design. Mr. Tugman also led the preliminary design for the Lead Contractor including developing alternative technical concepts, alignment optimization, pavement design and preparing a Value Engineering Report for VDOT for the proposed 36 mile 95/395 corridor HOT lane improvements. Mr. Tugman participated in the extensive and consistent public involvement, agency and stakeholder coordination, including Marine Corps Base Quantico, FHWA, VDOT, VDEQ, utility companies and area emergency responders.  <b><u>VDOT, Route 460 Program Management, Suffolk, VA</u></b> <b>Key Personnel Role:</b> Project Manager <b>Experience with Current Firm:</b> Yes

**Project/Assignment Duration:** 03/2014 - Present

**Design/Construction Value:** \$448 million

**Project Description:** This project originally included over 70 bridges with several complex structures and over 40 retaining walls along with the development and conceptual layout of \$200 million of interchange design at both termini with an overall project cost of \$1.4 billion. In February 2015, the Virginia CTB adopted a resolution for a hybrid 17-mile preferred alternative based on the USACE preliminary LEDPA determination. Key features for the revised project include extensive roadway alignment optimization for jurisdictional area avoidance and minimization, preliminary design for 17 miles of four-lane divided freeway, 18 bridges, geotechnical, drainage and stormwater management, traffic modeling and analysis, right of way acquisition, construction sequencing and cost estimating. The project team coordinated frequently, often weekly, with VDOT and the key federal agency partners FHWA, USACE and EPA, along with local stakeholders as needed.

**Responsibilities:** Mr. Tugman was the Project Manager responsible for overseeing the overall program management. Duties include assisting the Department with enforcement of technical and contract requirements, managing the design review oversight for preliminary and final construction plans for a 55-mile, four-lane divided interstate level facility including managed lane alternatives. Mr. Tugman led the project team's engineering and environmental support of a Draft Supplemental Environmental Impact Statement that studied 5, 55-mile alternatives to the original preferred alternative. Key elements included alternative evaluation and cost estimates, traffic analysis, natural resources and wetland delineation, right of way displacements and impacts and extensive public outreach and stakeholder coordination. This Draft SEIS was completed under an aggressive schedule in eight months, less than half the time of the typical duration for this work. Mr. Tugman led the project team's multidiscipline development of the 17 mile freeway preliminary plans along with the engineering and environmental support of a Final Supplemental Environmental Impact Statement to support a joint permit application and Record of Decision for the revised \$448 M project.

**Transurban, 395 Express Lanes, Arlington and Alexandria, VA**

**Key Personnel Role:** Project Manager

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 11/2015 to present

**Design/Construction Value:** \$220 million

**Project Description:** This project includes the conversion of the existing two-lane reversible HOV facility in the 395 median, located inside the Capital Beltway (I-495) in Fairfax and Arlington Counties and the City of Alexandria in Virginia, into a three-lane HOT lane facility. The project extends from the current northern 95 Express Lanes terminus at Turkeycock Run to the 14th Street Bridge over the Potomac River, a distance of over 8 miles, and will be operated as managed lanes. The scope included complex alignment geometry, 18 bridge widenings, condition assessment of existing facilities, urban drainage and stormwater design, geotechnical borings and pavement design, survey, signing, roadway lighting, pavement marking, ITS and tolling infrastructure, utility relocation and coordination, right of way acquisition services, noise barriers, complex maintenance of traffic during heavy interstate ADT and a detailed risk assessment and workshop.

**Responsibilities:** Mr. Tugman was responsible for the overall management, quality and preliminary design for this project. Mr. Tugman led the development of the prescriptive multidiscipline RFP plans and participated in the extensive agency coordination, including the Pentagon, FHWA and VDOT and coordinated the Technical Requirement development with TU and VDOT.

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

Not applicable; this position is not required to be on-site full time.

**ATTACHMENT 3.3.1(b)**

**KEY PERSONNEL REFERENCE FORM**

<b>PROJECT NAME</b>	<b>POSITION HELD ON THE PROJECT</b>	<b>DURATION IN THAT POSITION</b>	<b>NAME OF REFERENCE</b>	<b>REFERENCE'S LOCATION</b>	<b>NAME OF REFERENCE'S EMPLOYER</b>	<b>REFERENCE'S TITLE/POSITION</b>	<b>REFERENCE'S PHONE</b>	<b>REFERENCE'S EMAIL ADDRESS</b>
95 Express Lanes	Mike Tugman, Design Manager	4 years	Charlie Warraich, PE	4975 Alliance Drive Fairfax, Virginia 22030	VDOT	Project Manager	703-691-6740	H.S.Warraich@VDOT.Virginia.gov
Route 460 Program Management	Mike Tugman, Project Manager	2 years 6 mos.	Angel Deem	1401 E. Broad St. Richmond, VA	VDOT	Environmental Division Director	804-371-6756	Angel.Deem@VDOT.Virginia.gov
395 Express Lanes	Mike Tugman, Project Manager	1 year	Charlie Warraich, PE	4975 Alliance Drive Fairfax, Virginia 22030	VDOT	Project Manager	(703)-691-6740	H.S.Warraich@VDOT.Virginia.gov

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



**ATTACHMENT 3.3.1(a)**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)

**KEY PERSONNEL RESUME FORM**

<p><b>Brief Resume of Key Personnel anticipated for the Project.</b></p>
<p>a. Name &amp; Title:  <b>Steve DiMuro</b>  <b>Construction Manager</b></p>
<p>b. Project Assignment:  <b>Construction Manager</b></p>
<p>c. Name of Firm with which you are now associated:  <b>Flatiron Constructors, Inc.</b></p>
<p>d. Employment History: With this Firm <u>12</u> Years With Other Firms <u>20</u> Years</p> <p><b>Firm 1: Flatiron Constructors, Inc., Construction Manager, 2004 – Present</b>            Steve has managed a variety of large-scale projects, planning, directing and coordinating the on-site construction to ensure the accomplishment of project goals. His deep knowledge of complex design-build highway and bridge projects, as well as completing complex requirements, have allowed him to expertly lead Flatiron teams in the Southeast for the last decade.</p> <p><b>Firm 2: JA Jones, General Superintendent/Field Engineer, 1996 – 2004</b>            Steve was responsible for supervising superintendents, foreman, and field workers, and scheduling and coordinating their activities. He mentored and coached superintendents, participated in bid reviews to determine schedule, job cost, and staffing requirements, and worked with government entities and third-party agencies to coordinate project activities.</p>
<p>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</p> <p>University of Buffalo / Buffalo, NY / Bachelor of Science / 1994 / Civil Engineering</p>
<p>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</p> <p>N/A – Prior to commencement of construction, Steve will hold a Virginia Department of Environmental Quality Responsible Land Disturber Certification and a VDOT Erosion and Sediment Control Contractor Certification.</p>
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <p><b><u>I-73/PTI CONNECTOR, Greensboro, NC</u></b>  <b>Key Personnel Role:</b> Construction Manager  <b>Experience with Current Firm:</b> Yes  <b>Project/Assignment Duration:</b> 2014-present  <b>Design/Construction Value:</b> \$181 million  <b>Project Delivery Method:</b> Design-Build  <b>Project Description:</b> The team is constructing a new 9.4-mile, four-lane, future interstate with a 70-mph design speed that will begin at the existing Joseph M. Bryan Boulevard / Airport Parkway interchange, cross over N.C. 68, and end south of US 2201 near the Haw River. Work also includes a bridge and taxiway at Piedmont Triad International Airport.  <b>Responsibilities:</b> Steve is responsible for all field operations, including all labor, equipment, subcontractors and material handling. He coordinates multi-phases and tasks of construction, preparing a workable schedule to work toward achieving project goals. In addition to providing support to the project management team, he plans cash flow, provides technical advice to project personnel, and coordinates project activities with third-party agencies.  <b>Relevance to I-64 Project:</b> This design-build includes work on a four-lane divided freeway with a 46- to 70-foot-wide median and three interchanges.</p> <p><b><u>YADKIN RIVER BRIDGE, Salisbury, NC</u></b>  <b>Key Personnel Role:</b> Roadway Construction Manager, Overall Construction Manager  <b>Experience with Current Firm:</b> Yes  <b>Project/Assignment Duration:</b> 2010-2013  <b>Design/Construction Value:</b> \$134 million  <b>Project Delivery Method:</b> Design-Build</p>

**Project Description:** Flatiron designed and constructed a new dual I-85 bridge using a single temporary work bridge, with minimal disruption to I-85 traffic. Flatiron widened approximately three miles of the four-lane I-85 to eight lanes, including the north and south approaches to the bridges. Flatiron was also responsible for the design and construction of storm drainage systems, noise walls and guardrails. Flatiron built a six-million-pound trestle—nearly a half mile long—over sensitive wetland areas and an active railroad line. During one phase of construction, crews set 200-foot long, 10-foot deep steel girders each day during short four-hour railroad closure windows. HDR also served as a designer on the Flatiron team.

**Responsibilities:** Steve was one of the first employees on the Yadkin project seeing the project through all the way to the end achieving substantial and final completion on schedule. He began as the roadway construction manager and eventually became the overall project construction manager. He managed field staff responsible for project construction, and evaluated and interpreted job cost reports to make decisions on schedule, crew and equipment matters. He also directed and coordinated activities of field personnel to ensure the project progressed on schedule and budget.

**Relevance to I-64 Project:** This design-build included widening of three miles of interstate, and construction of sound walls and storm drainage systems. In addition, crews replaced two sets of parallel bridges to the north and south of the Yadkin River, as well as the adjacent US 29/70 bridge.

#### **CAROLINA BAYS PARKWAY, Carolina Bays, SC**

**Key Personnel Role:** Construction Manager

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2000-2002

**Design/Construction Value:** \$254.3 million

**Project Delivery Method:** Design-Build

**Project Description:** This 34-month project was completed eight months ahead of schedule. The new roadway is named SC-31 and runs northwest along the coast of South Carolina between Myrtle Beach and North Myrtle Beach. Construction included 20 miles of a new six-lane limited access divided highway and a 1.5-mile four-lane Robert M. Grissom Parkway connector to US 17 with a major bridge structure over the Intracoastal Waterway, five fully-directional interchanges and 38 bridges.

**Responsibilities:** Steve was the first employee on the project, kick-starting preconstruction by acquiring all necessary permits and setting up the offices and yards for the team. He managed the construction through the first several months of work, managing field personnel and ensuring the project began in a way to remain on schedule and budget. After two years with Carolina Bays, Steve's expertise was needed on back-to-back rail projects in California, with a combined value of \$839 million.

**Relevance to I-64 Project:** This design-build included construction of five interchanges and 38 bridges, as well as 20 miles of new six-lane, limited access, divided highway.

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

Steve is currently assigned to the I-73/PTI Connector project in Greensboro, N.C., as the Construction Manager. The project will be substantially complete by April 2017, making him available and 100% dedicated to the I-64 High Rise Bridge Project.



