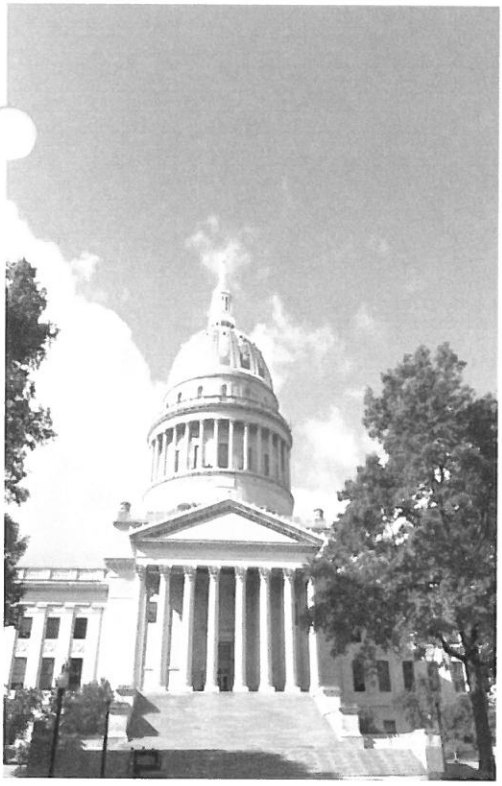


WDP
& Associates

PROPOSAL FOR

WEST VIRGINIA CAPITOL DOME MOISTURE INTRUSION

Solicitation No. CEOI 0211 GSD15000000001

Department of Administration

Purchasing Division

2019 Washington Street East

Charleston, WV 25305-0130

Attn: Guy Nisbet, Buyer Supervisor

WDP & Associates Consulting Engineers, Inc.

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

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

ORIGINAL

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

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 92501

Doc Description: EOI Capitol Dome Moisture Intrusion

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2015-04-22	2015-05-28 13:30:00	CEOI 0211 GSD1500000001	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

WDP & Associates Consulting Engineers, Inc.
335 Greenbrier Drive, Suite 205
Charlottesville, VA 22901
P: 434-245-6117
Mr. Rex Cyphers, P.E.; Associate Principal

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
(304) 558-2596
guy.l.nisbet@wv.gov

Signature X **FEIN #** 54-1763349 **DATE** May 26, 2015

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

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

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 92501

Doc Description: Addendum No.01; EOI Capitol Dome Moisture Intrusion.

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2015-05-13	2015-05-28 13:30:00	CEOI 0211 GSD1500000001	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

WDP & Associates Consulting Engineers, Inc.
335 Greenbrier Drive, Suite 205
Charlottesville, VA 22901
P: 434-245-6117
Mr. Rex Cyphers, P.E.; Associate Principal

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
(304) 558-2596
guy.l.nisbet@wv.gov

Signature X **FEIN #** 54-1763349 **DATE** May 26, 2015

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

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

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 92501

Doc Description: Addendum No.02; EOI Capitol Dome Moisture Intrusion.

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2015-05-16	2015-05-28 13:30:00	CEOI 0211 GSD1500000001	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

WDP & Associates Consulting Engineers, Inc.
335 Greenbrier Drive, Suite 205
Charlottesville, VA 22901
P: 434-245-6117
Mr. Rex Cyphers, P.E.; Associate Principal

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
(304) 558-2596
guy.l.nisbet@wv.gov

Signature X **FEIN #** 54-1763349 **DATE** May 26, 2015

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

May 26, 2015

WDP & Associates

Charlottesville, VA

Manassas, VA

Blacksburg, VA

Myrtle Beach, SC

New York, NY

Mr. Guy Nisbet, Buyer Supervisor
Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Re: West Virginia Capitol Dome, Moisture Intrusion
Solicitation No. CEOI 0211 GSD15000000001

Dear Mr. Nisbet:

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 GSD15000000001. WDP specializes in the investigation, evaluation, and repair of existing structures and has extensive experience as the Designer of Record on past projects for state agencies with all aspects of the work described for the West Virginia Capitol Dome project.

Our expertise has garnered recognition and allowed the firm to work on numerous challenging and high-profile projects, but it is the quality of the service provided and our attention to our clients' specific needs that has become the hallmark of our firm. Specifically, we worked with the Commonwealth of Virginia Department of General Services on a moisture infiltration issue at the State Capitol of Virginia in Richmond to investigate the cause of the leakage and craft a repair resolution.

As forensic consultants, we have a vast amount of experience with the restoration of buildings and the sensitivity of repairs, from both a historic preservation and a performance standpoint. We know many of the pitfalls and hidden problems that can plague historic buildings and can bring our expertise to the forefront of the moisture intrusion investigation and restoration of the Capitol Dome.

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 the Secretary of the Masonry Codes to the Chair of standard committees that write and develop the standards which are used to design, construct, and repair buildings. We also have an in-house testing laboratory and a full suite of non-destructive testing capabilities necessary to develop sound, accurate, and cost effective repair solutions. In addition we are proficient in creating customized approaches that ensure that "business as usual" can continue throughout the investigation and repair process.

The Senior Staff that will be involved with this project are the Task Group Chairs for three American Society for Testing and Materials (ASTM) standards that are at the forefront for this particular project:

WDP & Associates

ASTM E06-24 "New Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to the Thermal and Moisture Properties of the Wall" – Rex A. Cyphers, P.E., Associate Principal
ASTM E06-24 "New Guide for Evaluation, Rehabilitation and Retrofit of Existing Steep Sloped Roof Assemblies for Changes in the Thermal and Vapor Resistance of the Assemblies" – Rex A Cyphers, P.E., Associate Principal
ASTM E241 "Standard Guide for Limiting Water-Induced Damage to Buildings" – Andrew Wagner, P.E., Senior Engineer

The work for this contract would be performed primarily by staff in our Charlottesville, Virginia, office. We feel our close proximity to Charleston and our unique expertise in repairing and upgrading existing facilities makes 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

INDEX

WDP & Associates Consulting Engineers, Inc. ..... Moisture Protection / Building Envelope Sciences / Structural Engineering / Field Testing / Remediation & Repairs / Material Analysis / Architecture / Historic Restoration / Plumbing
PULLMAN..... Specialty Design Build Services / Repair & Maintenance Services

Overview of Project

Below is a description of the overview of the project:

The State of West Virginia is looking for Vendors to provide a study and to resolve moisture intrusion issues in the dome and the central rotunda area of the West Virginia State Capitol Building Project. The purpose of this project is to investigate the source of the water penetration and make recommendations to minimize future penetration. Depending on the investigation, the contract may include designing a solution for correcting water penetration issues, restoring existing finishes and the necessary contract administrations to assist the Agency in administering the Project. In addition, support services will be required to provide and assist the State of West Virginia with historic documentation and responses to the State Historic Preservation Office (SHPO) and the Capitol Building Commission as needed.

WDP & Associates

The pre-proposal conference discussion and site walk-though revealed the primary challenges associated with this project that WDP & Associates is prepared to address. Like many of our projects, the investigation and repair strategy will need to encompass:

- Continued occupancy of the building,
- Special considerations regarding historically significant building components,
- Access limitations or considerations,
- Procedures for approval of exploratory opening patches,
- Schedule and budget constraints.

A key initial challenge is to ensure that we fully understand the design and service history of the building so that we can develop a plan for the investigation, and select the correct field test methods, nondestructive testing tools, or probe opening locations.

One of the greatest challenges will likely be interior access since the leakage is occurring at the upper walkway located high above the Capitol floor. To address these challenges, we have engaged Pullman, a Structural Group Company, who will serve on our team to provide the necessary access and contractor support during the investigation. Pullman has worked closely with WDP on several similar projects and has demonstrated expertise in providing unique solutions to challenging access situations.

For every project, we strive to take a holistic approach to the investigation phase, applying both building science and diagnostic water testing techniques to systematically evaluate all of the conditions potentially contributing to the moisture issues, ensuring our recommendations address the entirety of the issue. In that light, in addition to our structural analysis, a transient hygrothermal analysis along with a thermal analysis of the existing dome and interior walls will be undertaken to determine recommendations for interior repairs.

Equally important, WDP recognizes that West Virginia must maintain occupancy and use of the building throughout the course of the investigation and repair, requiring construction phasing that minimizes disruption. WDP's commitment to providing practical engineering solutions that best fit short and long-term objectives is inherent to the high quality service we provide.

Approach

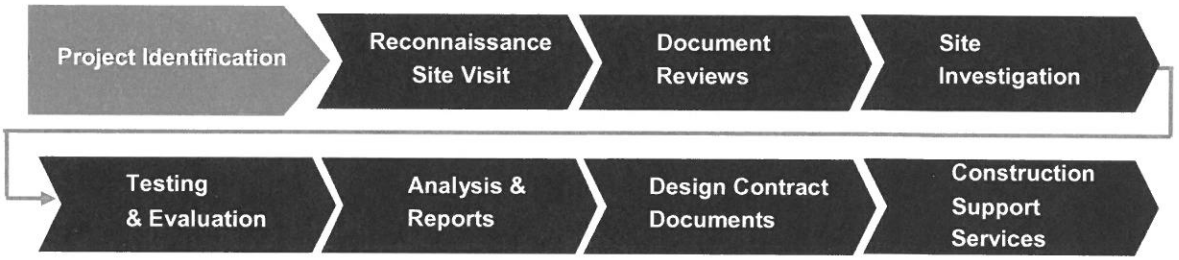
"Creating lasting solutions that extend the service life of buildings or structures is at the heart of our business." – WDP & Associates

Our project approach for the evaluation of the West Virginia Capitol Dome Moisture Intrusion begins with the experience of our firm. Our core business lies in diagnosing problems in buildings and developing repair solutions tailored to the owner's needs and budgetary limitations: this is what we do. WDP & Associates was founded on the award-winning expertise of the firm's Principals and Associates in the field of forensic engineering. Building upon advanced engineering degrees and years of experience, WDP's staff continues to conduct research and analysis in the field of building science and the performance of building envelopes. This knowledge is enhanced through our involvement on national committees for the development of building codes, industry standard test methods and guidelines that will be utilized for the successful evaluation and repair of the West Virginia Capitol Dome.

WDP & Associates

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:

- Continued occupancy of the building
- Special considerations regarding historically significant building components
- Access limitations or considerations
- Procedures for approval of exploratory opening patches
- Schedule and budget constraints

Document Review – WDP will review all available project information including drawings, specifications, and submittals from the Original Construction in 1932, as well as the 1996 inner dome repair project, the 2005 renovation of the outer dome, the 2007-2008 exterior restoration of the upper dome/rotunda, and the current roofing project. This task will enable WDP to understand the design and service history of the building, develop a plan for the investigation, and aid in selection of the correct field test methods, nondestructive testing tools, or probe opening locations. Commonly, this involves identification of the likely flow paths for moisture infiltration into the building as well as understanding of the moisture management systems currently in place.

Reconnaissance Site Visit – Concurrently or shortly after the document review, an initial site reconnaissance visit will be performed by WDP, along with our sub-contractor and a

representative for West Virginia. During the initial site visit, special project needs or concerns will be further identified or defined. Proposed testing locations will be identified based on the observed/reported leakage locations such that the necessary access can be determined for the investigation.

Site Investigation – WDP's staff will perform all of the required field testing as outlined in the RFP and as required to determine the cause of the moisture infiltration. One of the greatest challenges will likely be interior access since the leakage is occurring at the upper walkway located high above the Capitol floor. To address these challenges, we have engaged Pullman, a Structural Group Company, who will serve on our Team to provide the necessary access and contractor support during the investigation. Pullman has worked closely with us on several similar projects and has demonstrated expertise in providing unique solutions to challenging access situations. WDP has the in-house capabilities to conduct all the required standardized and non-standardized test methods required for the investigation. Our field investigation will include: visual and tactile surveys, infrared/thermal imaging, diagnostic water and air leak testing, and other methods as required if unique conditions are encountered. If any immediate structural or life safety issues are identified, WDP will immediately notify West Virginia.

WDP & Associates

For every project, we strive to take a holistic approach to the investigation phase, applying both building science and diagnostic water testing techniques to systematically evaluate all of the conditions potentially contributing to the moisture issues, ensuring our recommendations address the entirety of the issue. For this project our investigation will be conducted in general accordance with ASTM E2128, "Standard Guide for Evaluating Water Leakage of Building Walls." We anticipate we will utilize the following testing procedures:

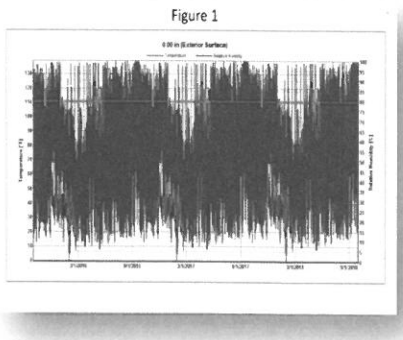
- ASTM C1715 testing
- Spray nozzle testing in general accordance with AAMA 501.2
- Masonry Saturation Testing

Additionally, it may be necessary to install ASTM F2170 humidity probes in order to limit destructive openings and to monitor the interstitial changes in moisture within building components.

