







EXPRESSION OF INTEREST FOR WEST VIRGINIA PARKING GARAGE CONSULTING SERVICES Solicitation No. CEOI 0211

GSD1600000006

Department of Administration
Purchasing Division
2019 Washington Street East

Charleston, WV 25305-0130

Attn: Laura Hooper, Senior Buyer

11/12/15 09:15:28 WW Purchasing Division

WDP & Associates Consulting Engineers, Inc.

Charlottesville, Manassas, Blacksburg, VA | New York, NY | Myrtle Beach, SC

(434) 245-6117 | www.wdpa.com





Purchasing Divison 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

State of West Virginia Centralized Expression of Interest

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 Proc Type: Central Contract - Fixed Amt

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SED RECEIVED LOCATION

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

VENDOR

Vendor Name, Address and Telephone Number:

WDD & Associates Consulting Engineers, Inc.

335 Greenbrie Drive

Suite 205

Charlottesville, VA 22901

(434) 245-6117

FOR INFORMATION CONTACT THE BUYER

Laura E Hooper (304) 558-0468

laura.e.hooper@wv.gov

gnature X

FEIN# 54-1763349

DATE

11/10/15

All offers subject to all terms and conditions contained in this solicitation

Page: 1

FORM ID: WV-PRC-CEOI-001



November 10, 2015

Ms. Laura Hooper, Senior Buyer Department of Administration Purchasing Division 2019 Washington Street East Charleston, WV 25305-0130

Charlottesville, VA

Re: West Virginia Parking Garage Consulting Services Solicitation No. CEOI 0211 GSD1600000006

Manassas, VA

Dear Ms. Hooper:

Blacksburg, VA

Myrtle Beach, SC

WDP & Associates Consulting Engineers, Inc. (WDP) is pleased to submit our qualifications to the State of West Virginia for professional services as outlined within Solicitation Number CEOI 0211 GSD1600000006. WDP specializes in the investigation, evaluation, and repair of existing structures, including parking garages, and since 2008 we have performed condition assessment, repair recommendations, and repair design and construction phase services on more than 20 parking garages.

7 York, NY

Our expertise and familiarity with parking structures has garnered recognition from our industry peers, and we have won several International Concrete Repair Institute (ICRI) awards for our work on parking garages. The quality of our service provided and our attention to our clients' specific needs has become the hallmark of our firm. Most recently we have been engaged on projects for both West Virginia University and the University of Virginia to perform condition assessments and provide repair recommendations for parking structures experiencing problems similar to Building 13.

As forensic consultants, we have a vast amount of experience in recognizing common defects and issues related to precast concrete construction and service performance. This expertise will be at the forefront of our parking garage consulting services for Building 13, and our in-house testing laboratory and full suite of non-destructive testing enables us to develop sound, accurate, and cost effective repair solutions.

WDP's senior staff are nationally recognized experts that are actively involved on the national level on standard and code development committees. Our involvement ranges from active participation with the American Concrete Institute to the International Concrete Repair Institute. Not only are our staff well-versed in industry standards, but many are involved in writing and maintaining those standards.

The work for this contract would be performed by staff in both our Charlottesville, Virginia, office and our Manassas, Virginia, office. We are currently engaged in multiple projects in Charleston and feel that our ties to Charleston and our unique expertise in



evaluating and recommending repairs for parking structures make us ideally suited for this project.

We look forward to the opportunity to meet and further discuss our qualifications.

Respectfully Submitted,

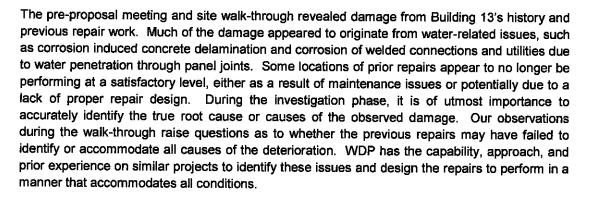
WDP & Associates Consulting Engineers, Inc.

Rex Cyphers, P.E. Associate Principal Phone: 434-245-6117

Email: rcypher@wdpa.com

Overview of Project

The State of West Virginia is seeking Vendors to provide parking garage consulting services for the parking garage located at the WV State Capitol Complex on Piedmont Road and referred to by the Agency as "Building 13." The scope of these services includes annual maintenance inspections of the parking structure and potentially will involve the preparation of construction bid documents for any repairs or upgrades deemed necessary by the inspections.



Building 13 is a four-level precast parking garage consisting of double tee deck sections, inverted tee beams, and various shear walls and connections. WDP's familiarity with other precast parking structures, which has resulted in two International Concrete Repair Institute (ICRI) awards, compels us to focus specifically on the deck coating, expansion joints, and patch repairs. It is our experience that these components are most likely to fail and contribute to performance issues of precast parking structures. With these specifics in mind, we will approach a survey of Building 13 by both observing the procedures and recommendations included in the Maintenance Manual for Precast Parking Garages published by PCI (Precast/Prestressed Concrete Institute) as well as using our experience and knowledge of common defects and issues relating to both precast concrete construction and service performance. This combined approach may enable us to recognize signs of a potentially hidden issue that may have been previously overlooked.

In addition to recognizing potential signs of hidden issues, WDP has the capability of providing more in-depth testing and investigation services in-house at our AASHTO and WACEL certified laboratory and with our repertoire of non-destructive and destructive testing techniques. If Building 13 appears to be experiencing problems that are not immediately apparent through typical survey methods, we can utilize Surface Penetration Radar (SPR) to locate embedded reinforcement (or lack thereof) or Impact-Echo and Ultrasonic Pulse-Velocity to locate internal concrete flaws. Our certified weld inspectors and our electrochemical corrosion testing facilities are additional resources, enabling us to extract concrete samples for testing both in WDP's laboratory and in partner laboratories.

The initial scope of this work includes the performance of annual maintenance surveys of the structure in accordance with PCl's published document. Based on the observations made, recommendations may include additional investigative work to determine the true cause of damage, repair design, and/or maintenance related repairs.