**ATTACHMENT 3.3.1(b)**

**KEY PERSONNEL REFERENCE FORM**

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-73/PTI CONNECTOR	Steve DiMuro, Construction Manager	2 years	Brian Smith	Raleigh, NC	NCDOT	Resident Engineer	(336) 375-1774	<a href="mailto:bvsmith@ncdot.gov">bvsmith@ncdot.gov</a>
YADKIN RIVER BRIDGE	Steve DiMuro, Roadway / Overall Construction Manager	3 years	Darrin Waller	Raleigh, NC	NCDOT	Resident Engineer	(803) 521-5176	<a href="mailto:dwaller@ncdot.gov">dwaller@ncdot.gov</a>
CAROLINA BAYS PARKWAY	Steve DiMuro, Construction Manager	2 years	Marty Long	Columbia, SC	SCDOT	Resident Engineer	(864) 915-0741	<a href="mailto:mllong@transystems.com">mllong@transystems.com</a>

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.

**ATTACHMENT 3.3.1(a)**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)



**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Vijay Modi, PE, Project Manager/Bridge Business Group Manager</b>
b. Project Assignment: <b>Lead Structural Engineer</b>
c. Name of Firm with which you are now associated: <b>HDR Engineering, Inc.</b>
d. Employment History: With this Firm <u>21</u> Years With Other Firms <u>6</u> Years  <b>Firm 1: HDR Engineering, Inc, Virginia Beach, VA, Senior Project Manager, 1994 - present (21 years)</b> Vijay has designed a variety of structures from bridges to water front structures (such as fender system and vessel collision protection system), retaining walls, and structures for local authorities, state governments, and federal governments. He has worked on several water crossing bridges for VDOT such as Clarksville Bypass –Route 58 over Kerr Reservoir, Route 288 over James River and stage I design of Route 460 Connector Bridge over Grassy Creek with approx. 250 feet tall piers. Vijay has also designed bridges on curved alignment with steel and prestressed beams. Additionally, he has assisted numerous construction field offices with technical advice regarding construction problems and pile length determination. Vijay has also reviewed shop drawings and materials data sheets and inspected various existing bridges for quality control and quality assurance, as well as prepared preliminary and final construction cost estimates. His experience also lends itself to QA/QC for a diverse of engineering projects such as 95 Express lane, Route 460 corridor improvement projects from Suffolk to Petersburg. He is also Project Manager for Movable Bridge on Call Contract which includes the bascule span of the existing High Rise Bridge. Mr. Modi has resolved several emergency issues at the High Rise Bridge location; some of which were resolved though the design of various movable bridge related items.  <b>Firm 2: VDOT- Hampton Roads (formerly Suffolk) District , Bridge Engineer; 1988 - 1994 (6 Years)</b> Vijay has designed numerous bridge projects. Bridge types included steel and prestressed concrete superstructures. Mr. Modi also performed load rating analysis for more than 800 various types of bridges in the Hampton Roads area. He played an important role to resolve construction related issues during the construction of the Route 58 Corridor Improvement, I-664 and I-64 HOV lanes in Tidewater, Virginia. He was responsible for the approval of pile lengths, and he worked to resolved issues during pile driving during bridge construction. He designed and 1,800-foot long bridge on Route. 337 over Lafayette River, Norfolk, VA. He was involved in the unique design of Head Dolphins at Scotland Ferry using marine fenders systems This System has been in place for more than 20 years.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:  <b>Old Dominion University, Norfolk, VA / MS / 1989 / Civil Engineering Regional Engineering College, India / BS / 1982 / Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:  <b>1990 / Professional Engineer / 0402020733 (Civil)</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project.  <b><u>VDOT, Route 189 over Blackwater River, South Quay Bridge, City of Suffolk/Southampton County, VA</u></b> <b>Key Personnel Role:</b> Project Manager <b>Experience with Current Firm:</b> Yes <b>Project/Assignment Duration:</b> 03/2012 to 12/2017 (estimated) <b>Design/Construction Value:</b> \$1 million/\$12 million <b>Project Description:</b> HDR is currently the lead designer for this bridge replacement project over navigable water. The replacement bridge will stretch 800 feet long with retaining walls.

**Responsibilities:** As project manager, Vijay prepared design waiver documents to provide common sense engineering solutions. He also led staff for Stage I plan submission, which included a possible scheme for construction of the replacement bridge and demolition of the existing bridge. In addition, a design waiver was obtained for the bridge width and use of Deck extension in lieu of Virginia Abutment. During Stage I design, various foundation alternatives were considered; from pier column to pile bents. This submission also included a scheme for deck replacements in the future.

**VDOT, I-495/DTR Interchange, Fairfax County, VA**

**Key Personnel Role:** Lead Structural Engineer

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 01/2009 to 02/2012

**Design/Construction Value:** \$3.2 million/\$80 million

**Project Description:** The Metropolitan Washington Airports Authority (MWAA), a major stakeholder to the I-495 Express Lanes project and owner of the land in the vicinity of the interchange, required modification to this interchange to provide direct connection from the Dulles International Airport Access Highway (DIAAH) to I-495 as part of the I-495 Express Lanes design-build project. HDR evaluated the short and long term improvements required to alleviate the merge and weave conditions in order to determine the modifications required for the Project, which was in design and construction at the time, as well as the required considerations for the future Metro Rail planned by MWAA in the median of the DIAAH corridor.

**Responsibilities:** This complex DB project had approximately 800 feet of curved bridge with bifurcated ramp and eight retaining walls of different types. Vijay established the bridge layout, wall limits and design criteria. He led multiple teams to deliver this fast-track project. During construction, he led the Team through utility conflict resolution, RFI review, and oversaw the erection of complex beams, cross girders and straddle bents. Due to the complexity of horizontal alignment, cross girders were introduced. In addition, straddle bents were used to accommodate several on and off ramps underneath. He obtained a design exception for a special roadway design barrier that provided clearance between the barrier and substructure of the ramp bridge. One of the key challenges for this project was to resolve global stability issues for the MSE walls.

**VDOT, Route 58, Clarksville Bypass, Mecklenburg County**

**Key Personnel Role:** Project Engineer to Lead Engineer

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 11/1994 to 01/2005

**Design/Construction Value:** \$3.4 million/\$75 million

**Project Description:** As part of Virginia's U.S. Route 58 Corridor Development Program to enhance transportation and economic development across almost 800 kilometers (500 miles) of southern Virginia, HDR designed a critical segment in the Clarksville area. The project began at the intersection of Route 58 and Route 722, west of the Town of Clarksville. It then extended east for approximately 8.1 kilometers (5 miles) on new alignment, crossing the Kerr Reservoir on new location and ending east of a proposed interchange with Route 15. This project had 11 bridges including a main bridge over Kerr Reservoir. The main bridge is approximately 5,200 feet in length with a 300 foot span over a navigable channel. The types of structures considered for this project were steel versus segmental concrete. An optimization study was performed for superstructure vs. cost and substructure vs. cost. The final design was for a steel plate girder option with hammerhead columns supported on drilled shafts.

**Responsibilities:** Vijay worked on this project from conceptual development to successful completion of this major bypass on U.S. Route 58. He performed the conceptual study and developed various span arrangements and material types to obtain the optimal solution for the main mile long bridge over the Kerr Reservoir. He laid out all 11 bridges to meet geometric and hydraulic criteria where applicable. For the final design, he worked on the main channel span and 3 bridges with curved girder plate girders. Vijay was also responsible for project development and engineering services during construction. In this role, he resolved construction issues, led the staff for shop drawings reviews for the fabrication in Brazil, and led coordination with field staff.

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

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

Not applicable; this position is not required to be on-site full time.

**ATTACHMENT 3.3.1(b)**

**KEY PERSONNEL REFERENCE FORM**

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
Rte. 189 over Blackwater River- South Quay Bridge	Vijay Modi, Project Manager	5 Yrs.	Wali Zaman, PE	Suffolk, VA	VDOT	Asst. District L&D Engineer	757.925.1605	Wali.Zaman@VDOT.Virginia.Gov
I-495/DTR Interchange	Vijay Modi, Lead Structural Engineer	3 Yrs.	Fawaz Saraf, PE	Fairfax, VA	VDOT	Sr. Bridge Engineer	703.691.6739	Fawaz.Saraf@VDOT.Virginia.Gov
Rte. 58, Clarksville Bypass	Vijay Modi, Project Engineer to Lead Bridge Engineer	11 Yrs.	Lee Godsey, PE	Richmond, VA	VDOT	Sr. Bridge Engineer	804.786.6172	Lee.Godsey@VDOT.Virginia.gov

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



**ATTACHMENT 3.3.1(a)**

(Addendum No. 1 – reference form on 2<sup>nd</sup> page removed)

**KEY PERSONNEL RESUME FORM**

<p><b>Brief Resume of Key Personnel anticipated for the Project.</b></p>
<p>a. Name &amp; Title:  <b>Brian Ballard</b>  <b>General Superintendent</b></p>
<p>b. Project Assignment:  <b>Incident Management Coordinator</b></p>
<p>c. Name of Firm with which you are now associated:  <b>Flatiron Constructors, Inc.</b></p>
<p>d. Employment History: With this Firm <u>19</u> Years With Other Firms <u>0</u> Years</p> <p><b>Firm 1: Flatiron Constructors Inc., 1997 – Present</b>          With nearly two decades of experience on major highway projects, Brian has extensive experience working with unique challenges, team-building, mentoring and providing technical expertise. He has deftly managed multiple projects, scheduling, coordinating and supervising activities of laborers, operators, carpenters and finishers, as well as supervising multiple superintendents. Brian is well-versed in both sides of construction projects, as he is able to transition from the field side, ensuring compliance with safety and efficiency of work, to the office side, participating in bid reviews and project presentations to owners and other stakeholders.</p>
<p>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</p> <p>AAS, Business Management, Lewis &amp; Clark State University, Lewiston, Idaho, 1981</p>
<p>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</p> <p>N/A – Prior to commencement of construction, Brian will complete training classes for FHWA SHRP2 “TIM” Responder Training; FEMA ICS/NIMS 100, 200 &amp; 700; and FEMA/VDEM Hazardous Materials Awareness.</p>
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <p><b><u>I-85 / I-385 INTERCHANGE, Greenville, SC</u></b>  <b>Key Personnel Role:</b> Superintendent  <b>Experience with Current Firm:</b> Yes  <b>Project/Assignment Duration:</b> 2016-Present  <b>Design/Construction Value:</b> \$230 million  <b>Project Delivery Method:</b> Design-Build  <b>Project Description:</b> Work on this project involves creating a new interchange within the general footprint of the current interchange by staging construction of the new lanes, ramps, and bridges while maintaining traffic. The project replaced existing loop ramps with direct-connect, high-level flyover bridges and includes construction of a new collector-distributor roadway along I-85 and I-385. The widening of I-385 will continue through the project limits. There were also improvements to Roper Mountain Road, Woodruff Road, Garlington Road, Miller Road, and Chrome Drive under this contract. Finally, the team designed and constructed 12 new bridge structures, which included two flyovers, rehabilitation of two existing bridge structures, and modifications to the substructure of one existing bridge.  <b>Responsibilities:</b> Brian reviews field operations to ensure that the project provides a safe workplace and supervises superintendents, acting as a liaison between field engineering, estimating, and crafts to ensure compliance of construction with drawings and specifications. In addition, he coordinates with project staff to outline the workplan and to assign duties, responsibilities, and scope of authority, as well as directs activities of project personnel to ensure the work progresses on schedule and budget.  <b>Relevance to I-64 Project:</b> This was also a design-build project that included road widening, the addition of lanes along both I-85 and I-385, resurfacing of the interstate, and bridge rehabilitation and replacement.</p> <p><b><u>PORT MANN BRIDGE/HIGHWAY 1, Vancouver, British Columbia, Canada</u></b>  <b>Key Personnel Role:</b> Superintendent</p>

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2009-2013

**Design/Construction Value:** CA\$2.39 billion

**Project Delivery Method:** Design-Build

**Project Description:** Flatiron was part of the design-build joint venture responsible for designing and building the new Port Mann Bridge over the Fraser River. The new cable-stayed bridge will increase the crossing's capacity from five to 10 lanes. Work also included upgrading a total of 23 miles of Highway 1 on each side of the Fraser River. The new bridge alleviated the nearly 14 hours of traffic congestion on the existing bridge and reduced travel times by up to 30 percent. This Project includes the longest cable-stayed span in North America, as well as being the largest contract in Flatiron's history. The Project was named one of the Top 100 Infrastructure Projects by ReNew Canada Magazine in 2011.