Testing and Evaluation – If required, WDP has the capability to sample materials and perform laboratory testing in-house. Often the evaluation of moisture related issues in historic buildings requires the verification of existing material properties or composition to determine the most suitable repair materials for repairs. Available testing includes: determining strength of materials and other performance properties, investigation of microscopic deficiencies, chemical composition analysis for corrosion and chemical incompatibility issues, and material testing of masonry materials in accordance with ASTM

Standards.

Analysis and Report – WDP will thoroughly analyze our findings from the document review, site investigation, and testing, and will prepare a detailed written report for West Virginia. The report will present WDP's observations, conclusions, and appropriate design recommendations. In addition to our structural analysis, a transient hygrothermal analysis along with a thermal analysis of the existing dome and interior walls will be undertaken to determine recommendations for interior repairs. WDP's commitment to providing practical engineering solutions that best fit short and long-term objectives is inherent to the high quality service we provide.

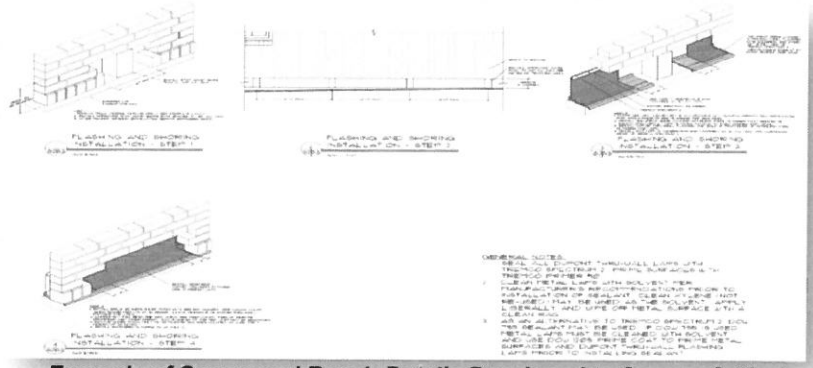


Graphical Representation of WUFI Analysis

Design Contract Documents – More often than not, our clients must maintain occupancy and use of their building(s) throughout the course of the investigation and repair, requiring construction phasing that minimizes disruption. We routinely transition from the evaluation of problems into the production of repair and restoration design documents and are experienced in the development of design documents that phase or sequence the work to accommodate existing conditions or occupancy requirements to the greatest degree possible.

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. Construction documents are often presented in isometric form or in sequential construction to assist contractors with proper sequencing, and when required, employ specialty sub-consultants in the areas of egress, safety, hazardous materials abatement, and fire code. WDP also places special emphasis on providing clear delineation of work items within the bid document to minimize miscommunication during the bid process.

Construction Support 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.



Example of Sequenced Repair Details Developed to Convey Critical Repair Sequence for Brick Removal, Temporary Shoring and Flashing Repair

Similar Projects and How Issues Were Resolved

WDP & Associates Consulting Engineers, Inc. has extensive experience with buildings experiencing moisture infiltration issues. We have highlighted and detailed many of these projects in our demonstrated experience section (Section 4), but have listed below those projects which to date have been fully completed.

WDP & Associates

WVU South Agricultural Sciences Building – Façade Replacement
Morgantown, WV

Failures of below-grade waterproofing and existing insulated metal panel systems resulted in water infiltration and interior biological growth at the South Agricultural Sciences Building of West Virginia University in Morgantown, West Virginia. WDP performed hygrothermal and structural analyses to assess the exterior cladding and provided veneer replacement options and a schematic design for new construction for the owner.

WVU Engineering Sciences Building – Façade Investigation
Morgantown, WV

The Engineering Sciences Building at West Virginia University in Morgantown, West Virginia, experienced widespread leakage and brick distress throughout the eleven story building. WDP surveyed the exterior façade and made exploratory openings to analyze the reason for the water infiltration and to determine appropriate repair options.

Virginia State Capitol – Stair & Skylight Leakage
Richmond, VA

The historic Virginia State Capitol Building experienced water leakage and cracks along the stairs of the South Portico entrance of the original building and water intrusion along the skylights of the south terrace of its 2007 underground expansion. WDP was retained to investigate and identify the specific source of these leaks and provided repair alternatives in order to prevent further infiltration.

Library of Virginia – Water Infiltration Investigation
Richmond, VA

In 2012 the Library of Virginia experienced water infiltration at various locations, which contributed to occupancy discomfort. WDP conducted an investigation to detect the specific infiltration points and to identify visible deficiencies in the exterior panels, roofing, and window systems. At the conclusion of the investigation, WDP recommended various repairs to the roof, cladding, and windows to resolve the leakage and also provided counsel for incorporating redundancy into the existing cladding system through installation of specific envelope improvements.

Point of Contact Information

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

WDP & Associates

Name: Mr. Gerald A. Dalrymple, P.E.; Principal
Address: 10621 Gateway Boulevard, Suite 200, Manassas, VA 20110
Phone: 703-257-9280
Email: adalrymple@wdpa.com
Signature:

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:

Personnel Chart

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

Name & Title	Project Role	Qualifications	Total Years Exp.	Investigation
WDP & ASSOCIATES CONSULTING ENGINEERS, INC. *(Moisture Protection / Building Envelope Sciences / Structural Engineering / Field Testing / Remediation & Repairs / Material Analysis / Architecture / Historic Preservation / Plumbing)*				
Gerald (Andy) Dalrymple, P.E., Principal	Principal-in-Charge	MS/1985/Civil Engineering BS/1983/Civil Engineering Professional Engineer / WV, VA, NY, NJ, VA, AL, CT, DC, FL, GA, IN, MD, MS, MO, NC, PA, SC, TX, TN	32	✓
Rex A. Cyphers, P.E., Associate Principal	Project Manager	MS/2003/Civil Engineering BS/2002/Civil Engineering Professional Engineer / WV, VA Licensed Field Auditor by Air Barrier Association of America	12	✓
Andrew Wagner, P.E., Senior Engineer	Senior Engineer	BS/2007/Civil Engineering Professional Engineer / VA	8	✓
Carly Wagner, P.E., Project Engineer	Project Engineer	BS/2009/Civil & Infrastructure Engineering (Magna Cum Laude distinction) Professional Engineer / VA	7	✓
Jody Knorowski, EIT Staff Engineer	Staff Engineer II	MS/2012/Civil Engineering BS/2010/Civil Engineering (focus on Structural Engineering) Engineer-in-Training	3	✓
Rick Weston, EIT Staff Engineer	Staff Engineer II	BS/2012/Civil Engineering Engineer-in-Training	3	✓
Pullman – A Structural Group Company *(Contractor Support Team and Contractor Tasks)*				
Robert Gensel, Division Manager	Contractor Support	Physics/Co-operative Engineering Program - 1981-1983 Biomedical Engineering-1983-1985 Certification in erection of system scaffold, swing stage, and conventional scaffold Certified as Level 1 Technician, for access to facades via vertical descent equipment Certified in design and erection of cuplock system scaffolding Structural Repair System Certification Program: London, England 2009 and 2011	29	✓

SECTION 2: Firm / Team Qualifications

Name & Title	Project Role	Qualifications	Total Years Exp.	Investigation
Mark A. Bott, Project Manager	Contractor Support	Master Certificate in Applied Project Management Master Certificate in Strategic Project Management OSHA 10 & 30 Hour Training First Aid & CPR	8	✓

WDP & Associates

WDP's Principals, Associates, and Senior Engineers are deeply engaged in the development of the technical requirements of codes, standards and specifications associated with 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 (ACI)
- 216 Fire Resistance and Fire Protection of Structural Members
- 370 Blast and Impact Load Effects
- 440 Fiber-Reinforced Polymer Reinforcement
- 546 Repair of Concrete

American Society for Testing & Materials (ASTM)
- C09 Concrete and Concrete Aggregates
- C09.60 Testing Fresh Concrete
- C09.61 Testing Strength
- C09.64 Nondestructive and In-Place Testing
- C09.98 – Chairman – Evaluation of Laboratories
- C11 Gypsum and Related Building Materials and Systems
- C12 Mortars and Grouts for Unit Masonry
- C15 Manufactured Masonry Units
- C18 Dimension Stone
- C24 Building Seals and Sealants
- C926 – Co-Chairman – Standard Specification for Application of Portland Cement Based Plaster
- C1063 – Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement Based Plaster
- D08 Roofing and Waterproofing
- D18 Soil and Rock
- D18.99 Quality Control
- E05 Fire Standards
- E06 Performance of Buildings
- E06.51 Performance of Windows, Doors, Skylights and Curtain Walls
- E06.55 Performance of Building Enclosures
- E36 Accreditation & Certification
- E36.70 Agencies Performing Construction Inspection, Testing and Special Inspection
- E58 Forensic Engineering
- E60 Sustainability
- E241 – Chairman – Standard Guide for Limiting Water-Induced Damage to Buildings
- E699 Standard Practice for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating of Building Components
- WK25809 Task Group – Chairman – Standard Guide for Specifying and Testing Field-Constructed Exterior Building Wall System Mock Ups in New Construction

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

The Masonry Society (TMS)
- Main Committee Secretary, 402/602 Building Code Requirements & Specifications for Masonry
- Past Committee Chair, Existing Masonry Committee
- Existing Masonry Committee – Façade Task Group
- Standards and Development Committee
- Standards and Development Committee – High Winds Task Group

National Institute for Building Sciences (NIBS)
- Board of Directors

Washington Area Council of Engineering Laboratories (WACEL)
- Past President
- Treasurer

Air Barrier Association of America (ABAA)
- Field Auditor Certification Program
- Chair, Terminations and Flashing Technical Committee
- Whole Building Air Tightness Committee
- USACE Air Testing Protocol Review Committee

RCI Incorporated (RCI)
- Registered Exterior Wall Consultant (REWC)
- Registered Roof Consultant (RRC)
- Registered Waterproofing Consultant (RWC)
- Registered Building Envelope Consultant (RBEC)

American Society of Civil Engineers (ASCE)
- ANSI A10 – Committee on Construction and Demolition
- SEI – Structural Engineering Institute
- CI – Construction Institute
- GEI – Geotechnical Engineering Institute
- TCFE – Technical Council on Forensic Engineering

Additionally, WDP's Employees have Memberships at:
- American Institute of Steel Construction (AISC)
- Chief Executive Network (CEN)
- Building Commissioning Association (BCA)
- Precast/Prestressed Concrete Institute (PCI)
- Construction Specifications Institute (CSI)
- Risk and Insurance Management Society (RIMS)

Resumes

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

WDP
& Associates

Gerald (Andy) Dalrymple, P.E., Principal

Princiapl-in-Charge

Mr. Dalrymple has over 30 years of experience in the industry and co-founded WDP & Associates Consulting Engineers, Inc. in July of 1995.

Mr. Dalrymple is involved with a wide variety of structural engineering and building envelope disciplines including failure investigations, rehabilitation of existing structures, development of restoration design specifications, construction management and inspection, and litigation support. As a nationally recognized expert in his field, he has been involved in numerous high-profile projects throughout his career and has served a variety of clients including contractors, architects, engineers, government agencies, school systems, and private sector clients. In 2010, he received The Masonry Society's TMS Service Award, and previously received a Facilities Management Recognition Award for "exemplary service during reconstruction of balconies at the historic Pavilions in Thomas Jefferson's Academic Village" by the University of Virginia Facilities Management office.

Education

MS / 1985 / Civil Engineering
BS / 1983 / Civil Engineering

Professional Registration

Professional Engineer / VA, DC, MD, NY, NJ, AL, CT, FL, GA, IN, MS, MO, NC, PA, SC, TX, TN

Professional Membership

- ASTM
- American Concrete Institute
- International Concrete Repair Institute
- The Masonry Society

Standards Committees

- Main Committee Secretary, The Masonry Society TMS 402- Building Code Requirements for Masonry Structures and TMS 602 – Specifications for Masonry Structures
- ASTM C-12 Mortars for Unit Masonry
- ASTM C-15 Manufactured Masonry Units

Representative Projects

College of William & Mary, Graduate Housing Façade Replacement, Buildings 1 – 9, Williamsburg, VA: WDP was retained to evaluate water penetration, cracking and differential movement problems in the brick veneer of the buildings, determine appropriate repair options, and develop plans and specifications for the selected repairs. Provided contract documents and on-site engineering services during the comprehensive façade repair and replacement program that was conducted over a seven year period. Construction duration for each phase was an ambitious 90 calendar days during summer break.