WDP would primarily utilize staff from our Manassas and Charlottesville, Virginia offices, to perform the surveys. Senior Engineer John Grill would oversee the project and lead the field surveys with assistance from Senior Engineer Jason Yates, other Staff Engineers, and CAD Technicians as necessary. Associate Principal, Rex Cyphers, would act as principal in charge of the project.



Approach

"Creating lasting solutions that extend the service life of buildings or structures is at the heart of our business." – WDP & Associates

WDP & Associates Consulting Engineers, Inc. (WDP) is a Federal and SWaM-certified, Commonwealth of Virginia consulting engineering firm certified to do business in West Virginia and founded on the award-winning expertise of the firm's Principals and Associates in the fields of forensic structural engineering and building envelopes. WDP's forensic structural engineering analysis, design, and inspections experience encompasses structures of all types, including parking structures. Our experience in evaluating and developing repair recommendations for parking structures encompasses all 20 years of our firm's history.

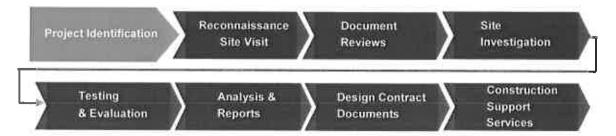
Our engineers, engineering technicians, inspectors and support staff thoroughly understand the operational requirements of municipal structures, in which repair and investigation work must not impede the program imperatives within the buildings nor the functional operation of parking structures. The majority of WDP's repair projects involve facilities in which on-going operations must continue "business as usual" throughout the investigation and repair process.

Since 2008, WDP has performed condition assessment, repair recommendations, and repair design and construction phase services on more than 20 parking garages. This experience includes the WVU Suncrest Parking Garage begun in 2015 and scheduled to continue into 2016, UVA McLeod Parking Garage Investigation and Repair completed in 2011, and the UVA South Parking Garage Investigation and Repair scheduled for completion in 2017. Additionally, our work on the Houston Hobby Airport Parking Structure Repair project resulted in an ICRI Award of Excellence in 2013, and our innovative use of a multiple-layer epoxy overlay as a long-term wearing surface on the Champion Parking Garage in Stamford, Connecticut, was recognized as a Project of the Year (Longevity Category) by ICRI.

Our extensive expertise with the evaluation and repair of parking structures will aid in WDP's ability to successfully meet the needs of West Virginia in regards to the Building 13 parking structure.

Project Approach

WDP's organized project approach to fulfilling West Virginia's needs is outlined in the following steps:



Project Identification – At the initial meeting with the General Services Division to discuss the project, WDP will listen and act upon the needs, concerns, and special considerations West Virginia may have. Based on our understanding of the project and our interactions with previous clients, we foresee that potential considerations for this project may include:

- Identification and quantification of damage;
- Identification of potential causes of observed damage:



- Recommended maintenance and care of the structure including plumbing and electrical systems:
- Recommendations for future surveys and potentially additional investigative studies;
- Recommendations for development of repair construction documents;
- Development of contract documents, if needed; and
- Construction administration services, if needed.





Figure 1 – Surface Penetrating Radar on Parking Structure

Document Review – WDP will review all available project information including drawings, specifications, and submittals from the Original Construction in 2000, as well as the 2007 survey and subsequent performance of repairs in 2008 and 2009. This task will enable WDP to understand the design and service history of the building and develop a plan for the investigation. This step may also provide insight into potential flaws in either the initial design, or the design of repairs.

Reconnaissance Site Visit – Concurrently or shortly after the document review, an initial site reconnaissance visit will be performed by WDP. This site visit would be used to

determine the time and manpower required to complete the required survey and to discuss the special needs and concerns the State may have.

Maintenance Survey and Report — WDP's senior engineer, John Grill, will lead a staff to perform the required maintenance survey, following procedures outlined in PCI's "Maintenance Manual for Precast Parking Structures." WDP will observe the conditions of the structural system using both visual and tactile (sounding) techniques. Careful, visual surveys are the first step in every assessment. Cracking and exposed reinforcing steel are obvious signs of distress, but less obvious conditions such as the location and direction of small cracks or subtle shifts in bearing pads or sealant joints can be indicative of greater issues and should not be overlooked. Particular attention will be paid to the condition and location of expansion joints, rigid connections, sealant joints, and coatings. Sounding techniques use chains, hammers, or sounding poles to impact the concrete and listen for signs of delamination not readily visible. General condition of the plumbing, lighting and electrical, and other systems will also be observed and noted. In addition to the maintenance survey items, WDP will also be mindful of potential signs of

construction defects or design flaws. If any urgent structural or life safety issues are identified, WDP will immediately notify the State's Project Manager. Upon completion of the survey, WDP will submit a report detailing observations made as well as repair and/or preventive maintenance items as necessary. Should signs of potential construction or design defects be observed, or the extent of repairs is deemed beyond the level of what could be considered maintenance, WDP may recommend that an additional study be performed, possibly including nondestructive and destructive testing, material sampling and testing, and structural modeling and analysis.



Figure 2 – Extraction of Concrete Cores from Parking Structure

Testing and Evaluation – If required, WDP has the capability to extract sample materials and perform laboratory testing in-house. Typically, our condition assessments require the verification of existing material properties or composition to assist in identifying the damage mechanisms as

well as to determine the most suitable repair materials for repairs. Available testing includes: determining strength of materials and other performance properties, investigation of microscopic deficiencies, and chemical composition analysis for corrosion and chemical incompatibility issues in accordance with ASTM Standards.

Additional Investigative Capabilities – WDP has the unique capabilities of performing highly specialized field sampling, testing, and structural analysis, should the need arise. WDP's team is well experienced in performing nondestructive testing of concrete structures including Surface Penetrating Radar (SPR), Impact-Echo (IE), and Ultrasonic Pulse Velocity (UPV). These highly specialized test methods, all performed by WDP personnel, can be invaluable in identifying existing conditions, developing the proper diagnosis, and subsequently, most effective repair methods for a given structure.