**Responsibilities:** Brian's assignment included overlooking all night operations for the Eastern Segment of the bridge. Duties included traffic management, environmental management, roadway and drainage construction.

**Relevance to I-64 Project:** This design-build increased the bridge crossing capacity from five lanes to 10 lanes, and also provided general roadway upgrades to 23 miles of the highway, including reconstruction and resurfacing.

**ARTHUR J. RAVENEL JR. BRIDGE (COOPER RIVER BRIDGE), Charleston, SC**

**Key Personnel Role:** Superintendent

**Experience with Current Firm:** Yes

**Project/Assignment Duration:** 2002-2005

**Design/Construction Value:** \$541 million

**Project Delivery Method:** Design-Build

**Project Description:** The Cooper River Bridge was the longest cable-stayed bridge on the continent at the time of construction, spanning 1,546 feet across the Cooper River in Charleston. The bridge, eight lanes wide with a 12-foot-wide bicycle/pedestrian lane, is supported by two 573-foot-tall towers visible from 30 miles away. 128 cable stays suspend the structural steel girders and precast concrete deck panels. The project also included construction of two interchanges and two high-level approaches. This project garnered 16 awards during its construction, including a Top All Time 10 Bridges mention by Roads and Bridges Magazine.

**Responsibilities:** As superintendent, Brian coordinated all concrete repair and placement, grouting of PT, traffic control, drilled shaft repair and supervised all labor crews. Between this project and the Port Mann Bridge/Highway 1 project, Brian served as the superintendent/assistant construction manager on the SR 60/Tampa Airport Interchanges project, which required 36 phases of construction for two major interchanges and 18 phases of MOT.

**Relevance to I-64 Project:** This design-build was constructed in five separate, simultaneous projects that included the two interchanges, two high-level approaches and a main span. The Cooper River Bridge main span is eight lanes wide and has a 12-foot-wide bicycle/pedestrian lane. In addition, flanked by more than a mile of eight-lane high-level approaches and significant interchanges in Mount Pleasant and Charleston.

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

Brian is currently assigned to the I-85 / I-385 Interchange project in Greenville, S.C., as the superintendent. While the project will be substantially complete by October 2018, Brian will be available as early as mid-2017. He will be 100% dedicated to the I-64 High Rise Bridge Project.



**ATTACHMENT 3.3.1(b)**

**KEY PERSONNEL REFERENCE FORM**

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-85 / I-385 INTERCHANGE	Brian Ballard, Superintendent	5 months (ongoing)	David Hebert, DCE	Columbia, SC	SCDOT	District Construction Engineer	(864) 603-5644	<a href="mailto:hebertdl@scdot.org">hebertdl@scdot.org</a>
PORT MANN BRIDGE / HIGHWAY 1	Brian Ballard, Superintendent	4 years	Garry Dawson	Vancouver, British Columbia, Canada	Transportation Investment Corporation	VP of Technical Services	(778) 783-1242	<a href="mailto:gdawson@ticorp.ca">gdawson@ticorp.ca</a>
ARTHUR J. RAVENEL JR. BRIDGE (COOPER RIVER BRIDGE)	Brian Ballard, Superintendent	3 years	Tim Henderson	Charleston, SC	SCDOT	Project Engineer	(843) 740-1667	<a href="mailto:HendersonTR@scdot.org">HendersonTR@scdot.org</a>

- (1) List the position to which this reference relates (Design-Build Project Manager, Responsible Charge Engineer, Quality Assurance Manager, Design Manager, Construction Manager, etc.).
- (2) List the name of the individual holding the position described in the "Position with Offeror" column.
- (3) List the name of the project on which the reference worked with this individual.



# 3.4.1a LEAD CONTRACTOR WORK HISTORY FORMS

**DRAGADOS USA**



**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>I-595 Corridor Roadway Improvements</b> Location: <b>Broward County, FL</b> (Roadway)	Name: AECOM	Name of Client/ Owner: <b>Florida Department of Transportation (FDOT)</b> Phone: <b>(850) 414-4100</b> Project Manager: <b>Paul A. Lampley</b> Phone: <b>(954) 732-0644</b> Email: <b>paul.lampley@dot.state.flu.us</b>	02/2014	02/2014	\$1,197,000	\$1,211,000*  *Project cost increase was due to FDOT's scope additions.	\$1,211,000

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. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<p><b>ROLE AND SCOPE OF WORK</b> Dragados USA (Dragados) was the sole Lead Contractor for this DBFOM project. As the Lead Contractor, Dragados was responsible for performing and/or overseeing all work on the roadways and bridges as well as managing the MOT, ROW, environmental compliance, utility relocation, public outreach, and coordinating among all regulatory agencies involved in the Project.</p> <p><b>PROJECT DESCRIPTION</b> Located in central Broward County, Florida, the approximately 10.5-mile, \$1.2 Billion, I-595 DBFOM project included new highway and roadway construction, new and modified bridges and access ramps, nine interchanges along the corridor, and improvements to the six-lane, I-595 limited access facility and to the four-lane SR-84, which has two lanes in each direction north and south of I-595 corridor. This project relieved congestion and created a multimodal transportation network along the I-595 corridor in South Florida. With express lanes, express bus service, and a bike/pedestrian greenway along the navigable North New River Canal (NNRC), the project improves multimodal travel for the entire region. The Project also included reconstruction, widening, milling and resurfacing of the I-595 and SR-84 roadways, and associated interchange modifications. Three reversible express lanes in the I-595 median were constructed, serving express traffic to/from I-75 Sawgrass Expressway and to/from I-95 with a direct connection to the Florida Turnpike. Geometric improvements were made to 2.5 miles of the I-595/Florida Turnpike interchange. The Florida Turnpike mainline from Griffin Road to Peters Road was widened and reconstructed to integrate the express lanes direct connection.</p> <p>Sixty-five bridges in total were necessary to complete the Project including intermediate bridges; major bridges cast in place with post tensioning super-structure, curved steel girders, multi-level roadways, and minor bridges; repair and rehabilitate (R&amp;R) intermediate bridges; R&amp;R major bridges in multi-level roadways and curved steel girders; R&amp;R minor bridges. Special mention for the R&amp;R of a major bridge in multi-level roadways and curved steel girders at the University Drive intersection. This bridge was partially demolished and rebuilt to adopt the new roadway geometry for the Express lanes and I-595. The last span was completely removed and replaced and a middle bent replaced by a new straddle bent. The rest of the structure remained and was properly reinforced because of the new load</p>	<p>requirements. Using a segment-based accelerated schedule, <b>the design and construction teams completed the project on time and \$275 million below FDOT's original estimated cost which was partly accomplished due to innovative Alternative Technical Concepts (ATCs) presented during the Procurement Phase.</b></p> <p>The project was divided into 5 roadway segments to streamline personnel and equipment resources and expedite the Construction Phase. Each segment had its own Segment Manager reporting to the Construction Manager, who was responsible for the five segment coordination. This approach provided a higher degree of flexibility in managing subcontractors and reduced the lane closure impact on the travelling public resulting in a better traffic flow and corridor access.</p> <p><b>RELEVANCE TO PROJECT</b></p> <ul style="list-style-type: none"> <li>✓ Construction over a navigation channel which required coordination with marine and environmental authorities</li> <li>✓ Complex MOT requirements and comprehensive traffic control plans, multimodal coordination and project interfacing in an urban location with heavy traffic congestion (AADT 200,000)</li> <li>✓ Construction in land and water environmentally sensitive areas</li> <li>✓ Design-Build component in the project development and optimization</li> <li>✓ Delivery of innovative ATCs</li> </ul> <p><b>VALUE-ADDED</b> In order to fit with the new roadway geometry, the previously mentioned bridge at the University Dr. intersection was jacked up 18 inches in a weekend operation (to reduce traffic impacts) that required more than eighty jacks all coordinated and controlled from a single console. Once the deck was in its final position and temporarily supported, traffic underneath was open and the jobs to reach the new elevations of the piers began. <b>This innovative solution saved \$ 25M in project costs.</b> Three major curved steel and multi-level roadway bridges were built to complete the connections between I-595 and Turnpike. Two of these bridges were over an existing navigable Canal and piers had to be protected by a fender system made out of sheet-piles to protect them from ships' impacts. In order to accommodate the new facility along the corridor it was necessary to <b>extend the available area over an existing navigable canal.</b> Since the hydraulic parameters of the NNRC had to</p>	 <p>be kept as is to maintain the capacity, installation of a bulkhead wall was necessary in many different locations. About 16,000 lf of bulkhead wall, made out of steel sheet-piling, were completed with a total area of 400,000 sf. An added feature to this project is that <b>Dragados successfully exceeded the 8.1% Disadvantaged Business Enterprise (DBE) goal for a final DBE participation of 13.6%</b> and surpassed the On-The-Job-Training (OJT) goal of 118 trainees with a final graduation of 164 trainees. Upon the completion of the I-595 Corridor Roadway Improvement Project, our Team was recognized for greatly exceeding FDOT's DBE requirements. The Project was also awarded "Project of the Year 2009" by the American Road and Transportation Builders Association, "North American Transport Deal of the Year 2009" by Project Finance Magazine, and received the 2015 People's Choice Award for "Under Budget Category" by the American Association of State Highway.</p>
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**LEAD CONTRACTOR - WORK HISTORY FORM  
(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>Autoroute 30</b>  Location: <b>Greater Montreal Area, Quebec, Canada</b>  (Roadway)	Name: Arup HK	Name of Client/ Owner: <b>Ministere des Transports du Quebec (MTQ)</b> Phone: <b>(514) 873-4377</b> Project Manager: <b>Sandra Sultana</b> Phone: <b>(514) 873-4377 ext.2200</b> Email: <b>sandra.sultana@mtq.gouv.qc.ca</b>	12/2012	12/2012	\$1,500	\$1,500 * CAD \$1 = \$1.23	\$600,000

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. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

**ROLE AND SCOPE OF WORK**

Dragados Canada, Inc. (Dragados USA, Inc. affiliated company)\*\* was the lead partner for the Lead Contractor on the Autoroute 30 (A-30) Project. As the Lead Contractor, Dragados was responsible for all performing and/or overseeing all work on roadway and bridge construction, reconstruction, and rehab and rehabilitation as well as managing the MOT, ROW,, environmental considerations, utility relocation, public outreach, and coordinating among all regulatory agencies involved in the Project.