Saint John Paul II National Shrine, John Paul II Shrine and Institute, Inc./HOP Properties, Inc., Washington, D.C. Conducted a condition assessment of the building envelope and assisted the renovation design team in production of construction document and construction quality assurance. Services included water penetration testing of masonry, storefronts, and curtainwall systems. Hygrothermal analyses were performed to assist in the design of wall systems for the archive and display areas. Performed peer reviews of design documents related to the building envelope and terrace paving waterproofing renovations. Also performed field construction monitoring during building envelope repairs.

Exploratory Hall Building Envelope Consultant, George Mason University, Donley's Inc., Fairfax, Virginia. WDP performed an evaluation of water infiltration issues at the completed facility to determine water penetration paths and develop repair methods to address chronic leakage. Systems evaluated included water penetration through roof top mechanical systems, waterproofing under toppings slabs and metal façade panel systems.

West Virginia State Board of Registration
for Professional Engineers

GERALD A DALRYMPLE
WV PE [redacted]

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 June 30, 2015

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.

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

- Wagner, A.W. & Cyphers, R.A. "Study of Mortar's Influence on the Water Penetration Rate of Brick Veneers" pending at the 12th North American Masonry Conference (NAMC) to be held May 17-20, 2015, in Denver, CO.
- Cyphers, R.A. & Weston, R.H. "Who'll Stop the Rain: Innovative Brick Veneer Assembly Performs after Insulated Metal Panels Failed" pending at the 12th North American Masonry Conference (NAMC) to be held May 17-20, 2015, in Denver, CO.
- "Envelope Commissioning on a Budget" presented November 20, 2014, with Kevin Lewis, Loudoun County Public Schools, at the Construction Owners Association of America (COAA) Fall Owners Leadership Conference in Nashville, TN.
- May, C.M., Cyphers, R.A., & Whitlock, R.A. "Evaluation of the Potential for Corrosion, Mold Growth and Moisture Accumulation within Typical Brick Veneer Wall Assemblies Designed per 2006 International Energy Code in a Mixed Humid Climate" to be published in the proceedings of ASTM STP 1549 on *Building Walls Subject to Water Intrusion and Accumulations: Lessons from the Past and Recommendations for the Future*, April 14-15, 2013, Indianapolis, IN.
- Peterson, J.E., Nash, W., & Cyphers, R.A. "Value Analysis from Behind the Curtain – The Illusion and the Reality of Value Analysis and Building Enclosures" to be published in the *Building Walls Subject to Water Intrusion and Accumulations: Lessons from the Past and Recommendations for the Future*, April 14-15, 2013, Indianapolis, IN.
- Cyphers, R.A., & Wagner, A.W. "When the Levee Breaks, Preventing Water Penetration Through Brick Veneer," *The Construction Specifier*, September 2012
- Cyphers, R.A. & May, C.M. "The Challenges of High Performance Building Envelope Design and Construction," CONSTRUCT 2011, Construction Specifier Institute, September 13-16, 2011, Chicago, IL.
- Cyphers, R.A. & Cyphers, A. "Building Envelope Design Peer Review–Success, Failures and Strategies," Construction Owners Association of America (COAA), Spring Owners Leadership Conference, May 4-6, 2011, Baltimore, MD.
- 'Why Buildings Leak," Building a Sustainable Future – A Design and Construction Conference, March 29, 2011, Richmond, VA.
- "The Challenges of High Performance Building Envelope Design and Construction," James River Green Building Council, September 14, 2010, Charlottesville, VA.
- Whitlock, R.A. & Cyphers, R.A. "Comparative Study of Freeze and Thaw Test Procedures on Molded Brick," ASTM International Masonry Symposium, June 8, 2010, St. Louis, MO.
- Whitlock, R.A. & Cyphers, R.A.. "Comparative Study of Two Freeze and Thaw Test Procedures on Molded Brick," 7th International Masonry Conference,

November 2006, sponsored by the British Masonry Society.

- "Strengthening and Preserving Historic Covered Bridges with FRPs," Poster Session, 2003 Association for Preservation International Annual Conference, September 2003.
- Cyphers, R.A., Kemp, E.L, & GangaRao, Hota, V.S. "Preservation of Historic Covered Bridges Using Glass Fiber Reinforced Polymers," SAMPE International Technical Conference, November 2002.

Your **ACTIVE PE** renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until June 30, 2015 may be detached and used until that date unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. Please sign the back of this pocket card and carry the registration with you.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers
300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free

THIS IS YOUR RENEWAL PAYMENT RECEIPT

(in addition to your secondary records of either a canceled check or credit card statement, as well as a confirmation email and printed confirmation page if renewing via our website)

PLEASE SAVE THIS FOR YOUR RECORDS

West Virginia State Board of Registration for Professional Engineers

REX A CYPHERS
WV PE [redacted]

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 June 30, 2015

Center of Excellence
Technology Transfer
Specifications /Details
Site Quality Assurance Programs
Manufacturer Accreditation
Contractor Accreditation
Installer Certification

air barrier
abaa
association of
america

Rex Cyphers
Whitlock Dalrymple Poston & Associates, P.C.
335 Greenbrier Dr., Suite 205
Charlottesville, VA 22901

RE: 2015 Licensed Field Auditor Renewal

Dear Mr. Cyphers,

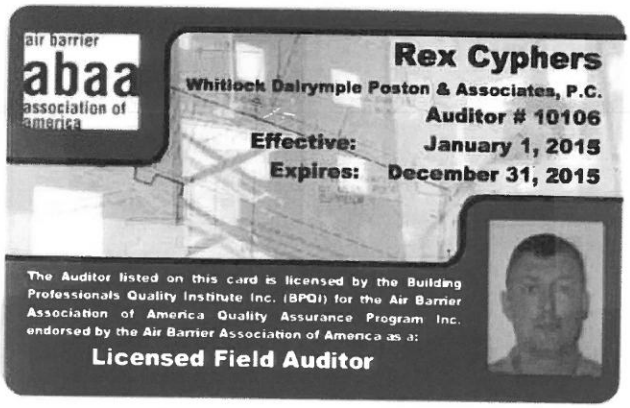
Thank you for renewing your Field Auditor License. Please find enclosed your 2014 Licensed Field Auditor identification card. Please note that as a Licensed Field Auditor, you must carry this card at all times while auditing for the Air Barrier Association of America, Inc. This identification card is valid until December 31st, 2015.

I would like to thank you for your efforts, they are greatly appreciated.

If you have any questions, please do not hesitate to contact me at 1.866.956.5888 or by email at uportillo@airbarrier.org

Best regards,

Uri Portillo
Quality Assurance Administrator
Air Barrier Association of America



[www.airbarrier.org]
1600 Boston-Providence Hwy Walpole, MA 02081 | T: 1.866.956.5888 | F: 1.866.956.5819

Andrew Wagner, P.E., Senior Engineer

Andrew W. Wagner, P.E. is currently a Senior Engineer with WDP & Associates Consulting Engineers, Inc. He performs and manages many architectural, structural and material engineering activities. He specializes in facade restoration and repair, building envelope design and detailing, concrete repair design, fenestration specification and testing, submittal and RFI review, construction observation and review, as well as air barrier audits for the Air Barrier Association of America.

Mr. Wagner has authored several papers on spray polyurethane foam as well as water penetration through masonry which have been published by ASTM, the North American Masonry Conference, and CSI.

Education
BS / 2007 / Civil Engineering

Professional Registration
Professional Engineer / VA

Professional Membership
- ASTM
- CSI

Standards Committees
- ASTM E06.41 Air Leakage and Ventilation Performance
    - Task Group Chair: Standard E241 "Standard Guide for Limiting Water-Induced Damage to Buildings"
- ASTM E06.55 Performance of Building Enclosures
- ASTM E06.51 Performance of Windows, Doors, Skylights and Curtain Walls
- ASTM E06.24 Building Preservation and Rehabilitation Technology

Representative Projects

Rouss & Robertson Hall, University of Virginia, Charlottesville, VA – Conducted a field investigation to diagnose reported leakage. Developed repair details for multi-wythe masonry walls, terrace drains, and stone coping. Performed construction observation during repairs and advised University in-house masons on temporary shoring and support conditions to facilitate the removal and replacement of brick masonry to facilitate flashing installation.

Library of Virginia, Richmond, VA – Conducted a field investigation to diagnose reported leakage through exterior limestone veneer supported on strong back system, curtain wall, and roof integrations with mechanical penthouse.

North Court Residence Hall, University of Richmond, Richmond, VA – Conducted a field investigation to evaluate reported water infiltration issues on residence hall buildings constructed in 1914 and 1947. Conditions evaluated included leaded glass windows, mass masonry walls, sloped slate roof assemblies, and below grade walls. Worked closely with Architect, University Project Manager, and University Facilities personnel to develop Owner's Project Requirements and a Basis of Design Narrative for renovations relating to the exterior envelope.

McComas Hall, Virginia Tech, Blacksburg, VA – Performed a field investigation to diagnose reported leakage through stone masonry walls, windows, and coping. Provided Construction Administration services during the execution of repairs.

Clemons Library, University of Virginia, Charlottesville, VA – Performed a field investigation of reported leakage associated with the roofing system located below a pedestal set pavers system and exterior plazas above interior space as well as exterior stair conditions and masonry walls. Developed repair documents to remedy interior leakage issues and provided Construction Administration services during repairs.

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
06-30-2015

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

NUMBER
[redacted]

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

ANDREW WILSON WAGNER
[redacted]

Gordon N. Dixon, Director

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

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(POCKET CARD)

COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402048543 EXPIRES: 06-30-2015

ANDREW WILSON WAGNER
124 SYDNEY WAY
PALMYRA, VA 22963

(FOLD)

(DETACH HERE)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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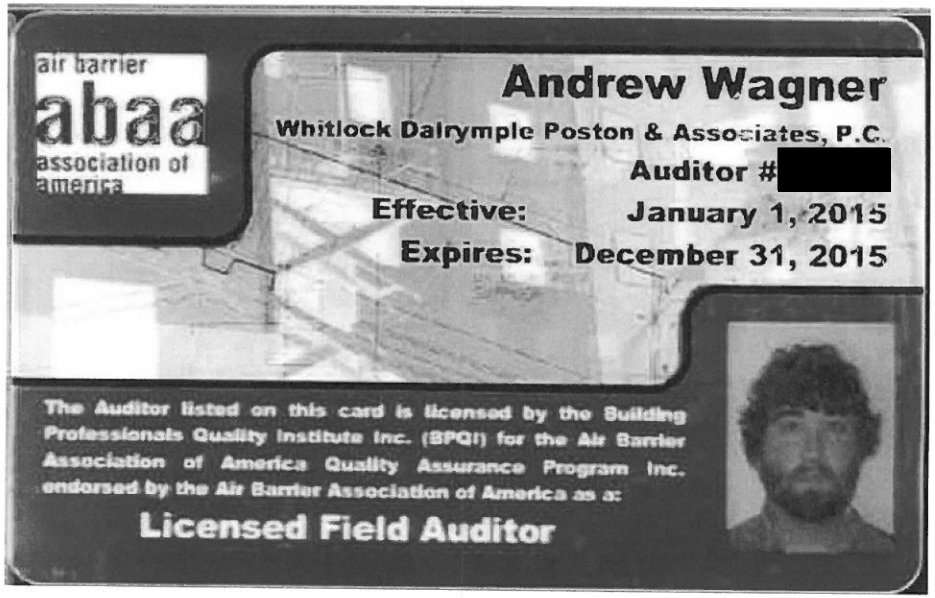
air barrier
abaa
association of america
Andrew Wagner
Whitlock Dalrymple Poston & Associates, P.C.
Auditor #[redacted]
Effective: January 1, 2015
Expires: December 31, 2015
The Auditor listed on this card is licensed by the Building Professionals Quality Institute Inc. (BPQI) for the Air Barrier Association of America Quality Assurance Program Inc. endorsed by the Air Barrier Association of America as a:
Licensed Field Auditor

Carly Wagner, P.E., Project Engineer

Building Sciences / Hygrothermal Analysis

Ms. Wagner has seven years of experience in the industry and with WDP & Associates Consulting Engineers, Inc. Ms. Wagner is involved with a wide variety of architectural engineering disciplines including failure investigations, rehabilitation of existing structures, development of restoration design specifications and drawings, peer review of construction documents, construction management and inspection and litigation support. Ms. Wagner is also trained and experienced in condensation analysis including steady state and transient hygrothermal analysis. Aside for the numerical models, she has developed a keen awareness for practical aspects of building sciences that are not always accounted for in the models. This is her specialty and focus of a majority of her projects. Ms. Wagner won the American Concrete Institute Student of the Year, National Capital Chapter, Spring 2008.