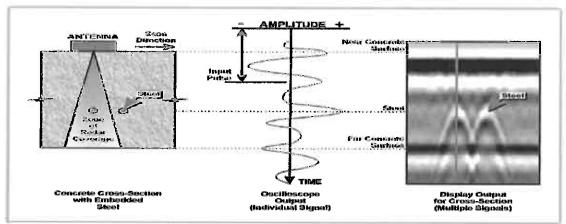


Figure 4 - Anatomy of a Surface Penetrating Radar Signal

Design Contract Documents – WDP is committed to providing practical engineering solutions that best fit short and long-term objectives is inherent to the high quality service we provide. Often times, this involves phasing of projects, either to maintain our client's occupancy and use of their parking structure(s), or to maintain budget constraints by prioritizing repairs. Whatever the need, WDP regularly tailors our repair design to the different needs of the client and the project.

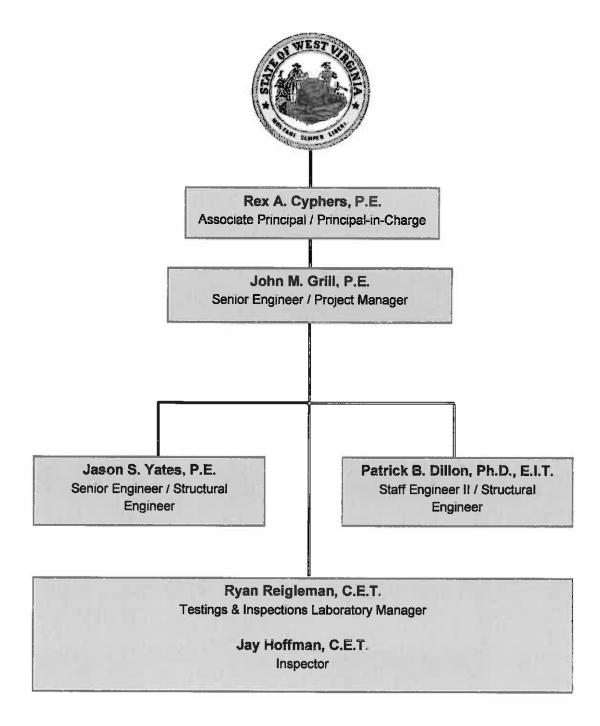
Our repair design will include construction documents and specifications in accordance with West Virginia's design guidelines and applicable codes. We strive to develop construction documents focused on attention to detail and practical constructability. WDP is well versed in designing and specifying repairs for parking garages and corrosion damaged concrete including; coating systems for both concrete and steel, specialized concrete repairs including corrosion control measures, and cyclical movement provisions. WDP also places special emphasis on providing clear delineation of work items within the bid document to minimize miscommunication during the bid process.

Construction Administration Services – WDP will provide the range of construction support services needed for successful implementation of the repairs. These services will likely include pre-bid meetings, pre-bid question clarifications, record drawing production, pre-construction meetings, submittal and shop drawing reviews, on-site progress meetings, addressing RFIs, reviewing change order and pay application, development of field reports and job bulletins as needed to address unforeseen conditions.

Organizational Chart

Below is the organizational chart representing our proposed team who will be working on this project:





Point of Contact Information

Below is the Point of Contact and Binding Signatory Information as per the RFP. Rex A. Cyphers, P.E., Associate Principal, has the full authority to execute a binding contract on behalf of WDP & Associates Consulting Engineers, Inc., and John M. Grill, P.E., Senior Engineer, will be the point of contact for any and all inquiries related to the project.

Name:

Mr. Rex Cyphers, P.E.; Associate Principal

Address:

335 Greenbrier Drive, Suite 205, Charlottesville, VA 22901

Phone:

434-245-6117

Email:

rcyphers@wdpa.com

Signature:

Name:

Mr. John M. Grill, P.E.; Senior Engineer

Address:

10621 Gateway Boulevard, Suite 200, Manassas, VA 20110

Phone:

703-257-9280

Email:

igrill@wdpa.com

Signature:

Personnel Chart

Listed below are the team members who will be working on this project:

WDP & ASSOCIATES CONSULTING ENGINEERS, INC.

(Maisture Protection / Building Envelope Sciences / Structural Engineering / Field Testing / Remodiation & Repairs / Material Analysis / Architecture / Historic Preservation / Plumbing)



Name & Title	Projest Role	Qualifications	Total Years Exp.	Investigation
Rex A Cyphers, P.E., Associate Principal	Principal In Charge	MS/2003/Civil Engineering BS/2002/Civil Engineering Professional Engineer / WV, VA	12	
John M. Grill, P.E., Senior Engineer	Project Manager	BS/1997/Civil & Environmental Engineering Professional Engineer / VA, DC	18	Y
Jason S Yates, P E Senior Engineer	Structural Engineer	BS/1991/Civil Engineering Professional Engineer/VA	25	
Patrick B Dillon, Ph D E I T , Staff Engineer II	Structural Engineer	PhD/2015/Civil Engineering BS/2010/Civil Engineering Engineer In Training/UT	4	~

WDP's consulting engineers specialize in the evaluation, repair, strengthening, and rehabilitation design of all types of structures, including buildings and parking structures. WDP is one of the foremost engineering experts in the evaluation and repair of pre-stressed concrete structures. As specialists in structural concrete and masonry repair, WDP engineers have developed in-house non-destructive testing capabilities to provide a seamless interface between field investigation, engineering evaluation and repair design.

Building upon advanced engineering degrees and years of experience, WDP's staff continues to conduct research and analysis of structural material properties and structural behavior. Our Principals, Associates, and Senior Engineers are deeply engaged in the development of the technical requirements of codes, standards and specifications associated with structural and waterproofing repair for roofing and building envelope systems, structural engineering, and construction testing and inspection services. Our involvement ranges from the Chair and Secretary of the Concrete and Masonry codes to the Chair of the Concrete Repair code to committees that write and develop the standards that are used to design, construct, and repair buildings. These organizations include the American Concrete Institute (ACI), the American Society for Testing & Materials (ASTM), The Masonry Society (TMS), the International Concrete Repair Institute (ICRI), the Air Barrier Association of America (ABAA), RCI (formerly Roof Consultants Institute), among others.