**PROJECT DESCRIPTION**

The A-30 Project was one of the largest highway and bridge projects in Canada. It dealt with strict and environmentally sensitive conditions as well as construction over navigable seaways, making this an extremely high-profile job similar to the I-64 High Rise Project. The A-30 Project was comprised of two sections: the Western Portion (WP), procured as a DBFOM, and the Supplemental Section Portion (SP), procured as an OM.

The project involved the design and construction of a four-lane, 26 mile limited access highway, a 623-ft cut-and-cover tunnel, 10 interchanges, a toll plaza as well as the construction of 23 bridges. Two of these bridges shared a similar size and complexity to the new High Rise Bridge : the St. Lawrence Bridge and the Beauharnois Bridge. **With an aggressive and demanding schedule, the A-30 project was delivered on time and on budget through a fast-track delivery method that was made possible by the design-build team developing innovative construction methodologies.**

**Roadworks:** The project earthworks volumes comprise a total of 8.3 million cubic yards excavation and 7.1 million cubic yards of fill for both structural (i.e. highway embankments) and non-structural (e.g. temporary surcharges, berms and landscape mounds). Most of the main line of A30 is on low-height embankments typically up to about 6-9 ft high, including pavement layers. However, a total of 64 higher embankments were required for highway geometry requirements at interchanges, side roads and on the approaches to bridges over the highway. The main constraints on the embankment design generally were deep deposits of soft sensitive clay, the short construction schedule, traffic management required existing interchanges to be kept open to traffic throughout the construction period and concurrent construction required embankment solutions that allowed bridges to be built concurrently. With these constraints the solutions for these higher embankments were: 26 were entirely constructed of lightweight fill and 13 were constructed part earthworks part lightweight fill for stability. The remaining 25

embankments were constructed conventionally with earthworks. Also, of these 64 embankments 22 required vertical drains and temporary surcharge for consolidation of the underlying soft clay. 977,000 cubic yards of EPS lightweight fill, 400,000 cubic yards of surcharge and 36 million linear foot of vertical drains were used. Asphalt and aggregate base course was the chosen option for the 1.5 million square yards of pavements.

The greatest geotechnical hazards for the earthworks design were all related to the soft, sensitive and compressible nature of the Champlain Clay which, if not managed carefully, had the potential to cause cost and schedule over-runs. The embankments were monitored using settlement plates, piezometers and inclinometers through the settlement periods.

**The Saint Lawrence Bridge was a \$136 million, 1.12-mile bridge** with two separate decks (eastbound and westbound) and 42 spans (average span of 135 feet long) per deck. The foundations were built using an artificial peninsula that couldn't span more than 70% of the total width of the river, and required special moratoriums for the fish spawning period. Beams were placed using both cranes (60%) and a beam launcher (40%).

**The Beauharnois Canal Bridge was a \$385 million, 1.55-mile bridge** with two separate decks (eastbound and westbound), one deck built with a composite box girder structure 11 feet deep designed to be launched over the canal from the east abutment, and the other deck built using conventional precast concrete beams six feet deep, precast concrete slabs and an in situ concrete deck. The steel deck consists of 18 spans, with the majority being approx. 246 feet long, with a main span at 450 feet long that spans over the shipping channel.

**RELEVANCE TO PROJECT**

- ✓ Design-Build component in the project development and optimization
- ✓ Extensive roadway construction and 1,7 million m<sup>2</sup> of asphalt
- ✓ Construction in land and water environmentally sensitive areas
- ✓ Construction over a navigation channel which required coordination with marine traffic and marine authorities
- ✓ Construction of the Beauharnois Bridge; which we believe is of similar scale and complexity to the I-64 High Rise Bridge

**VALUE-ADDED**

**To comply with the project schedule, jacking equipment and auxiliary supports were used for the parallel and simultaneous launching of both decks for the Beauharnois Bridge; the most complex and critical structure of the new Autoroute 30 Project.** Subject to a very tight schedule on account of severe construction restrictions imposed by the St.

Laurence Seaway Corporation over their land, the bridge had to be designed for construction in



challenging winter weather conditions, as construction work over the shipping channel could only be performed from December 20th to the end of March, the three months of channel winter closure when the shipping channel closes due to low temperatures and ice formation.

Because of contract restrictions, work over the main span that required the use of cranes and other lifting equipment was limited to the noted three-month winter period. This prompted Dragados to devise an innovative girder launching technological solution that would allow construction of the main span to proceed outside of the three-month winter window. The designer was instructed to adjust the bridge design and erection stresses to account for launching of the girders from the west abutment over the canal and over the shipping channel, **a method that would allow erection of the 450 ft long main span girders over the shipping channel on a single operation and in as little as two days.**

**\*\*Justification for utilizing an affiliated company to satisfy the relevant project experience on this Project:** Dragados USA, Inc. and Dragados Canada, Inc. are affiliated firms (under the Dragados Group of Companies) that share the same Chief Executive Officer, corporate and project management personnel, and equipment across North America. The reason for including a project completed by Dragados Canada is because our proposed Design-Build Project Manager (DBPM), Jose L. Conesa, served in this same role at the A-30 in Montreal, a project that shares many similarities with the I-64 High Rise Bridge Project with a strong highway and bridge design-build components and construction over navigable waters and challenging MOT conditions. Dragados Canada will have no role on the I-64 High Rise Bridge project beyond transferring Jose L. Conesa to Dragados USA upon Project Award.

**As a reflection of this Project's success, it received the Transportation Association of Québec Awards for Excellence in Transportation, Infrastructure and Distinction, 2013.**



**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>Arthur Ravenel, Jr. Bridge</b>  Location: <b>Charleston, SC</b> (Bridge)	Name: Parsons Brinkerhoff	Name of Client/ Owner: <b>South Carolina Department of Transportation (SCDOT)</b> Phone: <b>803-737-2314</b> Project Manager: <b>Leland Colvin</b> Phone: <b>803-737-5053</b> Email: <b>colvinld@scdot.org</b>	06/2006	06/2005 Actual	\$531,276	\$541,545 (Owner Directed Changes to Scope of Work)	\$216,618

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. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<p><b>ROLE AND SCOPE OF WORK</b> As a partner in this joint venture, Flatiron was <b>responsible for the construction of the new 1,546-foot Arthur Ravenel, Jr. Bridge over the Cooper River</b>. The bridge was constructed in five separate, simultaneous phases to manage overall construction: two interchanges, two high-level approaches and a main span. For example, the main span team began building the bridge deck before completion of the towers. This allowed the team to have more control of the project and facilitate the use of specialized talent.</p> <p><b>PROJECT DESCRIPTION</b> The Arthur Ravenel, Jr. Bridge was the <b>longest cable-stayed bridge</b> on the continent and SCDOT's largest single transportation infrastructure project at the time of construction, <b>spanning 1,546 feet across the Cooper River adjacent to Charleston's port</b>, considered the <b>busiest in all of the southeastern US</b>. <b>Over this navigable water channel, the main span has a horizontal clearance of 1,000 feet and vertical clearance of 186 feet to allow safe passage for marine traffic</b>. The cable-stayed bridge is supported by two 573-foot-tall towers visible from 30 miles away and required 128 cable stays to suspend the structural steel girders and precast concrete deck panels that were erected using the balanced cantilevered method. It comprises four lanes of traffic in each direction with a median barrier and a 12-foot-wide bicycle/pedestrian path, and is flanked by more than a mile of eight-lane high-level approaches and significant interchanges in Mount Pleasant and Charleston.</p> <p>The bridge replaces the older John P. Grace Memorial Bridge and the Silas N. Pearman Bridge, built in 1929 and 1966 respectively, and has been designed to withstand earthquakes, Category 5 hurricanes and ship impacts. Located directly in the Cooper River, each main span tower and tower footing is protected from ship impact by an environmentally friendly man-made rock island with a sloping design where ships can ground themselves, lessening potential damage to the bridge, ship, and environment. The team placed 531,000 tons of quarry stone and 167,000 tons of armor stone to form a protective barrier around each of the towers. Eleven 10-foot-diameter drilled shafts plunge up to 230 feet through each of the main footings into highly compressible soft soils. In total, 430 shafts were drilled and amounted to approximately 81,700 vertical feet of drilled shafts.</p> <p><b>RELEVANCE TO PROJECT</b> ✓ <b>Completed 12 months ahead of schedule, a design-build bridge constructed over a navigable water channel and over or adjacent to sensitive wetlands.</b></p>	<ul style="list-style-type: none"> <li>✓ <b>Extensive maintenance of traffic</b> due to connections with US 17 along with connection and constructing a new interchange with I-26 in Charleston.</li> <li>✓ <b>Substantial relocation of existing utilities in a heavily populated, urban area</b> along with obtaining right-of-way and permits for three ramps on the high-level interchange.</li> <li>✓ <b>Innovative engineering solutions</b> include offset stay cable anchors to reduce main span tower moments; long continuous approach spans to minimize the number of bearings and joints; and elimination of almost all pile caps by using large-diameter drilled shafts framed directly into pier columns.</li> <li>✓ Environmental innovative resolutions included special protection of the habitats of migratory birds and Loggerhead Sea Turtles, tree relocations, the planned use of demolished bridge material for off-shore artificial reefs and <b>impacting less than one acre of wetlands — a remarkable feat for a project of this magnitude</b></li> <li>✓ <b>Exceeded the project DBE goal</b> of 9.5% with an actual usage of 10%.</li> <li>✓ At peak of construction, over 600 employees, many of whom were local residents and unskilled construction workers, were trained and provided a two-week training course to teach job readiness skills and safety to unemployed, underemployed, minorities, females, and otherwise disadvantaged residents</li> <li>✓ <b>Public relations and community outreach were critical to this project</b> and many programs have been implemented to assist and involve the community.</li> <li>✓ <b>Sixteen national awards received</b> for this project including the American Road and Transportation Builders Association – Globe Award (Environmental) for Bridge, 2005, and the American Institute of Steel Construction – National Prize Bridge Award, 2005</li> </ul> <p><b>VALUE-ADDED</b> <b>Challenge:</b> The existing bridge spanned a shipping lane with a history of ship collisions so the new design had to withstand a major accident. Additionally, it was located in an area prone to strong storms and hurricanes along with the lesser threat of seismic activity. The new Arthur Ravenel, Jr. Bridge was <b>designed and built to withstand any shipping vessel impact, as well as Category 5 hurricanes and major earthquakes</b> like the one that decimated the city in 1886. However, during construction, it needed additional reinforcement. Even a small storm could have caused cracks in the towers if hit during construction.</p> <p><b>Solution:</b> To prevent cracking and maintain the safety of the structure, the bridge was tied down during severe weather. Large, temporary ducts were placed in the footing of the</p>	 <p>bridge. Large cables were then placed — able to resist up to 600 tons of force — through these ducts and attached them to the bridge deck. The cables crisscrossed and provided lateral stability to the bridge. Still, the ducts alone were not enough to fully stabilize the bridge in severe weather, so the team also installed vertical cables farther from the towers of the bridge. Because these vertical cables could not be placed in the main shipping channel, the team had to place additional cables on the back span of the bridge and offset huge forces of these cables by placing large counterweights on the main span side of the towers. By doing this, the team provided additional bridge stability without affecting shipping traffic.</p> <p><b>Challenge:</b> To construct a project of this magnitude, keeping the master project schedule running smoothly was of paramount importance. A delay in the high-level approach could mean a delay in constructing the cable stay bridge. The design-build approach necessitated an ability to foresee how changes in one project would impact the others and then make the necessary adjustments to stay on course.</p> <p><b>Solution:</b> Primavera, an integrated construction management solution, kept the project on schedule and effectively managed the disparate project elements. Additionally, best practices were implemented to allow on-time delivery of the first four lanes, and then the final delivery of the rest of the bridge two months later, a year ahead of schedule. For example, we implemented a change management process to allow the design-build teams of each of the five projects to work together effectively and efficiently along with continuous collaboration with stakeholders.</p>
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**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>Washington Bypass</b>  Location: <b>Washington, NC</b> (Bridge)	Name: AECOM	Name of Client/ Owner: <b>North Carolina Department of Transportation (NCDOT)</b> Phone: <b>877-368-4968</b> Project Manager: <b>B. Ed Eatmon</b> Phone: <b>252-439-2800</b> Email: <b>beatmon@ncdot.gov</b>	11/2010	3/2010 Actual	\$192,000	\$199,000 (Owner Directed Changes to Scope of Work)	\$119,900

