



# West Virginia Department of Tourism

## **Culture Center Windows Project**

Expression of Interest (EOI) – Architectural and  
Engineering Services for Culture Center Window  
Project

August 13, 2025

[wdpa.com](http://wdpa.com)



AUGUST 13, 2025

WEST VIRGINIA DEPARTMENT OF TOURISM  
BUILDING 3, SUITE 100  
STATE CAPITOL COMPLEX  
1900 KANAWHA BOULEVARD,  
EAST CHARLESTON, WV 25305

**ATTENTION:** MS. HANNA KROEGER – ACCOUNTING COORDINATOR

**SUBJECT:** REQUEST FOR EOIs – A/E SERVICES FOR CULTURE CENTER WINDOW PROJECT  
26-TOUREOI-2

Dear Ms. Kroeger,

The WDP / Silling team is pleased to submit our qualifications to provide professional engineering and architectural services for the Culture Center Window Project.

WDP is a WV SWaM certified small business consulting engineering firm with a proven history of investigating existing window failures, waterproofing and structural related issues as well as designing repairs to remedy those problems. The work required for this project is not just something that we have done, it is at the core of our business. Companywide, WDP has completed 400 exterior and structural investigation and repair projects in the past 5 years alone, and nearly all our completed façade evaluation projects have been undertaken on occupied buildings.

Our experience in the state of West Virginia began over 20 years ago with a project at West Virginia University in Morgantown, and since then we remain dedicated to serving the needs of our West Virginia clients with the establishment of our office in Hinton. We have investigated and designed the major exterior repairs to the stone and dome at the West Virginia State Capitol as well as similar projects at other state buildings throughout the state. Most recently, WDP conducted the cursory evaluation of the latest window failure at the Culture Center.

Silling, our Architectural partner for this project, is a West Virginia practice, through and through. Established in Charleston in 1902, their firm takes great pride in being the longest continuing practice in the state and one of the oldest in the country. Their legacy of bettering the lives of West Virginians through the built environment is a commitment they take with much enthusiasm, creativity and hard work. Silling is a practice centered on the core principle of Getting It Right...in design, service, and relationships. Silling's commitment to you is standing strong on a legacy of 120+ years, founded on the core belief that their clients and their communities deserve their absolute best.

The Culture Center's critical improvement project presents an opportunity to further preserve a legacy building, originally designed and completed by Silling's predecessors in 1976. Our

understanding of the importance of this building, not only as a spatial asset, but as an icon that helps visually and culturally shape the campus of your state government center, will inspire our team's collective pursuit of design innovation, technical preservation and improvement, and financial stewardship.

To further complement our teams experience, WDP has worked on several museums and cultural centers across the eastern United States –spanning from the Solomon R Guggenheim museum in New York, to the Greensboro Science Center in North Carolina. Our expertise in providing a forensic lens to investigate building façade related issues and designing repairs has allowed us to work on significant structures including the Saint John Paul II National Shrine, the American Civil War Museum at Tredegar Ironworks, the Virginia Museum of Fine Arts, and many more.

The WDP / Silling team is committed to providing quality services in a timely manner and in accordance with the West Virginia Department of Tourism's values, ideals, and goals. We hope that our collective expertise and commitment come through in the enclosed materials. Should questions arise regarding our qualifications or our experience, please feel free to reach out to us at your convenience.

Respectfully submitted,

**WDP & Associates Consulting Engineers, Inc.**

A handwritten signature in blue ink, appearing to read 'Rex Cyphers'.

Rex Cyphers, PE  
Vice President & COO

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# 1. FIRM OVERVIEW



With a history of providing architectural and engineering services in the State of West Virginia, as well as our familiarity with the Culture Center building, The WDP | SILLING Team is confident in our expertise to provide architectural and engineering design services for a full curtainwall / window replacement system. Our Teams' qualifications are presented below.