Education
BS / Civil and Infrastructure Engineering / 2009
(Magna Cum Laude distinction)

Professional Registration
Professional Engineer / VA

Training
WUFI-ORNL 5.1/WUFI-Pro 5.1 & Weather Analyzer 1.0; WUFI-ORNL Certified Instructor; &
WUDI 2D and WUFI Advanced / Oak Ridge National Laboratory and Fraunhofer IBP, 2011

Representative Projects

South Agricultural Sciences Building, West Virginia University, Morgantown, West Virginia. Assessed the below grade waterproofing, existing metal panel cladding and windows on a newly constructed building suffering from extensive water infiltration and interior mold growth. Developed feasibility study that examined the energy code and hygrothermal implications of replacing the existing cladding. Developed full Bid and Construction Documents, and performed construction administration for the restoration project.

Alderman Dormitories Residence Halls Project Phases II, III, & IV, University of Virginia Term Contracts for A/E Services, Charlottesville, Virginia. Performed peer review of the design documents Construction phase services included detailed reviews of related submittals, RFIs and PCOs.

Institute for Contemporary Art, Virginia Commonwealth University, Richmond, Virginia. Conducted parametric hygrothermal analyses of the proposed roof and wall assemblies, provided insulating and vapor resistive materials recommendation for envelope for the unique interior operating conditions required of art museums.

Newcomb and Peabody Hall Renovations, University of Virginia Term Contracts for A/E Services, Charlottesville, Virginia. Terrace renovations including full waterproofing and perimeter flashing replacement, development of Contract Documents and Construction Administration.

New Elementary School #1, Arlington County Public Schools Term Contract, Arlington, Virginia. Hygrothermal analysis of insulated concrete form wall systems for County's first Net Zero energy elementary school.

Virginia State Capitol Skylight & Plaza Water Infiltration, Virginia Department of General Services, Richmond, Virginia
Conducted diagnostic water testing and observed existing conditions to identify issues contributing to the active water infiltration occurring at the Capitol below the precast concrete/glass block skylight and the historic steps leading from Thomas Jefferson's original building down to the new pedestrian plaza. Developed repair documents for the hot applied waterproofing at the steps and conceptual short, medium and long term repair options for the skylight.

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

EXPIRES ON
05-31-2015

NUMBER
[redacted]

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

CARLY MARIE MAY
[redacted]

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Gordon N. Dixon, Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402051589 EXPIRES: 05-31-2015

CARLY MARIE MAY
[redacted]

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(DETACH HERE)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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10010 (7/11) 107028-3

Jodi Knorowski, EIT, Staff Engineer II

Staff Engineer II

Ms. Knorowski is a Staff Engineer II with WDP & Associates Consulting Engineers, Inc. Ms. Knorowski has provided professional design and construction administration services for post-occupancy failures of existing buildings related to the building envelope. She has performed diagnostic field investigations to determine the root cause of these failures in order to develop repair recommendations. In this process, she has utilized Hygrothermal modeling techniques to analyze the long-term effects of heat and moisture movement through a wall or roof assembly. Ms. Knorowski has also provided clients with construction monitoring services for new construction and performed quality assurance testing and observations of the structural, material, and architectural elements of the building envelope.

Education

MS / Civil Engineering / 2012
BS / Civil Engineering (focus on Structural Engineering) / 2010

Professional Registration

Engineer-in-Training / VA

Professional Membership

- Women in Design – Charlottesville Chapter

Representative Projects

Repairs to Whisnand Terrace and Wilkinson Court Wall, University of Virginia Term Contracts for A/E Services, Charlottesville, VA – Staff Engineer/Waterproofing Repair: Developed Contract Documents and provided construction administration services for renovations and upgrades including full waterproofing, perimeter flashing replacement, and brick paver and veneer replacement. Conducted quality assurance mock-up testing in accordance with ASTM C1601 to verify acceptable water penetration rates through brick veneer.

John Paul Jones Arena Exterior Façade Repairs, University of Virginia Term Contracts for A/E Services, Charlottesville, VA – Staff Engineer/Building Envelope: Conducted comprehensive investigation and evaluation of building envelope components to determine sources of air leakage and water infiltration. Developed Contract Documents for exterior facade repairs to address bulk air leakage and water infiltration. Provided construction administration services for repairs at the Penthouse Level including submittal review, RFI response, and observation of construction progress. Participated in Value Management Process and cost estimate review for Lower Façade Repair scope.

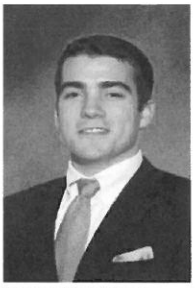
University Medical Center Air Infiltration Investigation, University of Virginia Term Contracts for A/E Services, Charlottesville, VA – Staff Engineer/Building Envelope: Developed a site specific safety plan for WDP personnel accessing the site during the field investigation of the 7th and 8th floor windows. The field investigation will consist of identifying existing conditions that are contributing to frost formation and mold growth on the interior of the building.

Gilmer-Chemistry Renovation, University of Virginia Term Contracts for A/E Services, Charlottesville, VA – Staff Engineer/Building Envelope: Conducted a field investigation consisting of a visual survey, evaluation of isolated structural building components, testing of window systems for air leakage and water infiltration, and hygrothermal analysis of existing wall systems. Anticipating involvement in the Design Team to assist in the development of the Schematic Design and Contract Documents, and providing construction phase services.

Law School Window Replacement Quality Assurance Testing, University of Virginia Term Contracts for A/E Services, Charlottesville, VA – Staff Engineer/Building Envelope: Conducted quality assurance testing on newly installed windows in accordance with ASTM E783 and ASTM E1105 to verify acceptable air and water infiltration rates.

Rick Weston, E.I.T., Staff Engineer II

Staff Engineer II



Mr. Weston's experience encompasses a wide variety of architectural and structural engineering disciplines on projects, including structural and water infiltration failure investigations. He performs peer reviews of façade design; forensic/diagnostic field investigations on building envelopes and structural components; develops design documents for the retrofit/rehabilitation of various buildings and structures; and performs construction administration/monitoring services. He can also perform masonry and fenestration quality assurance testing, as well as NDT.

Education
BS / Civil Engineering / 2012

Professional Registration
Engineer-in-Training / SC

Professional Membership
- The Masonry Society
- Construction Specification Institute, Member

Representative Projects

South Agricultural Sciences Building-West Virginia University, Morgantown, WV: Developed drawings and specifications to remove and replace the existing façade on a mixed use academic building. The existing building was plagued with air and water infiltration issues, and numerous design challenges had to be overcome. The design allowed for the existing lab and research spaces to remain in operation during construction. WDP provided construction administration services during construction including owner bid assistance, preconstruction meetings, submittal reviews, RFI responses, additional designs to overcome the unforeseen, and routine site visits.

Special Purpose Housing Waterproofing, Virginia Tech Term Contract for Building Façade Restoration Analysis Services, Blacksburg, Virginia. Performed water testing on the existing masonry and waterproofing to determine the source of water infiltration at the 8 buildings housing complex. Developed design documents for repairs and assisted the University with Contractor selection. Performed construction administration services along with full review and approval of RFIs, submittals, pay applications, and change orders.

University of Richmond, Thomas & Jeter Halls Façade Renovations, Richmond, VA
The University engaged WDP to assist in the design upgrades to two multiwythe brick dormitory buildings, originally constructed in the 1910s, to extend the service life of the historic buildings and bring them up to the most current energy code standards. In addition, WDP provided extensive coordination and direction on both the waterproofing and window replacement.

Battle Building Children's Hospital, University of Virginia Term Contracts for A/E Services, Charlottesville, Virginia. Performed Mockup reviews and assisted the design team in developing unique façade integration details. We provided construction monitoring services concentrated on the building envelope, including site visits, RFI and submittal reviews, and quality assurance testing.

Northridge Medical Office Building, University of Virginia, Charlottesville, Virginia. Performed building envelope investigation including diagnostic testing, and exploratory openings to determine the cause of water infiltration problems. The structural support elements for the cladding were also structurally analyzed for potential cladding replacement assessed through a cladding replacement feasibility analysis.

White Hall - West Virginia University, Morgantown, WV: WDP conducted a field investigation to determine the cause of failure in pigmented cementitious flooring system. We also conducted laboratory testing, recommended repairs, and developed cost estimates.

Robert Gensel, Division Manager

Pullman-Division Manager

Robert Gensel has over 29 years of experience as an estimator and project manager in the restoration industry. He has experience as an operations and department manager for projects as high as $25 million with responsibility for teams of estimators, project managers and superintendents.

Education

Shippensburg University – Physics/Co-operative Engineering Program - 1981-1983
Pennsylvania State University – Biomedical Engineering-1983-1985

Professional Participation

- Association for Preservation Technology (APT)
- International Concrete Repair Institute (ICRI)
- National Trust for Historic Preservation
- ASTM Committee E06 on Performance of Buildings
- Sealant, Waterproofing and Restoration Institute (SWRI)
    - SWRI Board of Director assignment, 3 year term commencing February 2002
    - SWRI Board of Directors – Current term running through 2014
    - Committee Chair, SWRI Technical Resource
    - Committee: Assigned responsibility to compile for publication, "Technical Resource Manual for Historic Preservation"
    - Committee Chair: Contractor Validation Committee
    - Committee Chair: SWR Foundation

Certifications

- ASTM
- Scaffold Institute of America- Certification in erection of system scaffold, swing stage, and conventional scaffold
- Rope Access, Inc. – Certified as Level 1 Technician, for access to facades via vertical descent equipment
- Brand Scaffold Systems – certified in design and erection of cuplock system scaffolding
- Helifix Inc. – Structural Repair System Certification Program: London, England 2009 and 2011

Representative Projects

Cheney University, Humphrey's Hall(c 1904): Preservation of historic stone structure on the campus of Cheney University. Disassembly and reconstruction of stone assemblies. Construction of stone mechanical enclosures. Masonry cleaning and repointing. Retrofit anchor installation. Awarded Preservation Alliance Grand Jury Award 2011.

West Chester Univ, Recitation Hall(c 1893): Comprehensive preservation of 19th century serpentine stone facades, oldest structure on campus. Masonry cleaning, retrofit stone anchors, patching of historic green serpentine stone surfaces. Awarded Preservation Alliance Grand Jury Award 2012.

Steel Stacks Stock House, Bethlehem, Pa (c 1863): Repair, restoration and preservation of historic stone "Stock House" located on the Bethlehem Steel campus. Disassembly and reconstruction of stone facades and archways. Micro-abrasive cleaning of stone surfaces. Lime mortar repointing. Stone consolidant application. Recognized as "Project of the Year – Historic" by Masonry Magazine 2012.

Pennsylvania State Capitol (c 1902): Disassembly, salvage, repair and reconstruction of granite balustrade assemblies, site walls and entryways at main complex and Ryan annex. Poultice cleaning, dutchman repairs, stone patching and repointing, stain removal and sealant repairs. Multi phased project completed 2008 to 2011. Recognized for Mid Atlantic BX Craftsmanship awards 2008 and 2010.

Oldest Mill House, Laurel, MD.: Restoration of exterior brick and bluestone façade assemblies at the town's oldest masonry structure. Cleaning, repointing, Jahn patching and crack repair, reconstruction of rubble stone foundation. Disassemble, salvage and reconstruction of chimney and fireplace assemblies.

Mark A. Bott, Project Manager

Pullman – Project Manager

Mark Bott has experience in project management handling projects from one million to 32 million dollars in value.

Education

Master Certificate in Applied Project Management – Villanova University

Master Certificate in Strategic Project Management – Villanova University

Certifications

- ASTM
- Scaffold Institute of America- Certification in erection of system scaffold, swing stage, and conventional scaffold
- Rope Access, Inc. – Certified as Level 1 Technician, for access to facades via vertical descent equipment
- Brand Scaffold Systems – certified in design and erection of cuplock system scaffolding

Helifix Inc. – Structural Repair System Certification Program: London, England 2009 and 2011

Representative Projects

AEP John Amos Generating Station: Construction of (2) 900' Reinforced Concrete Chimneys with FRP liners - $32,000,000.

Constellation Energy Brandon Shores: Installation of (2) Chimney Roof Cap Installations and Flu Gas Duct and Liner retrofit modifications - $2,200,000.

PPL Montour Generating Station & PPL Brunner Island Generating Station: Retrofit and Strengthening Upgrade to (9) Steel Coal Silos- $2,800,000.

PPL Brunner Island: – Installation of CFRP Strengthening System to (4) conjoined concrete coal silos to extend service life 25 years - $5,460,000.

Alliant Energy Edgewater Generating Station: – CFRP Strengthening & Modification to Unit 5 Chimney - $1,100,000.

Subconsultants

PULLMAN
A Structural Group Company

PULLMAN is a specialty contracting firm that integrates technology-driven, engineered solutions into its industry-leading contracting services.