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. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

**ROLE AND SCOPE OF WORK**

As the lead joint venture partner, Flatiron managed the construction of the new \$192 million 6.8-mile lane Highway 17 Bypass around Washington and Chocowinity, N.C. The new bypass was **completed eight months early and was the largest construction contract ever awarded by NCDOT at the time of bid.** The project consisted of constructing a four-lane new location freeway with two interchanges and six bridges, including the 2.8-mile-long bridge over the Tar River and its adjoining environmentally sensitive wetlands. Additional scope of work included drainage, erosion control, signing, traffic control, signals, and right-of-way acquisition. To further reduce environmental disturbances, all operations were performed without the use of temporary access trestles.

**PROJECT DESCRIPTION**

The project included **construction of a three-mile bridge over the Tar River and environmentally sensitive wetlands.** To ensure minimal disturbance to the surrounding environment, **Flatiron developed innovative construction methods and utilized a patented variation of the top-down construction technique.** This span-by-span construction method used the newly constructed permanent structure for personnel access and material deliveries. The process consisted of self-contained gantries capable of performing all tasks associated with the bridge construction, including driving the precast piles, building the bent caps, erecting the 120-foot-long precast girders and pouring the deck. Top-down construction, a commonly used construction method worldwide, was improved and customized for the portions of the new Tar River Bridge over wetlands. The new method **significantly reduced temporary impacts on wetlands beneath and around the new bridge,** and allowed these areas to recover more quickly than if they had been covered by a temporary work bridge that would have been necessary with conventional construction methods. It also **allowed an accelerated construction schedule in which the team completed the project eight months early.**

The main bridge was divided into two work segments, north and south of the Tar River. The now-patented process consisted of two self-contained gantries capable of performing all the tasks associated with the bridge construction, including driving 124-foot-long precast piles, erecting 50-ton bent caps, erecting 121-foot-long precast girders, and supporting deck pouring operations. The two self-launching 594-foot-long gantries, each weighing about 750 tons, worked simultaneously from each end of the bridge toward the middle of the structure.

As a span was completed and the deck was cured, the gantry was launched ahead to begin the pile driving on the next span. Each system was designed to be a totally self-contained bridge-building machine. It was capable of driving piles, erecting the bent caps, erecting the girders, and pouring the deck.

**RELEVANCE TO PROJECT**

- ✓ **Lead joint venture partner for a design-build bridge with a vertical clearance of 45 feet over a 2,000-foot navigable water channel**
- ✓ **Completed eight months early with no environmental violations**
- ✓ **Innovative patented, proprietary top-down construction technique to minimize footprint over wetlands**
- ✓ Required utility relocation, permitting, and right-of-way acquisition
- ✓ **Exceeded the project DBE goal of 8.8% with an actual usage of 9.7%**
- ✓ **Ten national awards received** for this project including the American Road and Transportation Builders Association - Globe Award Honorable Mention, 2011, and the Associated General Contractors of America - Aon Build America Award, 2011

**VALUE-ADDED**

**Challenge:** Both design and construction of the 2.8-mile-long, four-lane bridge structure over the Tar River and environmentally sensitive wetlands proved to be challenging. Additionally, this region is often in the path of hurricanes that land on the North Carolina Coast.

**Solution:** **A new and innovative top-down construction approach using a unique overhead gantry dramatically reduced impacts on more than 14 acres of wetlands and accelerated the construction schedule** when compared with conventional construction techniques. This dramatic reduction in wetland disturbance was warmly embraced by NCDOT, the US Army Corps of Engineers, NC Division of Water Quality, NC Department of Natural Resources, US Coast Guard, and other environmental agencies during the permitting process. **The world's first application of the pile driving operation from an erection gantry is the most unique feature of the system** and the essential element that truly eliminated the need for equipment and temporary access trestles and ground work in the fragile wetlands.

A pair of 592-foot-long, 750 ton, custom-built gantries, one at each end of the bridge working toward the middle of the bridge structure, built the entirety of the structure from the



top down. The gantries were manufactured by DEAL and Birmingham under direction from Flatiron. The self-launching truss system performed the complete sequence of construction activities — from driving 30-inch square pre-stressed concrete piling to setting precast post-tensioned bent caps and 72-inch modified Bulb-T girders to handing materials for construction of the cast-in-place concrete deck. Construction activities occurred simultaneously across three spans (typically 120 feet in length) in an assembly line progression. As a span is completed and deck cured, the gantry is launched ahead to begin the pile driving on the next span.

Additionally, the bridge was designed to withstand incredible loads far greater than normal traffic service load — from the construction activities to storm surge and 100 mph from hurricane events. This design allowed construction activities to proceed normally until wind speeds reached 45 mph, at which time the gantry was secured in place in a short-term out-of-service condition. If wind speeds exceeded 64 mph, the gantry was retracted to a position over a completed span and securely anchored to the deck. This section of the Tar River is also subject to tidal action and the potential scour from storm surge intensified the loading to the substructure elements.



**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>I-405 Tolloed Express Lanes</b> Location: <b>Kirkland, Washington</b> (Roadway)	Name: URS Corporation	Name of Client/ Owner: <b>Washington State Department of Transportation (WSDOT)</b> Phone: <b>360-705-7000</b> Project Manager: <b>Lisa Hodgson</b> Phone: <b>206-437-7242</b> Email: <b>hodgsol@wsdot.wa.gov</b>	9/30/15	9/30/15 Actual	\$155,501	\$158,000 (Owner Directed Changes to Scope of Work)	\$158,000

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. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<p><b>ROLE AND SCOPE OF WORK</b> As the Prime Contractor, Flatiron widened and installed express toll lanes from Bellevue to Lynnwood, Washington, on Interstate 405 (I-405), a major artery running along the east side of Lake Washington near Seattle. With an <b>average of 800,000 trips made every day, the \$158 million design-build project relieved congestion along 17 miles of the interstate by adding tolling infrastructure and an additional lane in each direction.</b> Crews also <b>constructed a braided ramp bridge</b> to separate vehicles entering and exiting I-405 at the interchange with State Route 522, further easing congestion and increasing safety. Other work included a new Intelligent Transportation System (ITS) network, <b>widening and retrofitting an existing bridge, advanced storm water treatment systems,</b> adding noise walls, upgrading barriers, and resurfacing much of the existing freeway.</p> <p><b>PROJECT DESCRIPTION</b> To deliver the 17-mile portion of I-405, Flatiron converted High Occupancy Vehicle lanes to High Occupancy Toll (HOT) lanes and <b>widened the interstate to add two HOT lanes in each direction</b> along a portion of the project. Work included <b>one major new bridge structure at an interchange, significant drainage,</b> paving, milling and overlaying the entire existing facility, and constructing the complete ITS backbone and electrical illumination system. Work also included noise walls, retaining walls, landscaping, <b>three mitigation sites</b> (streambed and two wetlands), and ADA improvements (curve ramps and sidewalks). Additionally, <b>protections were put in place for every utility except one (only one relocation required) and our team was responsible for managing those agreements and designs.</b> The project team also <b>earned 98% of a \$600,000 environmental incentive payment, as we worked to maintain water quality throughout the project.</b></p> <p>The <b>additional tolled express lanes along the 17-mile stretch required extensive traffic management.</b> First, Flatiron shifted traffic to the outside and rebuilt the inside lanes, followed by a traffic shift to the middle to reconstruct and widen the outside lanes. Phase 3 included striping and served as the pre-rollout configuration for a period of 270 days. Flatiron <b>coordinated with the toll vendor, who during this pre-rollout phase used specialized equipment to run a series of tests over a 120-day period.</b> Once the toll system passed the required tests, <b>Flatiron and WSDOT performed a live rollout, during a 54-hour weekend,</b> during which all 35 miles of roadway were restriped, the buffer zone was installed, and the tolling system was turned on. Additionally, the project required work at</p>	<p>two bridge sites. The first required <b>widening of an existing mainline bridge</b> over a median to accommodate <b>three girder lines of widening and a seismic retrofit underneath interchange ramp.</b> Flatiron phased this part of the project by shifting traffic toward <b>the entire northbound mainline bridge. All of the bridge work was performed under live traffic.</b> An interim milestone for toll infrastructure completion was included for this project. When WSDOT's procurement of the I-405 toll vendor was delayed, <b>Flatiron worked with WSDOT to mitigate these delays while still achieving the important toll infrastructure completion milestone.</b></p> <p>The project required installation of tolling and ITS infrastructure, including toll cabinets, toll reader boxes, and toll gantries to accommodate 21 new toll zones. Each toll zone required two gantries, 30 feet apart. The gantries were mono-tube steel structures on drilled shafts. Work also included the conduit system that connected those gantries to the reader and toll cabinets, including installation of 30 CCTV cameras as part of the ITS system, as well as live-power transformers and a separate fiber optic communication system.</p> <p><b>RELEVANCE TO PROJECT</b></p> <ul style="list-style-type: none"> <li>✓ <b>Prime Contractor for a design-build project</b> comprising tolled express lanes, widening of bridges, a new bridge structure, ITS, and advanced storm water treatment systems.</li> <li>✓ <b>Complex MOT requiring more than 20 closures per night</b> with up to six MOT crews and <b>development of more than 200 individual Traffic Control and Detour Plans.</b></li> <li>✓ <b>Implementation of a comprehensive Environmental Compliance Monitoring Program</b> that included noise and air quality monitoring; permitting, three separate mitigation sites; erosion/sedimentation control; water quality monitoring; and wildlife management.</li> <li>✓ <b>Close coordination with multiple stakeholders</b> including WSDOT, a separate tolling vendor, Cities of Bellevue, Kirkland, Bothell and Woodinville, utility owners in each city, the metro, and tolling authority.</li> </ul> <p><b>VALUE-ADDED</b> <b>Challenge:</b> The owner's concept specified taking an existing on-ramp (where there was also mainline traffic) to get to an interchange, and a braided ramp design that required a large cut into a known slide zone, creating a large risk.</p>	  <p><b>Solution:</b> An alternative technical concept (ATC) was proposed at the second bridge site to mitigate two issues by reducing night work and excavation of a known slide zone. The ATC adjusted traffic movements to remove live traffic from that work zone and built a temporary loop ramp on the other side. This eliminated night work and minimized noise impacts to a condo complex 10 feet away from the construction site. Additionally, geometry of the braided ramp was redesigned, eliminating a 200,000-yard cut in the slide zone. Not only did this reduce that slide zone risk, but it also enabled the team to mine MSE wall backfill onsite, changing a 600,000-yard off-haul job into a balanced project. One of the noise walls was also eliminated by using an earthen berm instead, contributing to the earthwork balance on the project.</p> <p><b>Challenge:</b> A toll vendor was not selected until five months after design began—indeed, the design and construction team had already completed half of the design and begun construction by that point. The chosen vendor's technology had limitations, including a maximum allowable distance from the toll cabinet to the toll gantry.</p> <p><b>Solution:</b> The Flatiron team redesigned some of these elements and reconstructed part of the project to accommodate limitations, including moving gantries and toll cabinets. Since construction had already begun, the design was broken into smaller packages so that design could keep up with construction. <b>The team was able to accommodate this relatively large impact without any additional cost to the owner.</b></p>
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## 3.4.1b LEAD DESIGNER WORK HISTORY FORMS