American Concrete Institute

- 117 Tolerances
- 216 Fire Resistance and Fire Protection of Structures
- 546 Repair of Concrete

American Society for Testing and Materials

- C-09 Concrete and Concrete Aggregates
- C-09.60 Testing Fresh Concrete
- C-09.61 Testing Strength
- C-09.64 Non-Destructive Testing
- C-09.98 Evaluation of Laboratories
- C-11 Gypsum and Related Building Materials and Systems
- C-12 Mortars for Unit Masonry
- C-15 Manufactured Masonry Units
- C-18 Dimension Stone
- C-24 Building Seals and Sealants
- D-08 Roofing and Waterproofing
- D-08.02 Prepared Roofings, Shingles and Sliding Materials
- D-18 Soil and Rock
- D-18.99 Soil Quality Control
- E-05 Fire Standards
- E-06 Performance of Buildings
- E-06.24 Building Preservation and Rehabilitation
- E-06.51 Performance of Windows, Doors, Skylights and Curtain Walls
- E-06.55 Exterior Wall Systems
- E-06.55 Façade Task Group
- E-06.55 Water Penetration
- E-06.58 EIFS
- E-36 Conformity Assessment
- E-36.70 Agencies Performing Construction, Inspection, Testing, and Special Inspections
- E-58 Forensic Engineering
- E-60 Sustainability

The Masonry Society

- Board of Directors
- Secretary, Masonry Standards Joint Committee
- Masonry Veneer Subcommittee
- Past Committee Chair, Existing Masonry Committee
- Architectural Practices Committee
- Construction Practices Committee
- Design Practices Committee
- Standards Development Committee
- Author, Masonry Designers Guide

RCI

- Chairman
- Registered Building Envelope Consultant

Air Barrier Association of America

- Field Auditor Certification Program
- Chair, Terminations and Flashing Technical Committee
- Whole Building Air Tightness Committee
- USACE Air Testing Protocol Review Committee

ICRI

- 150 ICRI Notes on ACI 562 Code Requirements
- 210 Evaluation

ASCE

- Chair Construction Safety Committee (Bill)
- Structural Engineering Institute
- Architectural Engineering Institute
- Construction Institute
- Geotechnical Engineering Institute
- Technical Council on Forensic Engineering

A.I.A. Registered Continuing Education Programs Delivered by WDP Personnel

- ACI 562 Development of a Building Code for Existing Concrete Structures
- ACI 562 Repair Code How Does It Affect Your Concrete Repair Project
- Assessment of Existing Concrete Structures In the Absence of Drawings
- Commercial Masonry Problems & Solutions
- Forensic Structural Engineering
- Non-Destructive Test Methods for Evaluating Structures
- Overview of Risk Assessment
- Parking Structure Repair and Maintenance
- Special Inspections What Does It Mean and When Is It Required?
- Structural Investigation & Repair Strategies



Resumes

Please find the attached resumes followed by copies of the individual's licenses from the personnel chart.





Rex A. Cyphers, P.E., Associate Principal



Mr. Cyphers earned his Master and Bachelor of Science degrees in Civil Engineering and also a Graduate Certificate in Cultural Resource Management from West Virginia University.

He is in charge of all operations of WDP's Charlottesville office, which offers a full range of consulting architectural engineering and

structural engineering services related to façade restoration and rehabilitation projects, failure investigation of building enclosures and structural systems, and litigation support.

Mr. Cyphers also assists clients in minimizing the potential of enclosure-related post occupancy failures in new and renovated buildings by providing professional design and construction administration services as well as peer reviews of contract documents prepared by others. Construction phase service services provided by Mr. Cyphers and his team include field performance testing and observations of the structural, material, and architectural engineering elements of the building enclosure.

Education

- Master of Science, Civil Engineering, West Virginia University, 2003
- Graduate Certificate, Cultural Resource Management, West Virginia University, 2003
- Bachelor of Science, Civil Engineering, West Virginia University, 2002

Professional Registration

Professional Engineer - Virginia, West Virginia

Standards Committees

- ABAA Flashing and Terminations Committee
- ASTM Committee E06.24 Performance of Buildings-Preservation and Rehabilitation Technology
 - Task Chair, "New Guide for Evaluation, Rehabilitation and Retrofit of Existing Steep Sloped Roof Assemblies for Changes in the Thermal and Vapor Resistance of the Assemblies"
 - Task Chair, "New Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to the Thermal and Moisture Properties of the Wall"

Publications and Presentations

Mr. Cyphers has published or presented over 14 articles at various conferences and institutes over the last 13 years.

Relevant Experience

West Virginia University Suncrest Parking Garage Structural Analysis, Morgantown, WV — Principal In Charge: A 56,000 square foot precast parking garage was experiencing significant cracking and damage in spite of previous efforts to repair it. WDP was retained to review previous repair documents, conduct a visual survey, and subsequently provide a structural analysis. WDP identified restrained movement as the most likely cause of the damage, a fact overlooked by previous reports from other surveys, and recommended that a more in-depth investigation and analysis be performed to provide a more thorough understanding of the structure's movement.

University of Virginia, McLeod Parking Structure, Charlottesville, VA – Principal In Charge: WDP performed a structural evaluation including visual and sounding surveys along with field and laboratory testing using both nondestructive and destructive test methods. Additionally, WDP developed the contract documents for repair work, assisted the University in retaining a Contractor, and provided construction phase services to oversee the work and to address unforeseen conditions.

University of Virginia Health System South Garage Condition Assessment, Charlottesville, VA – Principal In Charge: WDP performed a condition assessment of a 6-level parking structure and developed repair recommendations for the spalled concrete sections observed. Material sampling and testing was used to supplement the visual and tactile condition survey.