WDP is a West Virginia SWaM certified consulting engineering firm founded in 1995 with offices in West Virginia, Virginia, South Carolina, and New York. For 30 years, WDP has provided professional engineering services for the evaluation and repair of the exterior of buildings and structural assessments, repair design / replacements, and building enclosure consulting and commissioning (BECx) projects across the United States.

***Creating lasting solutions that extend the service life of buildings or structures is at the heart of our business.***

WDP performs around 100 façade assessments, roof, building envelope, and structural investigation and repair projects every year. Most of WDP's repair projects involve facilities that must remain occupied and operating "business as usual" throughout the investigation and repair process. Our investigative strategies and value-based repair designs have addressed countless issues, such as building envelope problems manifested through air/water leakage, occupant comfort issues, structural deficiencies caused by moisture infiltration, differential movement, general deterioration of building materials, biological growth, and aesthetic deficiencies, among others.

SILLING is a design-oriented architectural, planning, and interiors firm that is intensely committed to passionate service and a comprehensive response to our clients' distinct needs. They are fascinated with the study of place and time, informing a design process that adds relevance and meaning to our clients' stories. As a legacy architectural firm with beginnings back in 1902 they have decades of service to seven generations of Americans, showcasing a rich variety of building types where they live, work, and play.

SILLING places an extraordinarily high value on client and stakeholder relationships. They understand, at depth, the design and construction process and the untold number of participants involved in conceiving and executing a highly successful project. Managing the process is paramount to design excellence. Clients find they both listen and internalize; they both lead and follow; they are both innovative and practical; they respect the constraints of budgets and the demands of schedules, while passionately pursuing meaningful design solutions.

Their design process seeks a masterful interrelationship of building aesthetics, functionality, and technology in response to client and context. It is both a creative and critical process that emphasizes value and client satisfaction at all levels of the design.

## **Industry Leadership**

Our staff are a familiar, respected presence at various national and international industry organizations and standards committees. We pride ourselves on staying at the forefront of our industry. Our engineers use the knowledge that they have gained through their extensive investigative analysis and research experience to help elevate and advance the standards of practice in the design and engineering industry. WDP staff members serve on a wide variety of industry committees that develop the standards for the design and construction industry. Many of



# 1. FIRM OVERVIEW



these standards are incorporated by reference into the building codes adopted by local, state, and federal governments.

WDP staff also conduct independent research to build upon discoveries made during our investigations. We present this research in technical papers and journals, give AIA-accredited presentations, and hold seminars and attend conferences throughout the country. WDP personnel have authored and co-authored numerous industry publications, widely used by designers throughout the industry. In addition, we have worked on numerous high-profile projects around the country, many of which have earned industry awards and national recognition. WDP sets high standards for our work and our people to raise the bar in the building envelope industry.

## *Standards Development and Committee Memberships*

Within ASTM, our staff are Task Group Chairs for the development of standards relating to historic preservation, mockups, and air leakage and ventilation, as well as participating on committees relating to masonry, roofing, and thermal insulation. Staff are members of ASHRAE Committees that maintain the standard for hygrothermal analysis within the industry (ASHRAE 160), and manage chapters within ASHRAE Fundamentals relating to heat, air, and moisture movement throughout buildings. WDP develops the guiding BECx standards, including contributing authorship of NIBS Guideline 3 and active participation in the ASTM committee which developed the BECx standards referenced by LEED. Furthermore, WDP is working on a Task Group within IIBEC spearheading a new educational program on the process of Building Enclosure Commissioning. Below is a list of the specific committees and task groups that WDP staff are involved in:

- ASTM Committee E06 – Performance of Buildings

- ASTM Committee E06.24 – Building Preservation and Rehabilitation

- Task Group – E3069 Standard Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to Thermal and Moisture Properties of the Wall (Chair)
    - Task Group - WK 70955 Standard Guide for Evaluation of Changes to the Thermal, Moisture and Ventilation Performance of Existing Roof Enclosures (Chair)