**DRAGADOS USA**





**ATTACHMENT 3.4.1(c)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>95 Express Lanes Design-Build Segment 1</b>  Location: <b>Prince William and Stafford Counties (Roadway)</b>	Name: <b>Fluor-Lane 95 LLC</b>	Name of Client: <b>Virginia Department of Transportation (VDOT)</b> Phone: <b>571.483.2651</b> Project Manager: <b>Charlie Warriach, PE</b> Phone: <b>703.691.6740</b> Email: <b>H.S.Warraich@VDOT.Virginia.gov</b>	<b>February 2012</b>	<b>July 2015</b>	<b>\$691,147</b>	<b>\$726,194</b> (Owner Directed Changes to Scope of Work)	<b>\$12,000</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<p><b>Role and Scope of Work of Team Member:</b> HDR served as the lead designer for Segment 1 of the 95 Express Lanes design-build project which included the engineering design, plan development, and engineering coordination during construction for nine miles of two-lane reversible Express lanes within the existing interstate median. Office Locations where design work was performed include Vienna, VA; Virginia Beach, VA; Glen Allen, VA</p> <p><b>Project Description:</b> New ingress/egress points included two flyovers from the Express lanes to the southbound 95 general purpose lanes and one northbound slip ramp from 95 to the Express lanes. HDR provided design services for seven new bridges along the project corridor.</p> <p><b>Relevance to Project:</b></p> <table border="0"> <tr> <td>✓ Design-Build</td> <td>✓ Signs, Sign Structures, and Foundations</td> </tr> <tr> <td>✓ Roadways</td> <td>✓ Transportation Management Plan</td> </tr> <tr> <td>✓ Survey</td> <td>✓ Traffic Maintenance and Management</td> </tr> <tr> <td>✓ Structures and Bridges</td> <td>✓ Right-of-Way</td> </tr> <tr> <td>✓ Environmental</td> <td>✓ Utilities</td> </tr> <tr> <td>✓ Geotechnical</td> <td>✓ Stakeholder Coordination</td> </tr> <tr> <td>✓ Hydraulics</td> <td>✓ Public Hearing and Public Involvement</td> </tr> <tr> <td>✓ Stormdrain and SWM</td> <td>✓ Project Management and Coordination with other Active Construction Projects</td> </tr> <tr> <td>✓ Demolition of Structures</td> <td>✓ Within the Vicinity of the Project Site</td> </tr> <tr> <td>✓ Retaining Walls</td> <td>✓ Heavy interstate ADT</td> </tr> <tr> <td>✓ Traffic Control Devices</td> <td></td> </tr> </table> <p><b>Value Added by HDR to the Project:</b> Design efforts accounted for tight urban environment constraints and large volumes of traffic (AADT nearly 250,000). Segment 1 project included over 4.5 miles of new storm drainage pipe, analysis and design of stormwater management basins for water quality and quantity control. The scope also included the development of signing, lighting, pavement marking and sequence of construction/maintenance of traffic plans. HDR was responsible for the ITS design and</p>	✓ Design-Build	✓ Signs, Sign Structures, and Foundations	✓ Roadways	✓ Transportation Management Plan	✓ Survey	✓ Traffic Maintenance and Management	✓ Structures and Bridges	✓ Right-of-Way	✓ Environmental	✓ Utilities	✓ Geotechnical	✓ Stakeholder Coordination	✓ Hydraulics	✓ Public Hearing and Public Involvement	✓ Stormdrain and SWM	✓ Project Management and Coordination with other Active Construction Projects	✓ Demolition of Structures	✓ Within the Vicinity of the Project Site	✓ Retaining Walls	✓ Heavy interstate ADT	✓ Traffic Control Devices		<p>construction support that consisted of multiple subsystems including CCTV traffic surveillance cameras, toll and driver information DMS signs, video-based automatic incident detection cameras, etc. Segment 1 included nine miles of reversible Express Lanes in the 95 median. Ingress and egress included steel curve girder flyover ramps and the northbound entrance and southbound exit to the 29 mile facility. Gantries and gate systems were placed at strategic locations to accommodate the traveling public demand and provide a safe operation for high speed reversible traffic.</p> <p>HDR was also responsible for the ITS design and construction support that consisted of multiple subsystems including CCTV traffic surveillance cameras, toll and driver information DMS signs, microwave traffic detectors, video-based automatic incident detection cameras, emergency gate telemetry, express lane access gates, EZ-pass toll equipment, fiber optic communications, power distribution, and an emergency back-up power system.</p> <p><b>Roadway:</b> Project included design improvements within the existing median of heavily traveled 95. Design included horizontal and vertical alignment optimization, the balancing of earthwork and minimization of environmental impacts. Signing, lighting and pavement marking plans were also included.</p> <p><b>Stormwater Management/Drainage Design:</b> The Project included over 4.5 miles of new storm drainage pipe, 15 stormwater management ponds and surface drainage system for 9 miles of new roadway. One strategy employed by HDR included the use of manufactured BMP devices. HDR worked with VDOT to size and locate these devices in order to mitigate additional ROW impacts.</p> <p><b>Structural:</b> A large portion of the bridge work for this project included work in the interstate median. The seven new bridges included two steel curved girders, three single span bridges with steel girders, and two two-span steel girder bridges. Foundation designs included both driven piles and drilled shafts. Additional structural design was done for nine retaining walls, over four miles of sound walls, as well as signs and toll gantries.</p>	<p><b>Maintenance of Traffic/Public Safety:</b> MOT along this heavily traveled and congested interstate corridor was critical (AADT of nearly 250,000). The 95 Express Lanes project presented numerous work zone ingress/ egress challenges and very tight work areas due to the heavy traffic and median work zone conditions. The Team mitigated this challenge by working with construction and engineering personnel to devise optimal MOT schemes and develop efficient construction sequencing.</p> <p><b>Right-of-Way, Utility Relocation and Coordination:</b> HDR was responsible for the right-of-way acquisition, utility relocation design and coordination for the entire 29 mile corridor. This also included close coordination with U.S. Marine Corps Base at Quantico.</p>	
✓ Design-Build	✓ Signs, Sign Structures, and Foundations																								
✓ Roadways	✓ Transportation Management Plan																								
✓ Survey	✓ Traffic Maintenance and Management																								
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✓ Retaining Walls	✓ Heavy interstate ADT																								
✓ Traffic Control Devices																									