PULLMAN's capabilities include specialty design build services for new and existing structures, as well as a wide range of specialty repair and maintenance services. PULLMAN will serve as the General Contractor and overall contractual entity for the owner. PULLMAN will also subcontract any other construction trades that are necessary for the work.

WDP
& Associates

WDP & Associates and Pullman SST, Inc. have enjoyed a long and successful partnership on numerous projects together.

These projects include:

- Huebner Oaks Movie Theater (San Antonio, TX)
- WVU Summit Hall (Morgantown, WV)
- WVU Engineering Sciences Building (Morgantown, WV)
- Courthouse Square (Salem, OR)
- Indianapolis Marion County Public Library (Indianapolis, IN)
- The Guggenheim Museum (New York, NY)
- McCaskey East High School (Lancaster, PA)

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 delivering moisture investigation and repair strategies on projects of similar size and complexity for clients such as:

- Virginia Department of General Services - 5 projects in the last 5 years.
- U.S. Architect of the Capitol - 20+ projects on both buildings and utility systems since 2004
- West Virginia University - Five façade replacement, repair, and feasibility projects over the last 3 years.
- University of Virginia - 200+ projects since our first project assignment in 1995 and via Term Contracts for Building Envelope Peer Review & Consulting Engineering services over the last eight years
- Virginia Tech - 50+ projects since 2004 via Term Contracts for A/E Professional Services for Building Envelope Investigation, Analysis & Design.
- College of William & Mary - 30+ projects since 2005 via Term Contracts for A/E services.
- Roanoke Higher Education – 1930's era Art Deco building façade repair and rehabilitation.
- University of Richmond - Five projects within the last year including peer review, construction monitoring and forensic evaluation of buildings prior to renovation.
- George Washington University - 2140 and 2142 G Street, NW, Historic Masonry Façade Restoration; and 12 additional projects over the last two years.

Statement of Acceptance and Full Understanding

WDP & Associates Consulting Engineers, Inc. accepts with full understanding that any and all work produced as a result of the contract will become property of the Agency and can be used or shared by the Agency as deemed appropriate.

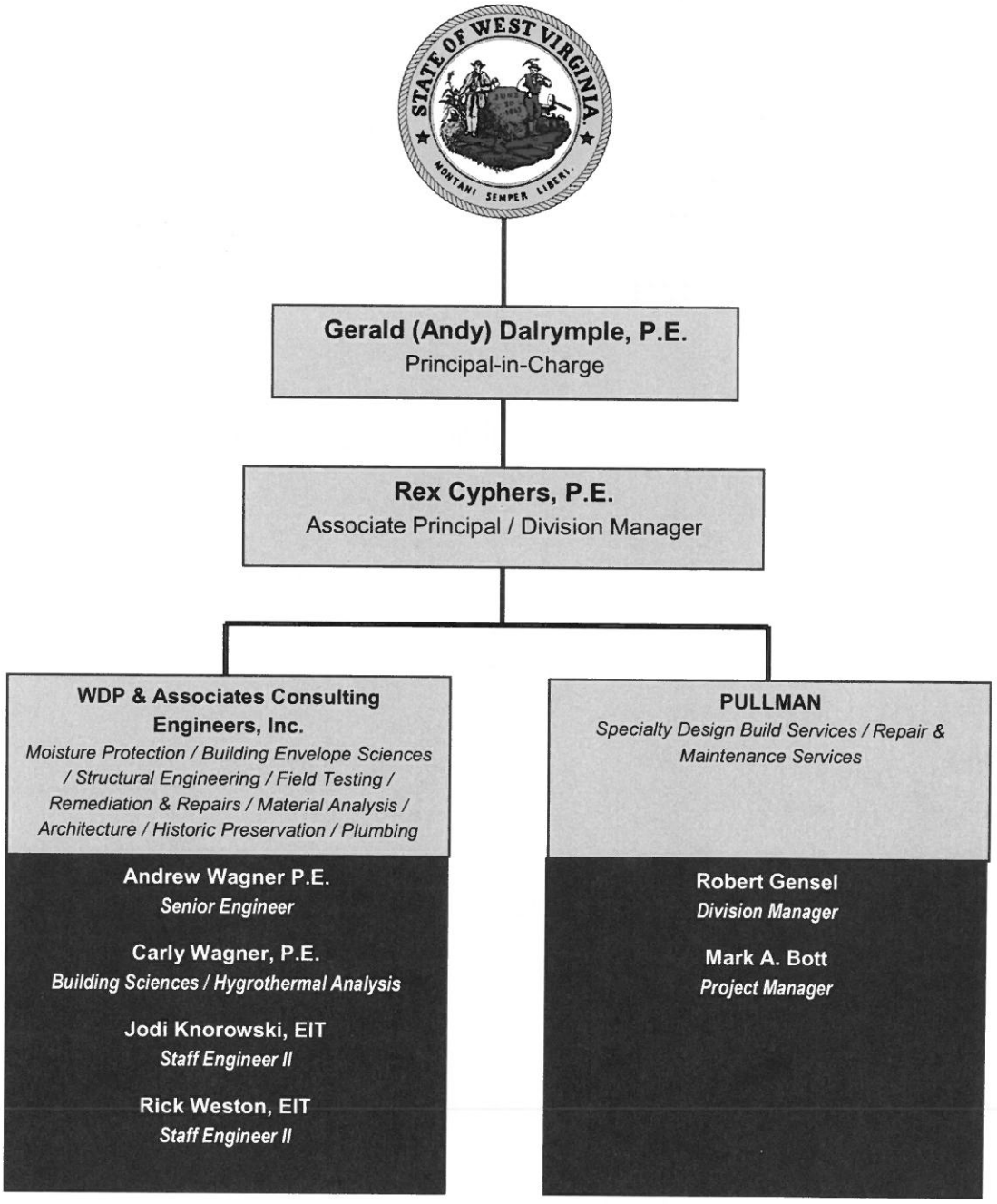
Litigation or Arbitration Proceedings

WDP & Associates Consulting Engineers, Inc. has no litigation or arbitration proceedings with any vendors associated with West Virginia, or any other Agencies of the State of West Virginia.

Organizational Chart

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

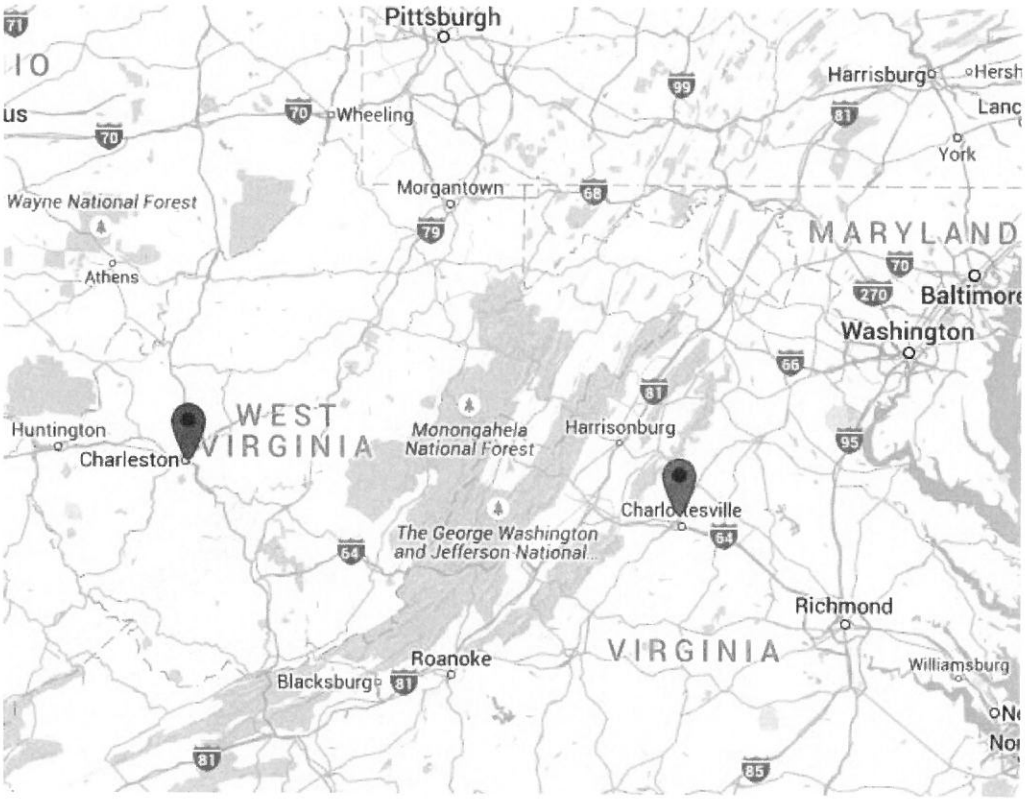
WDP & Associates



Location of Firms

Below is a map indicating where our firm is located in relation to the West Virginia Capitol Dome:

WDP & Associates



LEGEND

335 Greenbrier Drive, Charlottesville, VA 22901

West Virginia State Capitol Complex, Charleston, WV 25317

Statement of Team's Ability to Provide Services

WDP & Associates Consulting Engineers, Inc.'s ability to provide services for this project is more in detailed in our approach section.

WDP
& Associates

Project Experience

Please find the attached project sheets with the information requested as per the RFP:

WDP
& Associates

Virginia State Capitol Moisture Intrusion Investigation

Richmond, VA

Size / Cost: Original Capitol Building Square Footage not provided; 27,000 SF (New Addition) / Not Applicable

Date of Completion: 2012

WDP & Associates

OWNER'S INFORMATION

VA Dept. of General Services
Bureau of Facilities Management
1100 Bank Street
Richmond, VA 23219
Mr. Trev Crider, Project Manager
P: 804-786-3263
E: Trev.Crider@dgs.virginia.gov

Project Description

Designed by Thomas Jefferson and built in 1788, the Virginia State Capitol is a National Historic Landmark and accommodates the Virginia General Assembly, the oldest legislative body in the Western Hemisphere. WDP was retained to investigate leakage and cracks both within the historic Capitol building and in an underground expansion completed in 2007.

The original Capitol building experienced leaks along the stairs of the South Portico entrance of the building. WDP determined that the source of the moisture infiltration were cracks in the bases of the original columns and recommended appropriate repairs to prevent further water intrusion.

The underground addition to the Virginia Capitol building experienced leaks through the south terrace skylight and failed waterproofing on the plaza. WDP was retained to evaluate the water infiltration, conduct a condition survey, and perform diagnostic testing to determine the underlying chronic structural issues and the cause of acute failures of previously attempted exterior surface repairs. Based upon the findings, WDP also provided repair alternatives consisting of temporary repairs, repair-in-place option to address the waterproofing issues only, structural repairs to the skylight, and an option for the complete rebuild of the skylight.

WDP Team Members

*Rex A. Cyphers, P.E. - Project Manager
*Andrew Wagner, P.E. – Senior Engineer

General Contractor

Not applicable

*Proposed for this project

U.S. Capitol Architectural and Structural Consulting Services

Washington, DC

Size / Cost: 1.5 million SF (total) / Confidential
Date of Completion: Ongoing (Start Date: October 2014)

WDP & Associates

CLIENT'S INFORMATION

John C. Grimberg Co., Inc.
3200 Tower Oaks Boulevard, Suite 300
Rockville, MD 20852
Stephen Grimberg, Principal
P: 301-881-5120
E: sgrimberg@grimberg.com

Project Description

WDP was engaged by the client to provide architectural and structural consulting services for the general contractor responsible for the installation of new smoke ventilation fans into the monumental stairwells of the United States Capitol building in Washington DC. The project involved the removal of decorative "laylights" in the ceiling of the stairwell that would be replaced with smoke evacuation systems in the event of a fire. The general contractor requested that WDP evaluate the potential for performing all of the work from the attic level above the stair using a self-supporting work platform to perform the demolition into the structural roof system and copper roofing and sequence the removal of the laylights components to permit the utilization of the stairwells during construction. This required the analysis of the historic cast iron laylights frame and iron tension rod supports, careful scrutiny of the sequence of construction, development of temporary protection scheme for both occupants and construction operations, development of rooftop temporary protection details for weather and security, and interaction with mechanical consultants, historic preservation consultants and remediation contractors on the construction methods intended to be employed. The overall construction plan was presented to the owner for review and comment by the owner. Future work includes involvement during construction process to observe and monitor the work being performed to verify that the historic fabric of the monumental stair, the mural artwork and the historic laylights are preserved.

WDP Team Members

J. Eric Peterson, P.E. – Project Manager
Dean Yates, AIA – Senior Architect

General Contractor

John C. Grimberg Co., Inc.