- ASTM Committee E06.41 – Air Leakage and Ventilation Performance

- Task Group – E241 Standard Guide for Limiting Water-Induced Damage to Buildings (Chair)
    - Task Group – E3127 Guide for Specifying Water Vapor Transmission Material Properties of Water Resistive Barriers and Air Barriers

- ASTM Committee E06.51 – Performance of Windows, Doors, Skylights and Curtain Walls

- ASTM Committee E06.55 – Performance of Building Enclosures (Chair)

- Task Group – E2099 Standard Practice for Specification and Evaluation of Pre-Construction Laboratory Mockups of Exterior Wall Systems (Chair)
    - Task Group - E3223 Standard Guide for Specifying and Testing Field Constructed Exterior Building Wall System Mockups in New Construction (Chair)

*Whether it be hygrothermal analysis or standards for limiting water induced damage in buildings, our staff is leading the development of standards used by the industry. **Rex Cyphers, PE and Jodi Knorowski, PE** – led the effort to write the new ASTM Standard E3069, “Standard Guide for the Evaluation and Rehabilitation of Mass Masonry Walls for Changes to Thermal and Moisture Properties of the Wall,” and are in the process of writing a related standard for steep sloped roof assemblies.*



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- Task Group – E1825 Evaluation of Building Exterior Enclosure Materials, Products and Systems
  - ABAA Research Committee – Air Barrier Association of America
  - ACI 216 – Fire Resistance and Fire Protection of Structures
  - ACI 546 – Repair of Concrete
  - AISI – American Institute for Steel Construction
  - ASCE Structural Engineering Institute
  - ASCE Forensic Engineering Division
  - ASHRAE Technical Committee 4.4 – Building Materials and Building Envelope Performance
  - ASHRAE SSPC 160 – Criteria for Moisture-Control Design Analysis in Buildings
  - ASTM Committee C09 – Concrete Aggregates
  - ASTM Committee C11 – Gypsum and Related Building Materials and Systems
  - ASTM Committee C12 – Mortars for Unit Masonry
  - ASTM Committee C15 – Masonry Manufactured Masonry Units, Mortars, and Grouts
  - ASTM Committee C16 – Thermal Insulation
  - ASTM Committee D08 – Roofing and Waterproofing
  - ASTM Committee D18 – Soil and Rock

## **WDP | SILLING - West Virginia Experience**

WDP experience with the State began over 20 years ago with a project at West Virginia University in Morgantown, and we remain dedicated to serving the needs of our West Virginia clients. Over the years, we have worked on multiple projects from Charleston to Morgantown to Snowshoe; our services on those projects have included evaluating the structural stability of existing building components, investigating air and water infiltration issues, evaluating the hygrothermal properties of existing wall assemblies, and providing recommendations for repairs. In 2020, we officially opened an office in Hinton to better serve the needs of our clients throughout the State of West Virginia.

SILLING has provided architectural design services in the State of West Virginia since 1902. Their work experience in West Virginia surpasses most as they are the longest continuing practice in the state and one of the oldest in the country.

## **WDP | SILLING - Museums and Cultural Building Experience**

- **WVU ART MUSEUM BUILDING INVESTIGATION - ROOF REPLACEMENT**
- **ALBANY MUSEUM OF ART, ALBANY, GA - BUILDING ENCLOSURE CONSULTING**
- **AMERICAN CIVIL WAR MUSEUM AT TREDEGAR IRONWORKS, WASHINGTON, DC - BUILDING ENCLOSURE**
- **CENTER FOR THE ARTS, VIRGINIA TECH, BLACKSBURG, VA - BUILDING ENCLOSURE CONSULTANTS**
- **CITY MUSEUM, LYNCHBURG, VA - BUILDING ENCLOSURE INVESTIGATION**
- **CORCORAN SCHOOL FOR THE ARTS AND DESIGN, GEORGE WASHINGTON UNIVERSITY, WASHINGTON, DC – MASONRY FAÇADE & ROOF INVESTIGATION AND REPAIR DESIGN**