Judge Advocate General (JAG) School, University of Virginia, Charlottesville, Virginia – Project Manager. Conducted investigation into the cause of the severe moisture related and structural damage. Provided design services for structural repair and façade replacement. The project was awarded 2nd place Outstanding Repair Award from the Baltimore-Washington, DC Chapter of ICRI in 2012.

West Virginia University, Mountainlair Plaza and Parking Garage Feasibility Study, Morgantown, WV – Structural Engineer. Scope encompassed demolition and redesign of an existing 88,000 square-foot multi-use plaza located directly above a 500-car parking garage.



John M. Grill, P.E., Senior Engineer



Mr. John Grill, P.E., is a Senior Engineer with WDP & Associates Consulting Engineers, Inc., where he participates in and manages many structural, material, and architectural engineering activities, specializing in nondestructive testing and repair and rehabilitation of reinforced concrete structures. Mr. Grill joined the firm in 1998, and has since participated in and conducted a wide variety of

forensic field and laboratory investigations, structural condition assessments, façade and building envelope investigations, development of design documents, and repair recommendations. He has performed investigations on numerous projects utilizing surface penetrating radar, impact-echo testing, and corrosion evaluation techniques. Mr. Grill is currently a member of the International Concrete Repair Institute and the American Society for Nondestructive Testing.

Education

BSE / 1997 / Civil and Environmental Engineering

Professional Registration

Professional Engineer - VA, DC, MD

Professional Memberships/Committees

- International Concrete Repair Institute (ICRI)
 - Member of Committee 150 ICRI Notes on ACI 562 Code
 - o Member of Committee 210 Evaluation

Relevant Experience

West Virginia University Suncrest Parking Garage Structural Analysis, Morgantown, WV – Project Manager: A 56,000 square foot precast parking garage was experiencing significant cracking and damage in spite of previous efforts to repair it. WDP was retained to review previous repair documents, conduct a visual survey, and subsequently provide a structural analysis. WDP identified restrained movement as the most likely cause of the damage, a fact overlooked by previous reports from other surveys, and recommended that a more in-depth investigation and analysis be performed to provide a more thorough understanding of the structure's movement.

US Capitol Power Plant Utility Tunnels Condition Assessments, Washington, DC – Structural Engineer of Record/Project Manager: Network of several miles of reinforced concrete tunnels of varying cross-sections. WDP's initial investigation began in early 2006 and work continues to the present. Original construction dates ranged

from the early 1900s to the early 2000s. Participates in and leads periodic structural condition assessments utilizing various nondestructive and destructive test methods, including: Surface Penetrating Radar, Impact-Echo, half-cell potential, corrosion rate, compressive strength and petrographic analysis of concrete cores, chloride content and carbonation analysis, and tensile bond testing of concrete overlays. Oversees the performance of materials testing and the incorporation of all test data for the development of design parameters and structural calculations. Prepares reports, repair documents and provides construction administration services.

US Capitol Power Plant Condition Assessment of West Refrigeration Plant, Washington, DC – Structural Engineer of Record/Project Manager: Led a concrete condition assessment and repair design of cooling tower structure on the grounds of the Capitol Power Plant. Field survey included coordination of extensive scaffold installation and fall protection for access into fan towers. Survey tasks included review of existing documents, material sampling, destructive and nondestructive testing, repair design and preparation of concrete repair plans and specifications. Nondestructive and destructive testing included: Surface Penetrating Radar, Impact-Echo, etc.

Other Parking Structure Experience:

City Hall Garage, George Washington University – Conducted a condition assessment and developed repair documents. Also provided construction administration services during construction.

McLeod Parking Structure, University of Virginia – Performed a structural evaluation of a parking garage experiencing corrosion deterioration and concrete spalling. Prepared an assessment report with repair recommendations and cost estimate and provided construction phase services during construction.

Arlington Courthouse Garage – Condition assessment survey and development of repair documents for Arlington County Courthouse parking garage consisting of post-tensioned concrete, conventional cast-in-place reinforced concrete, and pre-cast concrete construction.

Ballston Parking Garage – Condition assessment of posttensioned concrete at upper level of parking garage for the Kettler Iceplex and Ballston Mall. Included assessment, review and comment on previous reports, and development of prototype repair procedures and documents. Previous evaluators recommended complete demolition and reconstruction of level. WDP was called for second opinion and recommended repairs.

Fair Oaks Parking Garage – Condition assessment of post-tensioned concrete garage. WDP also completed repair documents and provided construction administration services.



Jason S. Yates, P.E., Senior Engineer



has 20 years of Yates experience. He is responsible for performing structural engineering field and laboratory investigative testing, compilation and analysis of field and officegenerated data, and the generation of reports of findings. Mr. Yates has experience in the operations of destructive and nondestructive methods used in evaluating

concrete, masonry specimens, water penetration and structures. He is also experienced in construction quality control field testing and inspection procedures performed during rehabilitation programs for structures. He is well versed in current laboratory and field testing specifications. Mr. Yates is adept in state-of-the art procedures for data analysis, structural analysis of steel, concrete, wood, and masonry, and graphical presentation of results.

Education

BSE / 1991 / Civil Engineering

Professional Registration

Professional Engineer - VA

Professional Memberships/Committees

American Society of Nondestructive Testing (ASNT)

Relevant Experience

One Tribe Place Parking Structures Condition Assessments, College of William and Mary Term Contract for A/E Services, Williamsburg, VA – Sr. Engineer: Performed a condition assessment of four single-level parking structures. 108 exploratory openings were made to identify and document the number and location of existing post-tensioned strands, and to determine the number of failed or detensioned strands. Data collected from the assessment will be analyzed to determine appropriate repair procedure. Assessment included the use of surface penetrating radar (SPR) to locate and expose existing post-tensioned reinforcements.

University of Virginia Health System South Garage Condition Assessment, Charlottesville, VA – Structural Engineer: WDP performed a condition assessment of a 6-

level parking structure and developed repair recommendations for the spalled concrete sections observed. Material sampling and testing was used to supplement the visual and tactile condition survey.

Skyline House Condominium Parking Garage, Falls Church, VA – Structural Engineer: WDP surveyed the garage using nondestructive and destructive testing techniques, developed concrete and expansion joint repair contract documents based on findings.