*Proposed for this project

Library of Virginia and State Archives Water Infiltration Investigation

Richmond, VA

Size / Cost: 100,000+ SF / < $1,000,000 (Estimated Construction Cost for Repairs)
Date of Completion: 2012

WDP & Associates

OWNER'S INFORMATION

Department of General Services / Sub-consultant to Ballou Justice Upton Architects
203 Governor St.
Richmond, VA 23219
Mr. Ronald White, Architect
P: 804-786-2437
E: ron.white@dgs.virginia.edu

Project Description

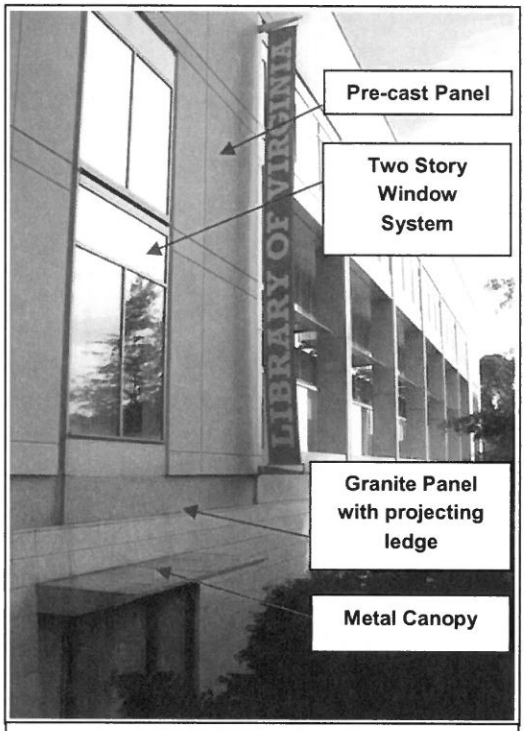
The Library of Virginia and State Archives, located in Richmond, Virginia, is a six-story building constructed on a two-story below-grade parking garage. The building footprint encompasses an entire city block. The exterior façade of the building consists of variety of exterior cladding components supported by a steel strong-back system. The first floor was constructed with granite panels that slope toward a ledge extending around most of the building perimeter. The remainder of the building is clad with limestone panels, window walls, and aluminum panel curtain wall systems. The cladding elements primarily rely on sealant joints between wall components forming a "barrier" type water management system. Both silicone and urethane sealant products were used depending on the substrate to which they were adhered.

WDP conducted an independent on-site investigation at the request of the Department of General Services to determine the cause of reported water infiltration at several locations throughout the building by the occupants. Exterior surfaces were surveyed to identify visible deficiencies in the exterior panels, roofing, and window systems. A visual inspection of the entire building was conducted to determine areas that present potential for water infiltration issues while more detailed inspections were conducted at areas adjacent to the testing locations. A survey of the interior finishes of the building was performed to identify and document locations of previous water intrusion and damage. Water testing and inspection openings were conducted at specific locations in an effort to recreate the reported leakage and trace the water paths from exterior building components onto interior surfaces of the building. The scope of the investigation focused on the evaluation of four active leak locations reported by the building's occupants.

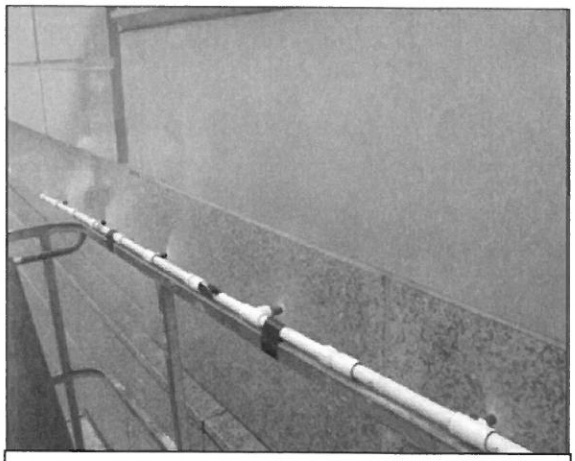
Based on the investigation and testing, WDP provided repair recommendations to resolve the building leakage which included implementation of roof, cladding and window repairs. This included a regular sealant maintenance and replacement plan to stay ahead of sealant failures and minimize the effect on the building. In addition to the sealant maintenance plan, WDP also recommended several options for building redundancy into the existing cladding system by installing specific envelope improvements in locations that are prone to leakage, thus mitigating the water infiltration.

SECTION 4: Experience in Completing Project of Similar Size and Scope

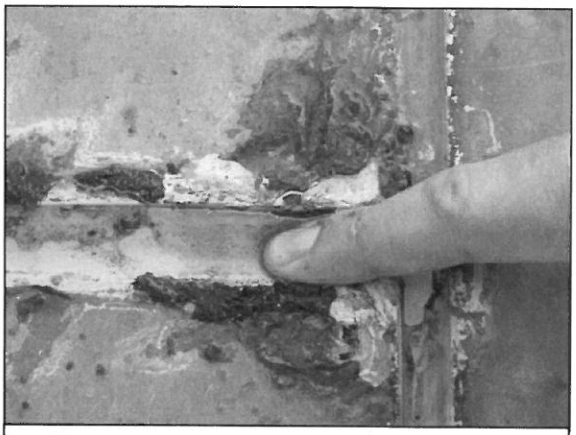
WDP & Associates



Typical Exterior Elevation



Spray testing of sealant joint between metal and granite panels below two-story window



Failed sealants between metal panels of canopy system

Water damage on soffit area in Lecture Hall

WDP Team Members

J. Eric Peterson, P.E. – Project Manager
*Rex Cyphers, P.E. – Senior Engineer
*Andrew Wagner, P.E. – Senior Engineer

*Proposed for this project

West Virginia University, South Agricultural Sciences Building Façade Replacement

Morgantown, WV

Size / Cost: 17,945 SF (Façade) / $520,731

Date of Completion: April 2014

WDP & Associates

OWNER'S INFORMATION

West Virginia University
P.O. Box 6570
Morgantown, WV 26506
Mr. John Thompson, Associate Director of Design & Construction
P: 304-293-3625
E: john.thompson@mail.wvu.edu

Project Description

The building consists of a 40,047 sq. ft., 250-seat lecture hall, eight research micro-biology/plant pathology labs, two teaching labs, as well as numerous faculty support areas, classrooms, and offices. Failures of the existing below grade waterproofing and existing insulated metal panel system resulted in water infiltration and damage to the interior finishes as well as interior biological growth.

WDP's Scope of Services

WDP performed hygrothermal and structural analyses to assess the exterior cladding of the existing facility constructed in 2005, which suffered from extensive water infiltration and interior biological growth. WDP conducted a feasibility study that examined the energy code and hygrothermal implications of replacing the existing cladding. WDP provided veneer replacement options for the owner to choose and a schematic design for new construction to outline the scope of work. WDP, as Designer of Record, designed the exterior cladding replacement and developed drawings, specifications, and other contracts documents. WDP also monitored the removal and replacement of the various cladding components, and executed construction phase design repairs resulting from numerous unforeseen conditions.

WDP Team Members

*Gerald A. Dalrymple, P.E. - Principal
*Rex A. Cyphers, P.E. - Project Manager
*Rick Weston, EIT - Staff Engineer
*Carly Wagner, P.E. - LEED GA - Project Engineer
B.J. Lee, P.E. - Project Engineer
Chris McKinley - CADD

*Proposed for this project

West Virginia University, Engineering Sciences Building Façade Investigation

Morgantown, WV

Size / Cost: 164,000 SF / $69,200 (Investigation)
Date of Completion: On-going (Start date: January 2015), 90% Complete

WDP & Associates

OWNER'S INFORMATION

West Virginia University
P.O. Box 6570
975 Rawley Lane
Morgantown, WV 26506
Mr. Joe Patten, Assistant Vice President
P: 304-293-5876 /
E: joe.patten@mail.wvu.edu

Project Description

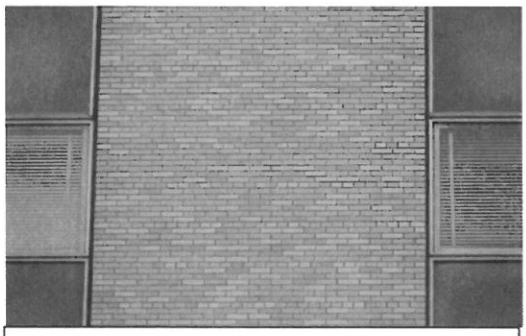
The engineering sciences building is an eleven story academic structure that houses classrooms, offices, and research space. Widespread leakage and brick distress was observed throughout the building, and WDP was retained to perform an investigation of the problems reported in the facility and to provide repair and replacement recommendations.

The primary focus of the evaluation was to determine the cause of the problems and the immediate repairs that were needed to stabilize the façade while also determining the potential options to replace the entire façade. The work generally consisted of:

- A survey of exterior façade at floor levels to document displacement of exterior brick wythe and corresponding interior clay facing tile.
- A general review of the conditions of the exterior masonry, mortar joints, counter flashing, and sealants.
- Survey of the existing masonry bonded headers to determine the extent to which failure, if any, had occurred. This involved a combination of nondestructive testing and exploratory openings to document the condition of bonded masonry headers.
- Exploratory openings at the steel spandrel beams to review the condition of the steel plates supporting the exterior glazed brick wythe and the spandrel beams. Also involved was an assessment of the masonry flashing and collection of material samples for asbestos and lead content analysis.
- Exploratory openings to verify the condition the inner clay tile wythe.
- Hygrothermal analysis for condensation resistivity.

WDP worked with Pullman, a STRUCTURAL Group Company, to provide access, make and repair exploratory openings, and to provide the necessary labor to support our investigation. WDP examined the exterior masonry wall components, masonry flashings, welded plate brick supports, structural steel, and lintels by means of exploratory openings at select locations.

SECTION 4: Experience in Completing Project of Similar Size and Scope



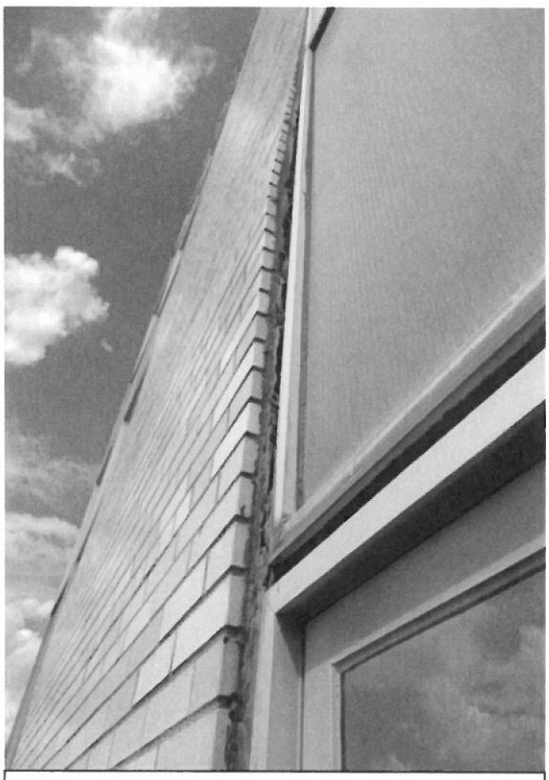
Brick Panels

WDP & Associates

WDP Team Members
*Rex A. Cyphers, P.E. - Project Manager
*Rick Weston, EIT - Staff Engineer II
Chris McKinley - CADD Operator / Engineer Assistant

General Contractor
*Pullman – a STRUCTURAL Group Company

*Proposed for this project



Displaced Brick Panel

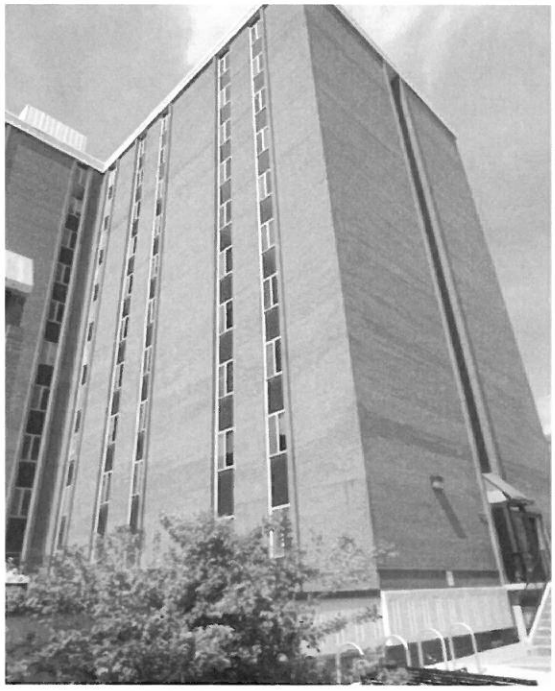
West Virginia University, Summit Hall, Building Envelope Investigation & Repair

Morgantown, WV

Size / Cost: 123,000 SF / Construction Phase Repairs Cost to be Determined at the Conclusion of the Investigation Phase

Date of Completion: On-going (Start date: March 2015), 10% Complete

WDP & Associates



OWNER'S INFORMATION

West Virginia University
P.O. Box 6570
975 Rawley Lane
Morgantown, WV 26506
Mr. Joshua Shinn
P: 304-293-9092
E: Joshua.shinn@mail.wvu.edu

Project Description

Summit Hall is a 10-story housing facility located on the Downtown Campus of West Virginia University (WVU). The building was constructed in 1965 and acquired by WVU in 2003.