**ATTACHMENT 3.4.1(c)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-495/Dulles Toll Road Interchange Design-Build</b>  Location: <b>Fairfax County (Roadway)</b>	Name: <b>Fluor-Lane LLC</b>	Name of Client: <b>Virginia Department of Transportation</b> Phone: <b>703.259.0243</b> Project Manager: <b>Larry Cloyd, PMP</b> Phone: <b>703.313.6689</b> Email: <b>Larry.cloyd@VDOT.Virginia.gov</b>	<b>January 2010</b>	<b>November 2012</b>	<b>\$67,000</b>	<b>\$67,000</b>	<b>\$3,221</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<p><b>Role and Scope of Work of Team Member:</b> HDR served as lead designer on this project which included engineering design, plan development, and engineering services during construction. The project design was performed out of HDR's offices in Norfolk, VA; Glen Allen, VA; Vienna, VA, Jacksonville FL, Pittsburgh, PA. The Metropolitan Washington Airports Authority (MWAA), a major stakeholder to the I-495 Express Lanes Project and Owner of the land in the vicinity of the interchange, required modifications to this interchange to provide direct connection from the Dulles International Airport Access Highway (DIAAH) to I-495 as part of the I-495 Express Lanes design-build project. HDR evaluated the near and long term improvements required to alleviate the merge and weave conditions to determine modifications required to the Project, which was in design and construction at the time, as well as considerations for the future Metro Rail planned by MWAA in the median of the DIAAH corridor.</p> <p><b>Project Description:</b> HDR prepared the final design for the improvements to the DIAAH, Dulles Toll Road, and I-495 interchange. The Project included modifications to the Dulles Toll Road ramp network to accommodate the I-495 Express Lanes; the relocation of approximately 1 mile of the eastbound DIAAH; and construction of approximately 1 mile of new ramp providing a direct connection for eastbound DIAAH to both northbound and southbound I-495. This new ramp construction included an 872' curved steel bridge crossing over the Dulles Toll Road with high MSE wall approaches. Geotechnical investigation and final design was completed in six months. One of the key challenges for this project was the special design of a barrier for the road close to the new bridge substructure. Design exception was obtained.</p> <p>Due to the complex roadway geometry, two straddle bent piers and two integral steel plate pier diaphragms were needed to clear the roadway below and support the structure above. Pier 2 has a 72' span steel box cross girder straddle bent. Pier 5 has a 64' span steel box cross girder straddle bent. Pier 1 and 6 use integral steel plate pier diaphragms to reduce the size of concrete pier cap for roadway clearance. The box girders were designed with future jacking and inspection access requirements. HDR also oversaw all engineering issues during construction.</p>	<p><b>Relevance to Project:</b></p> <ul style="list-style-type: none"> <li>✓ Design-Build</li> <li>✓ Roadways</li> <li>✓ Survey</li> <li>✓ Structures and Bridges</li> <li>✓ Environmental</li> <li>✓ Geotechnical</li> <li>✓ Hydraulics</li> <li>✓ Stormdrain and SWM</li> <li>✓ Demolition of Structures</li> <li>✓ Guardrail</li> <li>✓ Retaining Walls</li> <li>✓ Traffic Control Devices</li> <li>✓ Signs, Sign Structures, and Foundations</li> <li>✓ Transportation Management Plan</li> <li>✓ MOT under heavy ADT</li> <li>✓ Managed Lanes</li> <li>✓ Utilities</li> <li>✓ Stakeholder Coordination</li> <li>✓ Public Hearing and Public Involvement</li> <li>✓ QA/QC</li> <li>✓ Construction Engineering and Inspection</li> <li>✓ Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site</li> </ul> <p><b>Value Added by HDR to the Project:</b> <i>Maintenance of Traffic Plan.</i> The maintenance of traffic plan not only had to consider the heavy traffic demand along the Dulles Toll Road, but also needed to consider the active construction work zones for the I-495 Express Lanes project. Constant coordination during design was required with both the Contractor and the other design consultant to ensure a seamless integration of this project and an effective MOT Plan. The plan included temporary connections between the DIAAH and the DTR roadways as well as utilizing portions of the new ramp systems under construction for the I-495 Express Lanes.</p>	<p><i>Hydraulics.</i> The hydraulic design for the Project included both open and closed system storm sewer conveyance design. Stormwater management was provided through a joint design with the I-495 Express Lanes project. Like the roadway design, constant coordination was required to integrate this project with the active construction project of the I-495 Express Lanes.</p> <p><i>Roadway.</i> Associated with the roadway design, the Project also included signing and pavement marking and lighting improvements associated with the interchange modification.</p> <p><i>Geotechnical Design.</i> Associated with the bridge design, the HDR team provided geotechnical investigation and final design for the new ramp roadway and structure. The geotechnical investigation began in January 2010 and was conducted during one of the worst winters in the DC area in decades. HDR provided full time field staff to orchestrate the field work during this challenging time. As lab tests were performed on the 30 soil borings, HDR provided immediate, phased geotechnical design data to the structural designers to allow for an accelerated structural design schedule of four months. The high MSE walls at one of the bridge ends was located over poor soils and required innovated stabilization and settlement techniques that were both cost effective and allowed for fast construction. In addition to MSE retaining walls, soil nail walls were required to convert the existing sloped abutments of SB I-495 over the DTR to vertical abutments, allowing a wider roadway section to pass underneath.</p>	
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**ATTACHMENT 3.4.1(c)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>Herbert C. Bonner Bridge Replacement</b>  Location: <b>Outer Banks, North Carolina</b> (Bridge)	Name: <b>PCL Civil Constructors</b>	Name of Client: <b>North Carolina Department of Transportation (NCDOT)</b> Phone: <b>704.983.4171</b> Project Manager: <b>David Hering, LG, PE</b> Phone: <b>919-707-6617</b> Email: <b>dithering@ncdot.gov</b>	<b>July 2011</b>	<b>May 2017</b>	<b>\$217,000</b>	<b>\$246,000</b> (Owner Directed Changes to Scope of Work)	<b>\$16,718</b>
<p>h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.</p>							
<p><b>Role and Scope of Work of Team Member:</b> HDR is the Lead Designer for PCL Civil Constructors, the design-build team working for the North Carolina Department of Transportation (NCDOT), on the 2.8-mile replacement of the Herbert C. Bonner Bridge in Dare County. As Lead Designer, HDR provided all roadway, geotechnical and bridge design services, as well as environmental permitting services. Office location(s) where the design work was performed include Vienna, VA with support from Raleigh, NC; Charlotte, NC; Charleston, SC; Tampa, FL; Pittsburgh, PA; Newark, NJ; Omaha, NE; Kansas City, MO; Chicago, IL</p> <p><b>Project Description:</b> The existing bridge carries North Carolina Highway 12 across the Oregon Inlet from Bodie Island to Hatteras Island, part of the North Carolina Outer Banks barrier island system, and lies within both the Cape Hatteras National Seashore and the Pea Island National Wildlife Refuge. It is the only access route to and from Hatteras Island and is a critical hurricane evacuation route. Over 50 years old, the bridge suffers from severe deterioration and scour problems. The replacement bridge will provide a new link to Hatteras Island with a 100-year service life.</p> <p><b>Project Relevance:</b></p> <ul style="list-style-type: none"> <li>✓ Coastal Condition</li> <li>✓ Navigation Channel</li> <li>✓ Similar type of geological condition</li> <li>✓ Design-Build</li> <li>✓ Roadways</li> <li>✓ Survey</li> <li>✓ Structures and Bridges</li> <li>✓ Environmental</li> <li>✓ Geotechnical</li> <li>✓ Hydraulics</li> <li>✓ Stormdrain and SWM</li> <li>✓ Demolition of Structures</li> <li>✓ Retaining Wall</li> </ul>		<p><b>Value Added by HDR to the Project:</b></p> <p><i>A Tough Environment.</i> The project site poses extreme challenges to both the designers and the contractor. The Oregon Inlet is highly dynamic with severe scour and significant changes in bathymetry from week to week, in addition to high winds and swift currents. The project involved extensive, complex 2-D hydraulic modeling, scour analysis and physical model scour testing. More than 50 new soil borings were obtained, in addition to 50 or more soil borings previously obtained by NCDOT. For such a long structure in a complex and challenging site, the Design Team chose to divide the bridge into five "regions" and tailored the design to the unique subsurface and scour conditions of each region. The superstructure will be highlighted by a 3,550-foot-long, 11-span continuous precast, post-tensioned segmental concrete box girder structure with multiple 350-foot navigation spans bordered by extensive low-level precast, prestressed concrete girder approach spans. The segmental concrete box girder and spans will be built using the balanced cantilever construction method. Numerous construction issues will be considered in the design process, including jacking of the superstructure to help mitigate the effects of the long-term creep and shrinkage strains that will occur in such a long continuous unit, minimizing loads on the columns foundations.</p> <p><i>A Solid Foundation.</i> While the scale of the superstructure is massive in and of itself, it is the substructure and foundation system for the bridge that is most impressive. Three different substructure and foundation systems were tailored specifically to the varying scour profiles and subsurface conditions of the site. Much of the low-level approach structures are founded on a totally precast pile bent structure system featuring vertical 54-inch-diameter precast cylinder piles with a precast concrete bent cap. The high-level navigation spans will be supported by precast, post-tensioned hollow concrete box columns founded on multiple 36-inch square precast concrete piles with a cast-in-place concrete pile cap. Between the low-level approach spans and the high-level navigation spans are transition units where two-column bents with precast, post-tensioned solid concrete columns and precast concrete bent caps are also founded on multiple 36-inch square precast concrete piles with a cast-in-place concrete pile cap. The extensive use of precast concrete structural elements provided the benefits of being economical, durable and easily constructed — all key criteria for a design</p>		<p>build project being built in such a harsh marine environment. Piles will extend as deep as 140 feet below the water surface to address the potential for up to 84 feet of scour, but will need to be installed through as much as 140 feet of soil during the non-scoured construction conditions. Highly complex soil-structure interaction models of all the foundations were developed using sophisticated specialty software requiring a high degree of interaction between the structural and geotechnical engineers. The Design-Build Team has also developed creative solutions to reduce both temporary and permanent environmental impacts to the pristine natural coastline at the site.</p> <p><i>A Collaborative Effort.</i> The Project Team took a truly collaborative, multi-disciplinary approach to address all of the design challenges. The final bids testify that the team clearly provided the best value solution to NCDOT for a challenging, large-scale and high-profile project. After a lawsuit delayed the start of construction by several years, the replacement of the Herbert C. Bonner Bridge on the North Carolina Outer Banks is back on track.</p>			



# 3.5 LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM

**DRAGADOS USA**



**ATTACHMENT 3.5**

**(Addendum No. 1 Form 3.5)**

**LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM**

The following information will be used to understand and evaluate the Offeror's past performance on safety in accordance with RFQ Section 3.5.

<b>Company Name:</b>	<b>Flatiron Constructors, Inc.</b>	<b>Date:</b>	<b>10/6/16</b>
<b>Number of Employees:</b>	<b>3,300</b>		
<b>Workers' Compensation Experience Modification Ratio (EMR) and/or Experience Modification Factor (EMF)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>3.5.1.1</b> List your company's Worker's Compensation EMR/EMF calculated by National Council on Compensation Insurance, Inc. or other similar advisory organization or rating bureau for the past 3 years.	<b>0.76</b>	<b>0.71</b>	<b>0.72</b>
<b>Accident and Illness</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>3.5.1.2</b> List your company's recordable injuries and illnesses rate for the past 3 years.	<b>2.19</b>	<b>1.91</b>	<b>2.04</b>
<b>3.5.1.3</b> List your company's days away from work injury incident rate for the past 3 years.	<b>0.41</b>	<b>0.32</b>	<b>0.23</b>
<b>3.5.1.4</b> Submit a completed Occupational Safety and Health Administration (OSHA) Form 300A, Summary of Work-Related Injuries and Illnesses, for the past three (3) years.			

# Summary of Work-Related Injuries and Illnesses

**Note: You can type input into this form and save it.**  
 Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader.

Year 20 13



U.S. Department of Labor  
 Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases			
Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	10	16	24
(G)	(H)	(I)	(J)

Number of Days	
Total number of days away from work	Total number of days of job transfer or restriction
777	872
(K)	(L)

Injury and Illness Types			
Total number of ... (M)			
(1) Injuries	50	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

**Establishment information**

Your establishment name Flatiron Construction

Street -Corporate Wide Report-

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Industry description (e.g., *Manufacture of motor truck trailers*)  
Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)  
 \_\_\_\_\_

OR \_\_\_\_\_

North American Industrial Classification (NAICS), if known (e.g., 336212)  
2373

**Employment information** (If you don't have these figures, see the Worksheet on the next page to estimate.)

Annual average number of employees 2371

Total hours worked by all employees last year 4931925

**Sign here**

**Knowingly falsifying this document may result in a fine.**

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature] VP-EHS  
 Company executive Title

Phone 303-485-4050 Date 09/26/16

**Save Input**

# Summary of Work-Related Injuries and Illnesses

**Note: You can type input into this form and save it.**  
 Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader.

Year 20 14



**U.S. Department of Labor**  
 Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	9	29	15
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
529	2161
(K)	(L)

### Injury and Illness Types

Total number of ... (M)			
(1) Injuries	53	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment information

Your establishment name Flatiron Construction

Street -Corporate Wide Report-

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Industry description (e.g., *Manufacture of motor truck trailers*)

Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)

OR \_\_\_\_\_

North American Industrial Classification (NAICS), if known (e.g., 336212)

2372

**Employment information** (If you don't have these figures, see the Worksheet on the next page to estimate.)

Annual average number of employees 2666

Total hours worked by all employees last year 5545849

**Sign here**

**Knowingly falsifying this document may result in a fine.**

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature] VP-EHS  
 Company executive Title

Phone 303-485-4050 Date 09/26/16

**Save Input**

**Note: You can type input into this form and save it.**  
 Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader.



## Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases			
Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	7	34	20
(G)	(H)	(I)	(J)

Number of Days	
Total number of days away from work	Total number of days of job transfer or restriction
732	2169
(K)	(L)

Injury and Illness Types			
Total number of . . . (M)			
(1) Injuries	61	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment information

Your establishment name Flatiron Construction

Street -Corporate Wide Report-

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Industry description (e.g., *Manufacture of motor truck trailers*)

Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)

OR \_\_\_\_\_

North American Industrial Classification (NAICS), if known (e.g., 336212)

2373

**Employment information** (If you don't have these figures, see the Worksheet on the next page to estimate.)

Annual average number of employees 2868

Total hours worked by all employees last year 5966888

### Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature] VP-EHS  
 Company executive Title

Phone 303-485-4050 Date 09/26/16

**Save Input**

**ATTACHMENT 3.5**

**(Addendum No. 1 Form 3.5)**

**LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM**

The following information will be used to understand and evaluate the Offeror's past performance on safety in accordance with RFQ Section 3.5.