University of Virginia, McLeod Parking Structure, Charlottesville, VA – Structural Engineer: WDP performed a structural evaluation including visual and sounding surveys along with field and laboratory testing using both nondestructive and destructive test methods. Additionally, WDP developed the contract documents for repair work, assisted the University in retaining a Contractor, and provided construction phase services to oversee the work and to address unforeseen conditions.

WMATA Glenmont Metro Parking Structure, Glenmont, MD - Structural Engineer: The Glenmont Metro Station provides Red Line train service under the Washington Metropolitan Transit Authority (WMATA) in Montgomery County, Maryland. A multi-level parking structure provides parking for Metro customers utilizing the station. The parking structure is cast-in-place with post-tensioned beams framing into reinforced concrete columns. Whitlock Dalrymple Poston & Associates, Inc. (WDP) was retained to provide engineering consulting and to conduct nondestructive testing of select columns to determine the location of existing tie reinforcement. Impact-echo testing was also to be conducted in order to evaluate surface opening cracks on four columns slated for repair. A second phase involved the assessment of the structural adequacy of the cracked and repaired post-tensioned beam.

Ballston Parking Garage, Arlington, VA – Structural Engineer: Condition assessment of post-tensioned concrete at upper level of parking garage for the Kettler Iceplex and Ballston Mall. Included assessment, review and comment on previous reports, and development of prototype repair procedures and documents. Previous evaluators recommended complete demolition and reconstruction of level. WDP was called for second opinion and recommended repairs.



Patrick B. Dillon, Ph.D., E.I.T., Staff Engineer II



With five years of combined research and field work experience, Patrick conducts evaluations and assessments of structural and building envelope systems for WDP. He regularly performs diagnostic field investigations to determine the root cause of postoccupancy failures of existing buildings and develops repair recommendations to solve the

problems. Patrick is also involved with a variety of other architectural and structural engineering disciplines, including development of specifications and drawings, peer review of design documents, and construction management and administration. Patrick has also authored or co-authored four articles at industry conferences in the last five years.

Education

- Doctor of Philosophy, Civil Engineering, Brigham Young University, Provo, Utah, 2015
- Bachelor of Science with Honors, Civil Engineering, Brigham Young University, Provo, Utah, 2010

Theses

- Ph.D. "Shear Strength Prediction Methods for Grouted Masonry Shear Walls"
- Honors "Effects of a Reinforced Concrete Braced Frame on a Confined Masonry Wall"

Certifications

Engineer in Training (E.I.T.) Certification, 2011.

Publications and Presentations

- "Issues in Developing Strut-and-Tie Procedures for Masonry" co-authored with F.S. Fonseca and presented at the North American Masonry Conference (NAMC) held May 17-20, 2015, in Denver, CO.
- "Resistance Analysis of Partially Grouted Shear Walls" co-authored with F.S. Fonseca and presented at the North American Masonry Conference (NAMC) held May 17-20, 2015, in Denver, CO.
- "Analyzing Masonry Research Data in Matrix Form" coauthored with F.S. Fonseca and presented at the 9th International Masonry Conference held in Portugal in 2014.

 "Preliminary Study into the Standardization of Masonry Shear Wall Reporting Methods" co-authored with F.S. Fonseca and presented at the 9th International Masonry Conference held in Portugal in 2014.

Relevant Experience

University of Virginia Health System South Garage Condition Assessment, Charlottesville, VA – Structural Engineer: WDP performed a condition assessment of a 6-level parking structure and developed repair recommendations for the spalled concrete sections observed. Material sampling and testing was used to supplement the visual and tactile condition survey.

Pavilion VII (Colonnade Club) Porch Repair, University of Virginia Term Contract, Charlottesville, VA. Structural Engineer: Performed a structural assessment and developed a foundation design for replacement porch slab and new ADA ramp for historical building. Developed structural drawings and specifications for slab and ramp.

Slaughter Hall Investigation, University of Virginia Term Contract, Charlottesville, VA. Structural Engineer: Evaluated the building condition and performed investigations of building settling, façade cracking, water leakage, and construction feasibility using site observations, ground penetrating radar, diagnostic water testing methods, and construction document review.

John Paul Jones Arena, University of Virginia Term Contract, Charlottesville, VA. Structural Engineer: Developed repair design concept for integration of pergola beams with cavity wall drainage system. Performed brick IRA testing in accordance with ASTM C67.

New Science Building, Radford University, Radford VA. *Structural Engineer*: Conducted water leakage field check in accordance with AAMA 501.2 for newly installed curtain wall system.

St. Stephen Episcopal Church, Richmond, VA. *Structural Engineer:* Conducted a building assessment through the investigation of water leakage issues using diagnostic water testing methods.



REX A. CYPHERS WV PE

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2016

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION COMMONWEALTH OF VIRGINIA

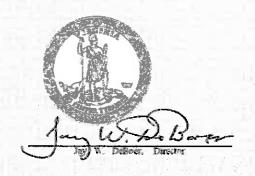
06-30-2017

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



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

JOHN MICHAEL GRILL



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POCKET CARD) COMMONWEALTH OF VIRGINIA BOARD FOR APELSCIDLA PROFESSIONAL ENGINEER LICENSE NUMBER: EXPIRES: 06-30-2017		(DETACH HERE) DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION 9960 Mayland Dr., Suits 400, Flohmond, VA 23233
JOHN MICHAEL GRILL	(मुठ्य)	

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION COMMONWEALTH OF VIRGINIA

EXPIRES ON

06-30-2017

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

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

JASON SCOTT YATES WDP & ASSOCIATES 10621 GATEWAY BOULEVARD SUITE 200 MANASSAS, VA 20110

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Jan W. De Bores

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BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: EXPIRES: 06-30-2017