WDP has been retained to perform an investigation of the problems reported in the facility and provide repair / replacement design documentation and construction phase services. The primary focus of the evaluation is to determine the cause of the problems and the immediate repairs that are needed to stabilize the façade while also determining the potential options to replace the entire façade. The investigation work generally consists of:

- A survey of exterior façade at floor levels to document displacement of exterior brick wythe and corresponding interior clay facing tile.
- General review of the conditions of the exterior masonry, mortar joints, counter flashing, and sealants.
- Survey of the existing masonry bonded headers to determine the extent to which failure, if any, has occurred. This involves a combination of nondestructive testing and exploratory openings to document the condition of bonded masonry headers.
- Exploratory openings at the steel spandrel beams to review the condition of the steel plates supporting the exterior glazed brick wythe and the spandrel beams. Also involved is assessment of the masonry flashing and collection of material samples for asbestos and lead content analysis.

- Exploratory openings to verify the condition the inner clay tile wythe.
- Hygrothermal analysis for condensation resistivity.
- Ensuring that occupancy of the building is maintained throughout the investigation process.

WDP is working with Pullman – a STRUCTURAL Group Company to provide access, make and repair exploratory openings, and to provide the necessary labor to support our investigation. WDP will examine the exterior masonry wall components, masonry flashings, welded plate brick supports, structural steel, and lintels by means of exploratory openings at select locations.

Subsequent to the investigation WDP will provide design documentation for the repairs and also construction phase bidding assistance and construction administration services.

WDP
& Associates

WDP Team Members
*Rex A. Cyphers, P.E. - Project Manager
*Rick Weston, EIT - Staff Engineer II
Chris McKinley - CADD Operator / Engineer Assistant

General Contractor
*Pullman – a STRUCTURAL Group Company

*Proposed for this project

University of Virginia, John Paul Jones Arena, Comprehensive Investigation and Repair

Charlottesville, VA

WDP & Associates

Project Description

John Paul Jones Arena is the major basketball and event center serving both the University of Virginia and Central Virginia. Originally completed in 2006, the 360,000 SF facility houses a main arena with seating for over 15,000 attendees, Men's and Women's Basketball practice and training facilities, coach's and assistant offices, dining facilities, media broadcast and editing rooms, and support space.

OWNER'S INFORMATION

University of Virginia
575 Alderman Road
PO Box 400726
Charlottesville, Virginia 22903
Ms. Taryn Harrison, Project Manager
P: 434-243-5329
E: tsh2n@virginia.edu

Shortly after construction was completed, building envelope problems became apparent, including water penetration at various locations throughout the arena, excessively high energy bills, and difficulties maintaining comfortable temperatures and operating humidity throughout the arena.

Since 2008 and continuing through 2015, WDP has been charged with all five unique areas of repairs. For each phase and area, WDP has:

- conducted field investigations, which generally included diagnostic testing for water penetration and excessive air leakage as well as masonry and light gage metal framing condition assessments;
- developed a prioritized repair approach to include cost estimates for short term and long term repair options;
- developed construction documents for the repairs accepted by the University; and
- performed construction administration for the execution of the repairs.

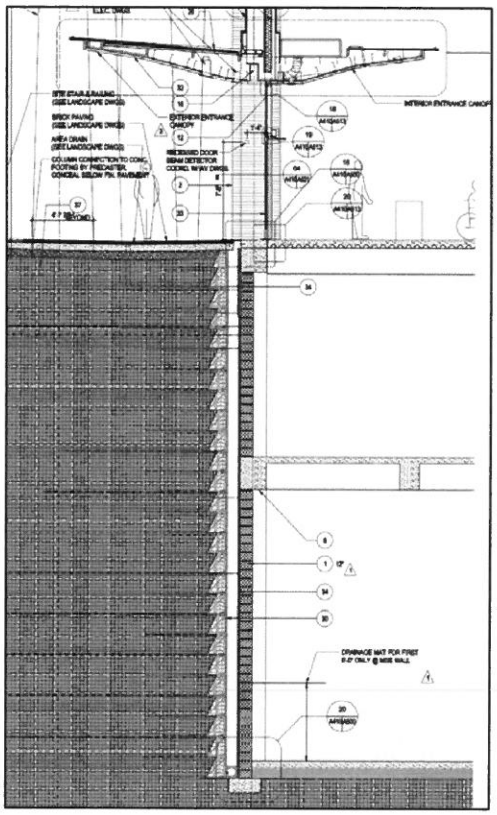
To date, WDP's fee for professional services on all the JPJ repair projects has totaled over $600,000. The major areas of repair and a brief description of each phase are provided below.

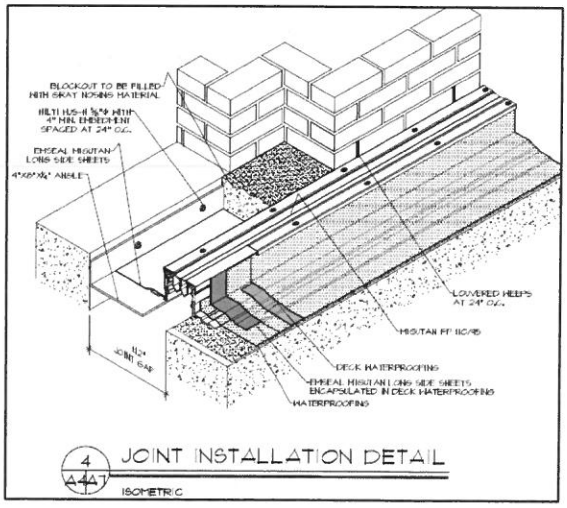
Media Services

The main entrance plaza is located along the signature west radius wall of the facility. Outside the main lobby is a large queuing area comprised of concrete slabs and landscaped areas. The arena extends over 40 feet below grade beneath the main entrance and houses the media services and other support operations. The adjacent earth immediately below the exterior queuing area is retained by a gabion wall located just 12 inches out from a non-grouted, non-reinforced CMU infill comprising the arena's below grade wall. The original design required damp proofing at the exterior side of the CMU and an expansion joint between the exterior slab on grade and the interior slab along the entrance thresholds.

WDP & Associates

WDP investigated the causes of water infiltration evident below the main entrances. WDP used diagnostic water testing and destructive test cuts in order to observe the conditions at the exterior face of the CMU. Deficiencies and discontinuities in the damproofing and the entrance expansion joint were discovered. WDP developed repair details for the expansion joint as well as for the replacement of damproofing at the exterior of the CMU. This portion of the repairs required temporary removal and shoring of the CMU as well as work within the below grade confined space between the CMU and the gabion wall.





WDP & Associates

Practice Court

The locker rooms and men's and women's basketball practice courts are located within a lower roofed portion of the facility along the East elevation. Profuse water infiltration into these areas led the University to engage WDP to determine the cause of the water infiltration and to design and oversee the repairs.

To determine the cause of the leakage, WDP conducted numerous standard and non-standard water tests intended to replicate expected in-service conditions, including ASTM C1715 and hydrostatic flashing lap testing. These testing procedures, combined with exploratory openings in the brick masonry, identified the sources of leakage and leak paths. The through-wall flashing along the base of the adjacent masonry wall above the roof had several deficiencies, particularly at the structural steel columns which were vertically continuous beyond the roof. The through-wall flashing was also not properly integrated at the window jambs. Furthermore, this flashing had been sealed shut, making the infiltration worse as water managed by this flashing could not be evacuated above the roof line and was actually directed towards the interior at the columns penetrations in the flashing. WDP's repair design corrected these deficiencies.

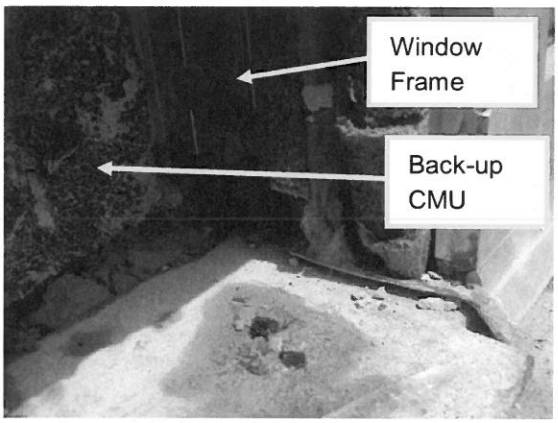
Penthouse Repairs

After a series of diagnostic testing, WDP discovered that the source of water infiltration in the center court was attributed to a lack of a continuous air and weather barrier behind the metal panels and deficiencies in flashing. This primary cause was the sill pan flashing below the mechanical penthouse louvers which were located over 100 feet above center court. The flashing was missing effective end dams and not properly integrated with structural steel columns. Additionally, the flashing laps were completely ineffective and there were numerous unsealed penetrations in the flashing. In order to conduct these repairs, the mechanical louvers had to be removed, revealing inadequate structural attachments and a structurally unstable arched end wall

Deficiencies in through wall flashing within masonry wall adjacent to practice court roof led to profuse water infiltration (Left).

Missing end dams and cavity closures at window jambs contributed to infiltration (Below Left).

Flashing did not return to flanges of steel structural columns. This allowed drainage within the masonry cavity to completely bypass the flashing and continue directly to the interior spaces below the roof (Below Right)



above the louvers. WDP developed full Construction Documents for the temporary removal and subsequent reinstallation of the louvers and the metal panels to include structurally sound attachments and wall bracing, replacement of the sill flashing and the installation of a continuous and properly integrated air/water barrier. A significant challenge to this project was the access and coordinating occupant safety throughout the work. Debris netting and floor watchmen were required at the interior of the arena to coordinate breaks in the work while occupants needed to cross the arena floor. Additionally, temporary closures to entrances, egress doors, and adjacent roadways required WDP to develop traffic control, egress and access plans.

Clearstory Repairs & Lower Façade

WDP & Associates

Excessively high energy bills and difficulties maintaining comfortable temperatures and humidity during events led the University to retain WDP to conduct a comprehensive envelope assessment. An infrared survey was conducted to identify major areas of heat losses and gains. Many of the areas of excessive air leakage were within the clearstory or at an integration of various cladding materials of the lower façade; areas that also suffered from sporadic water damage. WDP conducted standardized and non-standardized diagnostic water testing at the clearstory and various integrations of the lower façade. At the clearstory, WDP also conducted smoke pencil testing to qualitatively identify the locations and extents of air exfiltration. Several destructive test cuts were made revealing numerous defects and voids in the gypsum and the building paper behind the metal panels of the clearstory. Additionally, penetrations of W-section steel supports for the eyebrows, awnings, and overhangs were completely open to the exterior. At the lower facade, the curtain wall integration with the stucco infill panels were not properly flashed and the flashing within the adjacent masonry was not properly end dammed and terminated at the curtain walls.

WDP issued a comprehensive investigation report, resulting in a cost sharing of the repairs by the original designer and original construction manager-at-risk. The report also outlined recommended repairs, specifying which ones are required to address water penetration and which would only address air leakage. In addition, WDP worked with a MEP firm to provide cost analysis for the University comparing the cost of repairs addressing the air leakage against the estimated energy cost savings. WDP prepared full Construction Documents for repairs to the clearstory and lower façade and is providing construction administration services. The scope of repairs included the removal of all of the metal panels and stucco; structural upgrades to the light gage backup supporting the stucco; installation of exterior grade sheathing and a continuous air and water barrier behind all the stucco and metal panels; installation of new flashing at all curtain wall jambs, heads, and sills; and installation of new through wall flashing above the large radius precast beam supporting the trellis at the main entrance.