<b>Company Name:</b>	<b>Dragados USA, Inc.</b>	<b>Date:</b>	<b>10/6/16</b>
<b>Number of Employees:</b>	<b>705</b>		
<b>Workers' Compensation Experience Modification Ratio (EMR) and/or Experience Modification Factor (EMF)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>3.5.1.1</b> List your company's Worker's Compensation EMR/EMF calculated by National Council on Compensation Insurance, Inc. or other similar advisory organization or rating bureau for the past 3 years.	<b>0.90</b>	<b>1.09*</b>	<b>0.90</b>
*The 12/1/2014-15 NCCI rating is over 1.00 due strictly to adverse claims in a Florida wrap up program for I-595 Project during the calendar years 2011 and 2012. We expect to see continued reductions in the rating going forward as these older claims age out of the experience period.			
<b>Accident and Illness</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>3.5.1.2</b> List your company's recordable injuries and illnesses rate for the past 3 years.	<b>2.28</b>	<b>6.66</b>	<b>10.45</b>
<b>3.5.1.3</b> List your company's days away from work injury incident rate for the past 3 years.	<b>1.63</b>	<b>1.43</b>	<b>0.48</b>
<b>3.5.1.4</b> Submit a completed Occupational Safety and Health Administration (OSHA) Form 300A, Summary of Work-Related Injuries and Illnesses, for the past three (3) years.			

# OSHA's Form 300A (Rev. 01/2004) Summary of Work-Related Injuries and Illnesses

Year 2013



U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	5	0	2
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
265	0
(K)	(L)

### Injury and Illness Types

Total number of...	(M)	(N)	(O)
(1) Injury	7	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

**Establishment information**

Your establishment name Dragados USA (cumulative)

Street 810 Seventh Avenue, 9th Floor

City New York State NY Zip 10019

Industry description (e.g., Manufacture of motor truck trailers)  
heavy Civil Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)  
\_\_\_\_

OR North American Industrial Classification (NAICS), if known (e.g., 336212)  
2 3 7 2 1 0

**Employment information**

Annual average number of employees 290

Total hours worked by all employees last year 613,139.00

Sign here 

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Mike O'Neil  
Company executive

914-413-2656  
Phone

Corbett  
Title

11/29/15  
Date

# OSHA's Form 300A (Rev. 01/2004)

## Summary of Work-Related Injuries and Illnesses

Year 2014



U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	3	3	11
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
30	137
(K)	(L)

### Injury and Illness Types

Total number of... (M)	
(1) Injury	13
(2) Skin Disorder	1
(3) Respiratory Condition	0
(4) Poisoning	0
(5) Hearing Loss	0
(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment information

Your establishment name Dragados USA (cumulative)

Street 810 Seventh Avenue, 9th Floor

City New York State NY Zip 10019

Industry description (e.g., Manufacture of motor truck trailers)  
Heavy Civil Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)  
\_\_\_\_\_

OR North American Industrial Classification (NAICS), if known (e.g., 336212)  
2 3 7 2 1 0

### Employment information

Annual average number of employees 202

Total hours worked by all employees last year 420,270.00

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Mike [Signature]  
Company executive

914-413-2656  
Phone

[Signature]  
Title

11/29/13  
Date





# APPROVED JOINT VENTURE BIDDING AGREEMENT

**DRAGADOS USA**



---

**Subject:** FW: Your assigned Joint Venture # is JV079

**From:** Prequalification (VDOT) [<mailto:Prequalification@VDOT.Virginia.gov>]

**Sent:** Monday, October 03, 2016 12:22 PM

**To:** [rbarreda@dragados-usa.com](mailto:rbarreda@dragados-usa.com)

**Cc:** Heredero Rodriguez, Gabriel Santiago; DePorter, Katie

**Subject:** Your assigned Joint Venture # is JV079

Dear Dragados USA, Inc.  
And Flatiron Constructors, Inc.

Thank you for submitting the Joint Venture agreement to the Prequalification Office.  
We have processed the paperwork and the Joint Venture: Dragados|Flatiron High Rise JV and is assigned the # **JV079**.

Please feel free to contact me if there are any concerns.

Thank-you

*Suzanne Lucas*, CAPM

State Prequalification Supervisor  
Construction Division  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219  
(804)-786-2941

Email: [Prequalification@VDOT.Virginia.gov](mailto:Prequalification@VDOT.Virginia.gov)

Form **SS-4**  
(Rev. January 2010)  
Department of the Treasury  
Internal Revenue Service

### Application for Employer Identification Number

(For use by employers, corporations, partnerships, trusts, estates, churches, government agencies, Indian tribal entities, certain individuals, and others.)

OMB No. 1545-0003

EIN  
**61-1802910**

▶ See separate instructions for each line. ▶ Keep a copy for your records.

1 Legal name of entity (or individual) for whom the EIN is being requested <b>DRAGADOS FLATIRON HIGH RISE JV</b>		3 Executor, administrator, trustee, "care of" name	
2 Trade name of business (if different from name on line 1)		5a Street address (if different) (Do not enter a P.O. box.)	
4a Mailing address (room, apt., suite no. and street, or P.O. box) <b>810 7TH AVE FL 9</b>		5b City, state, and ZIP code (if foreign, see instructions)	
4b City, state, and ZIP code (if foreign, see instructions) <b>NEW YORK, NY 10019</b>		6 County and state where principal business is located <b>NEW YORK, NY</b>	
7a Name of responsible party <b>DRAGADOS USA INC</b>		7b SSN, ITIN, or EIN <b>20-3902316</b>	
8a Is this application for a limited liability company (LLC) (or a foreign equivalent)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		8b If 8a is "Yes," enter the number of LLC members <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8c If 8a is "Yes," was the LLC organized in the United States? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
9a Type of entity (check only one box). Caution: If 8a is "Yes," see the instructions for the correct box to check.			
<input type="checkbox"/> Sole proprietor (SSN)		<input type="checkbox"/> Estate (SSN of decedent)	
<input checked="" type="checkbox"/> Partnership		<input type="checkbox"/> Plan administrator (TIN)	
<input type="checkbox"/> Corporation (enter form number to be filed) ▶		<input type="checkbox"/> Trust (TIN of grantor)	
<input type="checkbox"/> Personal service corporation		<input type="checkbox"/> National Guard <input type="checkbox"/> State/local government	
<input type="checkbox"/> Church or church-controlled organization		<input type="checkbox"/> Farmers' cooperative <input type="checkbox"/> Federal government/military	
<input type="checkbox"/> Other nonprofit organization (specify) ▶		<input type="checkbox"/> REMIC <input type="checkbox"/> Indian tribal governments/enterprises	
<input type="checkbox"/> Other (specify) ▶		Group Exemption Number (GEN) if any ▶	
9b If a corporation, name the state or foreign country (if applicable) where incorporated		State	Foreign country
10 Reason for applying (check only one box)			
<input checked="" type="checkbox"/> Started new business (specify type) ▶ <b>CONSTRUCTION</b>		<input type="checkbox"/> Banking purpose (specify purpose) ▶	
<input type="checkbox"/> Hired employees (Check the box and see line 13.)		<input type="checkbox"/> Changed type of organization (specify new type) ▶	
<input type="checkbox"/> Compliance with IRS withholding regulations		<input type="checkbox"/> Purchased going business	
<input type="checkbox"/> Other (specify) ▶		<input type="checkbox"/> Created a trust (specify type) ▶	
		<input type="checkbox"/> Created a pension plan (specify type) ▶	
11 Date business started or acquired (month, day, year). See instructions. <b>09-16-2016</b>		12 Closing month of accounting year <b>DECEMBER</b>	
13 Highest number of employees expected in the next 12 months (enter -0- if none). If no employees expected, skip line 14.		14 If you expect your employment tax liability to be \$1,000 or less in a full calendar year and want to file Form 944 annually instead of Forms 941 quarterly, check here. (Your employment tax liability generally will be \$1,000 or less if you expect to pay \$4,000 or less in total wages.) If you do not check this box, you must file Form 941 for every quarter. <input type="checkbox"/>	
Agricultural	Household	Other	
15 First date wages or annuities were paid (month, day, year). Note: If applicant is a withholding agent, enter date income will first be paid to nonresident alien (month, day, year) ▶			
16 Check one box that best describes the principal activity of your business.			
<input checked="" type="checkbox"/> Construction		<input type="checkbox"/> Health care & social assistance	
<input type="checkbox"/> Rental & leasing		<input type="checkbox"/> Wholesale-agent/broker	
<input type="checkbox"/> Transportation & warehousing		<input type="checkbox"/> Accommodation & food service	
<input type="checkbox"/> Real estate		<input type="checkbox"/> Wholesale-other	
<input type="checkbox"/> Manufacturing		<input type="checkbox"/> Retail	
<input type="checkbox"/> Finance & insurance		<input type="checkbox"/> Other (specify) ▶	
17 Indicate principal line of merchandise sold, specific construction work done, products produced, or services provided. <b>HIGHWAY</b>			
18 Has the applicant entity shown on line 1 ever applied for and received an EIN? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," write previous EIN here ▶			
Third Party Designee	Complete this section only if you want to authorize the named individual to receive the entity's EIN and answer questions about the completion of this form.		
	Designee's name	Designee's telephone number (include area code)	
	Address and ZIP code	Designee's fax number (include area code)	
Under penalties of perjury, I declare that I have examined this application, and to the best of my knowledge and belief, it is true, correct, and complete.		Applicant's telephone number (include area code)	
Name and title (type or print clearly) ▶ <b>FERNANDO GONZALEZ - CHIEF FINANCIAL OFFICER</b>		<b>(212) 779-0800</b>	
Signature ▶		Applicant's fax number (include area code)	
Date ▶ <b>9/16/16</b>		<b>(212) 764-8020</b>	

91-16-6  
201695340

For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

Cat. No. 15055N Form **SS-4** (Rev. 1-2010)

SEP 19 2016

A-108

RECEIVED BY IRS-EFAX 09/16/2016 3:19PM (GMT-05:00)

Submitted to:



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

Submitted by:

**DRAGADOS USA**