JASON SCOTT YATES
WDP & ASSOCIATES
10621 GATEWAY BOULEVARD
SUITE 200
MANASSAS, VA 20110



Result Notification

Examinee Information

Name

Patrick Dillon

NCEES ID

Email

Primary Phone

Alternate Phone

Address

Patrick Dillon



Exam Information

FE Civil - 04/09/2011

Result: Pass Board: Utah

Education Information

Brigham Young University
Civil Engineering - Doctoral
08/2010—04/2015
Brigham Young University

Civil Engineering - Bachelor's

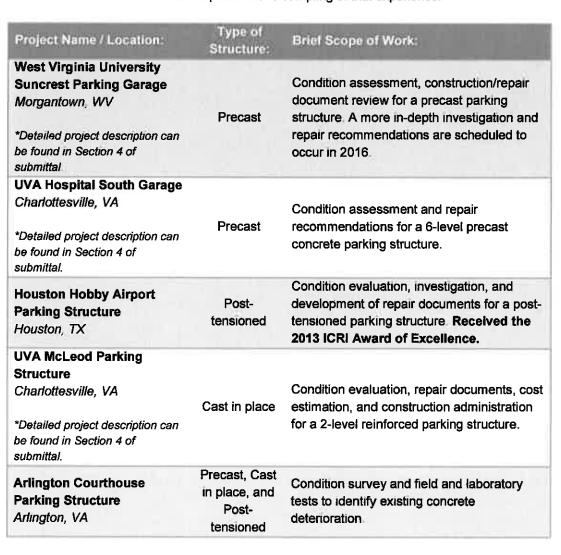
08/2006-08/2010

Statement of Firm's Ability to Handle Project

WDP & Associates Consulting Engineers, Inc. can handle a project of this magnitude and can provide the services required to complete this project.

We have a 20-year history of successfully evaluating, investigating, and providing routine maintenance service for parking structures across the United States. Our investigation and repair design work on the Houston Hobby Airport Parking Structure garnered us a 2013 International Concrete Repair Institute (ICRI) Award of Excellence in the Parking Structures Category, and our work at the Champion Parking Garage in Stamford, CT, also received an ICRI Award of Excellence. We also have extensive experience with pre-cast, pre-stressed, post-tensioned, and reinforced concrete structures in the mid-Atlantic region for entities such as West Virginia University and the University of Virginia and municipalities such as Arlington and Manassas, Virginia.

Our breadth of our experience in evaluating and investigating parking garages includes 20 structures since 2008. Below is a representative sampling of that experience:







Skyline House Parking Structure Falls Church, VA	Post- tensioned	Condition assessment and repair recommendations for a 5-level parking structure.
Ballston Public Parking Structure Adington, VA	Post- tensioned	Visual survey and material sampling and testing for a 5-level reinforced concrete parking structure.
WMATA Parking Structures DC Metropolitan Area	Post- tensioned	Investigation and remediation design of multiple post-tensioned parking structures. Design/construction documents and construction administration services were also performed.
Marine Corps Barracks Garage Entrance Washington, DC	Cast in place	Condition survey, field and lab testing, and conception repair recommendations for reinforced concrete ramp entering the parking structure.
Architect of the Capitol Parking Structure Washington, DC	Cast in place	Post-earthquake detailed damage assessment survey for two parking structures, East & West House Parking Structure and Canon Building Parking Structure.
Champion Parking Garage Stamford, CT	Post- tensioned	Comprehensive investigation, development of repair design documents, and construction administration services. Project was awarded the ICRI Award of Excellence for Parking Structures (Longevity Category).

Project Experience

Please find the attached three detailed descriptions of projects of similar size and scope to the Building 13 Parking Garage.



West Virginia University, Suncrest Parking Garage Structural Analysis

Morgantown, WV

Size: 58,000 SF

Date of Completion: On-going (Investigation: September 2015; Analysis: Spring 2016)





OWNER'S INFORMATION

West Virginia University
P.O. Box 6570
975 Rawley Lane
Morgantown WV 26506
Mr. Jeff Palermo, Project Engineer
P. 304-293-8444
E. Jeffrey Palermo@mail wvu edu

WDP Team Members*Rex A. Cyphers, P.E. – Principal in Charge
*John Grill, P.E. – Project Manager

*Proposed for this submittal

Project Description

The 56,000 square foot, precast concrete Suncrest Parking Garage at West Virginia University was constructed in 2005 and had experienced significant cracking and damage in its early life. The University hired an engineering firm to perform a condition assessment in 2012, and based on recommendations in this report, the University developed a repair package for the garage. Repairs were performed in late 2014, including repair of cracking within the pour strips by removing cracked sections of concrete and replacing with new. In late 2014/early 2015, similar cracking and distress was observed in several repaired areas, prompting the University to contact WDP. WDP was contracted to provide an evaluation of the cause of continued cracking of the pour strips, in spite of recent repairs.

WDP conducted a review of previous documents and a brief visual survey of the garage, including a contractor's removal of select concrete patches. Review of the design details and survey observations, including displaced sealant joints and failed weld connections, indicated that restrained movement was most likely the primary cause of the observed cracking and distress, a fact overlooked by the previous report. WDP recommended that a more in-depth investigation and analysis be performed to provide a more thorough understanding of the structure's movement as well as to develop repairs to accommodate it.

The follow up structural investigation and analysis of the garage will focus on precast member connections, weld details, and the overall movement and behavior of the structure. The analysis will closely examine connection locations and the movement forces imposed on them before determining what more appropriate connection alternatives could be utilized, which would allow for the anticipated movement while still providing adequate strength.

University of Virginia, South Garage Investigation & Maintenance Repair

Charlottesville, VA

Size: 441,500 SF

Date of Completion: Investigation completed October 2011; Additional Maintenance Repairs

March 2015





WDP

OWNER'S INFORMATION University of Virginia Department of Parking & Transportation P.O. Box 400000 1101 Millimont Street Chariottesville, Virginia 22903 Mr. Mike Sturnbaugh, Assistant Director for Facilities & Operations P. 434-924-1968 E. sturn@virginia.edu

Team Members

*Rex A. Cyphers, P.E. – Principal In Charge *Jason S. Yates, P.E. – Structural Engineer *Patrick Dillon, Ph.D., E.I.T. – Staff Engineer

*Proposed for this submittal

Project Description

WDP was retained to conduct a comprehensive investigation into the 441,500 square feet South Garage of the University of Virginia Hospital. The six-level garage was originally constructed in two phases, occurring in 1999 with 309,800 square feet and again in 2004 with an additional 131,700 square feet. The garage consists primarily of precast, prestressed concrete double tee slabs and precast concrete beams, shear walls, and columns. The structure was exhibiting general signs of concrete deterioration and significant sealant joint damage between the precast concrete tee sections which necessitated the investigation and the development of repair details.