WDP Team Members

*Rex Cyphers, P.E. – Supervisory Project Manager
*Carly Wagner, P.E. – Project Manager
*Jodi Knorowski, EIT – Staff Engineer

*Proposed for this project

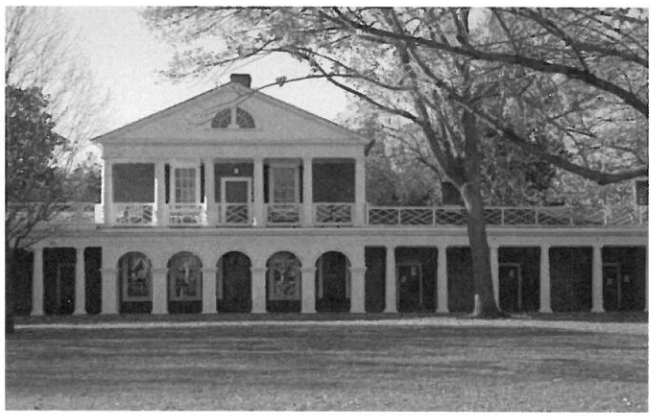
The University of Virginia's Colonnade Club Repair Design (Academical Village Investigations)

Charlottesville, VA

Size / Cost: Not Available / Not Available

Date of Completion: Ongoing (Start Date: May 2015), 10% Completion

WDP & Associates



OWNER'S INFORMATION

University of Virginia
Facilities Management
575 Alderman Road
Charlottesville, VA 22904
Mr. Eugenio Schettini, RA, Design Manager
P: 434-982-5906
E: es3g@virginia.edu

Project Description

WDP has conducted numerous investigations and consulting engineering services at the historic Academical Village, a UNESCO World Heritage Site, of the University of Virginia in Charlottesville, Virginia, over the past 15 years. Our scope of work has included investigations into structural failures, non-destructive testing, evaluation of slab conditions, other material testings, development of repair documents, and construction administration for various buildings in the Academical Village, including a waterproofing investigation on the famed Rotunda building.

Currently, WDP is conducting an investigation on the existing slab concrete conditions at the Colonnade Club, the oldest existing building of the Academical Village. We will be utilizing both non-destructive and other testing means to evaluate the support condition of the concrete slabs and to document the masonry wall support condition of the Colonnade Club structure. We will also conduct material testing and develop repair recommendations and documents based on the findings of our investigation. We will also provide construction administration and support to the University of Virginia during the repair phase.

WDP Team Members

*Andrew Wagner, P.E. – Project Manager

General Contractor

Not yet applicable

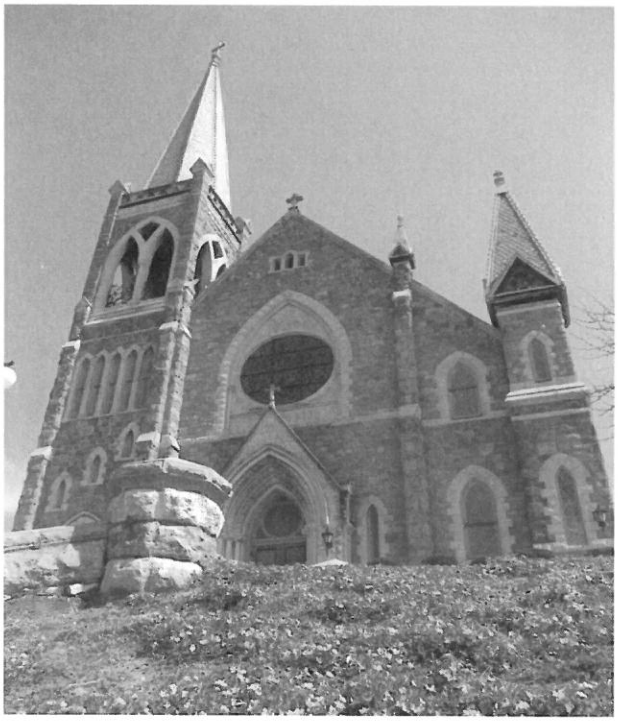
*Proposed for this project

Saint Francis of Assisi Catholic Church

Staunton, VA

Size / Cost: 6,600 SF / $2,889,907 (Construction Cost of Repairs)
Date of Completion: Ongoing, 13% Complete

WDP & Associates



OWNER'S INFORMATION

St. Francis of Assisi Catholic Parish
118 North New Street
Staunton, Virginia 24401
Father Joseph Wamala
P: 540 886 2262
E: frwamala@stfrancisparish.org

Project Description

Originally constructed in 1895 and designed in the English Gothic style, the existing exterior mass walls of the St. Francis of Assisi Catholic Church consist of green serpentine stone laid in a random ashlar pattern and backed by three wythes of brick masonry. The existing stone has undergone extensive deterioration, causing pieces to spall off and posing a serious risk. Due to the historic nature of the church, it was imperative that the repairs preserve the original condition of the building. WDP designed a façade repair and replacement program that would recreate the existing stone pattern, as well as an exterior shoring system and demolition / reconstruction phasing plan that permitted unrestricted use of the church interior during execution of the project. Hygrothermal analyses were conducted to permit selection of materials to minimize any change in moisture vapor movement through the wall system to protect the integrity of the original horse hair plaster used in the interior wall finish.

WDP Team Members

*Rex A. Cyphers, P.E. - Project Manager
*Jodi Knorowski, EIT - Staff Engineer II
*Andy Dalrymple, P.E. – Principal
*Carly Wagner, P.E. – Hygrothermal Analysis
Chris McKinley - CAD Operator / Engineer Assistant

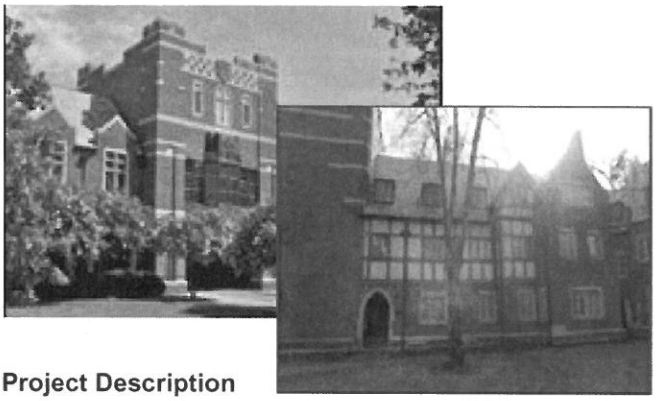
*Proposed for this project

University of Richmond, Thomas & Jeter Halls Façade Renovations

Richmond, VA

Size / Cost: 29,761 SF (Thomas) and 30,270 SF (Jeter); $13.5 million (total renovation)
Date of Completion: On-going (Start date: January 2015), 60% Complete

WDP & Associates



OWNER'S INFORMATION

University of Richmond
27 Westhampton Way
Richmond, VA 23173
Chuck Rogers, Director of Design & Construction
P: 804-289-8600
E: crogers2@richmond.edu

Project Description

The University engaged WDP to conduct an investigation and to assist in the design of the renovation and restoration of two historic multi-wythe brick dormitory buildings which were originally constructed in the 1910's. The project's objective was to extend the service life of the historic buildings as they celebrated 100 years as well as bring the buildings up to the most current energy code standards and modern day performance expectations.

WDP's specific services included conducting diagnostic water testing of the mass masonry walls as well as assisting the designer of record in the development of repair and restoration procedures for the historic stucco, cast stone and brick masonry in accordance with the National Park's Service Preservation Briefs. Additionally, WDP conducted transient hygrothermal analyses for both the roof and the mass masonry walls. When insulation and air barriers are added to historic slate roofs and historic brick masonry, the thermal and vapor exposures of the historic materials are drastically altered. Our analysis was used to guide the choices and placement of interior insulating and air barrier materials. Finally, WDP provided extensive coordination and direction on the thermal performance of the replacement windows. Replacement windows that had been installed within the original cast stone surrounds in the early 1990's did not meet the 2012 Energy Code requirements. WDP installed thermocouples on the glass and frames to measure the thermal gradient across the windows and provided the University's window manufacturer with direction on computer simulations and laboratory tests to develop a glazing and framing combination that complied with the new requirements.

WDP Team Members

*Rex Cyphers, P.E. - Project Manager
*Carly Wagner, P.E. – Project Engineer
*Rick Weston, EIT – Staff Engineer II

General Contractor

Trent Corporation (Jeter Hall)
RVA Construction, LLC (Thomas Hall)

*Proposed for this project

References

Below are five references from clients for whom we have conducted projects of a similar size and nature:

WDP & Associates

Engineering Sciences Building Façade Investigation, West Virginia University
Morgantown, WV

WDP performed an investigation of the brick veneer façade of an 11-story academic structure that exhibited signs of distress and displacement at numerous locations around the building. The investigation focused on the cause of the problems and the immediate repairs needed to stabilize the façade, while also determining the potential options to replace the entire façade. WDP examined the multiple components by means of exploratory openings at select locations. WDP also performed Hygrothermal analysis for condensation resistivity.

Mr. Joe Patten, Associate Vice President
West Virginia University, PO Box 6570, 975 Rawley Lane, Morgantown, WV 26506
P: 304-293-5876; E: joe.patten@mail.wvu.edu

Thomas & Jeter Halls Façade Renovations, University of Richmond
Richmond, VA

The University engaged WDP to design upgrades to two multi-wythe brick dormitory buildings, originally constructed in the 1910s, to extend the service life of the historic buildings and bring them up to the most current energy code standards. In addition to addressing the building envelope assemblies, WDP provided extensive coordination and direction on the thermal performance of the replacement windows. Replacement windows that had been installed within the original cast stone surrounds in the early 1990's did not meet the 2012 Energy Code requirements. WDP provided the University's window manufacturer with direction on computer simulations and laboratory tests to develop a glazing and framing combination that complied with the new requirements. The new window assembly closely matches the historic look.

Mr. Chuck Rogers, Director of Design & Construction
University of Richmond, 27 Westhampton Way, Richmond, VA 23173
P: 804-289-8600; E: crogers2@richmond.edu

Saint Francis of Assisi Church
Staunton, VA

WDP designed a façade repair and replacement program, as well as an exterior shoring system and demolition / reconstruction phasing plan that permitted unrestricted use of the church interior during execution of the project. Hygrothermal analyses were conducted to permit selection of materials to minimize any change in moisture vapor movement through the wall system to protect the integrity of the original horse hair plaster used in the interior wall finish.

Father Joseph Wamala
St. Francis of Assisi Catholic Parish, 118 North New Street, Staunton, VA 24401
P: 540-886-2262; E: frwamala@stfrancisparish.org

VA State Capitol Stair & Skylight Leakage Repair Design
Richmond, VA

WDP was retained to evaluate the water infiltration, conduct a condition survey and perform

diagnostic testing to determine the underlying chronic structural issues and the cause of acute failures of previously attempted exterior surface repairs. Based upon the findings, WDP also provided repair alternatives consisting of temporary repairs, repair-in-place option to address the waterproofing issues only, structural repairs to the skylight, and an option for the complete rebuild of the skylight.

Mr. Trev Crider, Project Manager
VA Dept. of General Services, Bureau of Facilities Management,
1100 Bank Street, Richmond, VA 23219
P: 804-786-3263; E: DEBinfo@dgs.virginia.gov

WDP
& Associates

South Agriculture Sciences Building, West Virginia University
Morgantown, WV

WDP performed hygrothermal and structural analyses to assess the exterior cladding of the existing facility constructed in 2005, which suffered from extensive water infiltration and interior biological growth. WDP conducted a feasibility study that examined the energy code and hygrothermal implications of replacing the existing cladding. WDP provided veneer replacement options for the owner to choose and a schematic design for new construction to outline the scope of work. WDP, as Designer of Record, designed the exterior cladding replacement and developed drawings, specifications, and other contracts documents. WDP also monitored the removal and replacement of the various cladding components, and executed construction phase design repairs resulting from numerous unforeseen conditions.

Mr. John Thompson, Associate Director of Design & Construction
West Virginia University, P.O. Box 6570, Morgantown, WV 26506
P: 304-293-3625; E: John.Thompson@mail.wvu.edu

SECTION 5: Acknowledgement of Addendums

The following form is attached as per the RFP for the Acknowledgment of Addendums.

WDP
& Associates

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:CEOI 0211 GSD1500000001

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:
(Check the box next to each addendum received)

[X]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	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 Engineers, Inc.
Company

Authorized Signature

May 26, 2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

SECTION 6: Certification Page

The following form is attached as per the RFP for the Certification Page.

WDP
& Associates

CERTIFICATIONAND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

WDP & Associates Consulting Engineers, Inc.
(Company)

Rex Cyphers, P.E.; Associate Principal
(Authorized Signature) (Representative Name, Title)

434-245-6117; 434-245-6118; May 26, 2015
(Phone Number) (Fax Number) (Date)

SECTION 7: Purchasing Affidavit

The following form is attached as per the RFP for the Purchasing Affidavit.

WDP
& Associates

RFQ No. CEOI 0211 GSD1500000001

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 & Associates Consulting Engineers, Inc.

Authorized Signature: _____ Date: May 26, 2015

State of Virginia

County of Prince William, to-wit:

Taken, subscribed, and sworn to before me this 26th day of May, 20 15.

My Commission expires January 31st, 20 18.

AFFIX SEAL HERE

NOTARY PUBLIC _____
Jamie Nicole Reve

JAMIE NICOLE REVE
NOTARY PUBLIC
REG. #7591932
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES JANUARY 31, 2018