Over the period of five nights, WDP performed a survey of the garage, closely examining the concrete, sealant joints, flashings, expansion joints, connections, and all other components of the garage for signs of visible deterioration. The visual survey results were recorded on a set of asbuilt drawings. Additionally, WDP collected concrete powder samples from five locations in order to test for chloride content. Finally, WDP prepared an official report with the compiled data, repair options, quantity estimates, and cost estimates with respect to the garage's structural and operational priorities.

During a routine site visit to the South Garage in March 2015, WDP observed spalled concrete sections which required remediation. WDP developed recommended repair details for the spalling in order to ensure continued operation of the garage.

University of Virginia, McLeod Parking Structure

Charlottesville, VA

Size: 65,000 SF

Date of Completion: October 2011





Owner's Information University of Virginia Facilities Management – Engineering & Design Services P.O. Box 400726 575 Alderman Road Charlottesville, Virginia 22904 Mr. Brian Pinkston P. 434-243-7178 E. brp2x@eservices virginia edu

*Rex A. Cyphers, P.E. – Principal in Charge
*John Grill, P.E. – Project Manager

*Proposed for this submittal

Project Description

The McLeod Parking Garage is a 67,300 square foot structure consisting of 141 parking spaces on two levels for attendees, faculty, and staff of the attached School of Nursing. The structure was opened in 1972, and corrosion deterioration, in the form of concrete delamination and spalling, had been observed throughout the garage prompting the University's request for a structural survey and assessment.

As part of our Structural Engineering Services Term Contract with the University of Virginia, WDP performed a structural evaluation including visual and sounding surveys and field and laboratory testing using both destructive and nondestructive test methods. An assessment report including repair recommendations and cost estimate was issued.

Following the structural evaluation and recommendations for rehabilitation, WDP worked closely with University personnel through meetings and presentations to tailor the repair scheme to meet the specific needs of the University. Through this team approach, WDP developed a full set of contract documents that generally included the following repairs:

- Concrete delamination and spall repairs at decks, beams, soffit ribs, and vertical surfaces;
- Replacement of existing expansion joints and select reconstruction of joints to address water penetration;
- · Concrete crack repairs;
- Removal and replacement of damaged brick masonry and related steel supports around the perimeter of the garage; and
- Installation of a concrete sealer and traffic bearing membrane.

WDP assisted the University in selecting the Contractor through participating as an advisory member of the selection committee during the RFQ and RFP interview process. WDP provided professional construction phase services to oversee the work and to address unforeseen conditions in an expedited manner.

Reference Letter



575 Alderman Rd • P.O. Box 400726 • Charlottesville, VA 22904-4726 • 434-982-4621 • FAX 434-982-4628

FACILITIES MANAGEMENT
Facilities Planning and Construction Department



May 11, 2012

To Whom It May Concern:

I am pleased to tender this letter of recommendation for Whitlock Dalrymple Poston & Associates, P.C. The Facilities Planning & Construction Department of the University of Virginia has had the opportunity to work with WDP for approximately fifteen years on projects involving structural investigations, structural testing, repair design, repair construction, building envelope consulting, architectural performance testing and quality assurance monitoring services. WDP currently holds two open end term contracts with the University:

- Building Envelope Peer Review & Consulting Engineering Services, and
- Structural Engineering Services Including Parking Deck Evaluations.

WDP has consistently delivered a high quality professional service. It is WDP's level of professionalism that leads the University to continually rely on their services.

My personal experience reinforces the importance of naving wider as a part of our team on our related projects. Working with the staff at WDP has been a positive experience as they consistently meet project requirements and time schedules. They are also at the forefront of their field and can address complex problems using their expertise quickly and practically lessening the impact on budgets and schedules. We are very pleased with the performance of WDP and count ourselves fortunate to have a firm of this caliber assisting us to serve the needs of the University.

I can, without reservation, state that WDP is well qualified to meet the expectations of any client or organization, and they enjoy my highest recommendation.

Please feel free to contact me directly to discuss this recommendation further.

Sincerely,

C.A. Johannesmeyer, P.E., VCCO

Director, FP&C Email: sack@virginia

Email: sack@virginia.edu Phone: 434-982-4371

Acknowledgement of Addenda

Please find the attached acknowledgement of Addenda.



ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: GSD1600000006

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:						
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	[🗸	1	Addendum No. 1	[]	Addendum No. 6
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	[^]	Addendum No. 3	[]	Addendum No. 8
	[j	Addendum No. 4	ſ	ì	Addendum No. 9
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	Į.]	Addendum No. 5	[]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

WDP + ASSOCIATES Consulting	Enginees
Company	
Authorized Signature	
11/10/15	
Date	

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing. Revised 6/8/2012

Purchasing Affidavit

Please find the attached purchasing affidavit.



CEOI 0211 RFQ No. <u>GSD 14000000</u>06

Purchasing Affidavit (Revised 07/01/2012)

STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: WDP 9 Associates Consu	Hing Engineers, Inc.
Authorized Signature:	Date: // /10/15
State of Virginia	
County of Albersarle to-wit:	
Taken, subscribed, and sworn to before me this <u>10</u> day of <u>Nov</u>	enter , 20_15
My Commission expires August 31 , 20	<u>19.</u>
AFFIX SEAL HERE NOTARY	PUBLIC Matrina & Daltin

KATRINA ELISABET DALTON NOTARY PUBLIC REGISTRATION # 7633735 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES AUGUST 31, 2019