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- **DE LASKI PERFORMING ARTS BUILDING, GEORGE MASON UNIVERSITY, MANASSAS, VA - BUILDING ENCLOSURE**
- **GREENSBORO SCIENCE CENTER, GREENSBORO, NC - LIMITED BUILDING ENCLOSURE PEER REVIEW**
- **INSTITUTE OF CONTEMPORARY ART, VIRGINIA COMMONWEALTH UNIVERSITY (VCU), RICHMOND, VA - BUILDING ENCLOSURE CONSULTING**
- **LIBERAL ARTS CENTER AT DAVIDSON HALL, VIRGINIA TECH, BLACKSBURG, VA - BUILDING ENCLOSURE CONDITION ASSESSMENTS**
- **MUSCARELLE MUSEUM, THE COLLEGE OF WILLIAM & MARY. WILLIAMSBURG, VA - BUILDING ENCLOSURE CONSULTING**
- **MUSEUM AND COLLECTIONS FACILITY, FAIRFAX COUNTY PARK AUTHORITY - HYGROTHERMAL ANALYSIS**
- **NATIONAL MUSEUM, UNITED STATES ARMY, FT BELVOIR, VA - TESTING & INSPECTION**
- **SAINT JOHN PAUL II NATIONAL SHRINE, WASHINGTON, DC - RENOVATIONS AND ADDITIONS, BUILDING ENCLOSURE REPAIR DESIGN**
- **SOLOMON R. GUGGENHEIM MUSEUM, NYC - STEEL CORROSION INVESTIGATION - ICRI PROJECT OF THE YEAR AWARD WINNER**
- **THE VALENTINE MUSEUM COLLECTIONS (C/O GLAVÉ & HOLMES ARCHITECTURE), RICHMOND, VA - BUILDING ENCLOSURE CONSULTING**
- **VIRGINIA MUSEUM OF FINE ARTS, RICHMOND, VA - WATER INFILTRATION INVESTIGATION & ROOF SYSTEM REPLACEMENT DESIGN**
- **VIRGINIA STATE LIBRARY, DEPT OF GENERAL SERVICES, RICHMOND, VA - FAÇADE, WINDOW, ROOF AND CANOPY REPAIR DESIGN**
- **WVU ART MUSEUM BUILDING INVESTIGATION - ROOF REPLACEMENT**
- **ALBANY MUSEUM OF ART, ALBANY, GA - BUILDING ENCLOSURE CONSULTING**
- **AMERICAN CIVIL WAR MUSEUM AT TREDEGAR IRONWORKS, WASHINGTON, DC - BUILDING ENCLOSURE**
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The following pages include the services that the WDP | SILLING Team can provide based on the scope of services for the West Virginia Culture Center Window Project.

## **Façade and Building Envelope Evaluations**

WDP provides a variety of services related to building facades and enclosure systems, including facade assessments, leakage investigations, peer review of architectural design, development of repair and restoration documents, mockup and field performance testing, enclosure commissioning and construction administration services.

Our expertise in the diagnosis and correction of exterior envelope systems includes extensive knowledge of brick and natural stone masonry (both veneer and adhered systems), fenestration systems, roofing, stucco, exterior insulation and finish systems (EIFS), precast concrete wall panels, architectural metal panel systems, concrete, and steel structures. WDP's professional team of envelope specialists are experienced in performing hands-on inspections with particular care given to original construction materials and evaluation of pre-existing repairs. No matter the age of the facility, from historic 18th and 19th century structures to newly constructed buildings experiencing post-occupancy problems, WDP has experience in preservation and improving the value of existing facility assets through tailored engineering solutions. Our investigative strategies and cost-effective design approaches have addressed countless façade issues, such as cracking, facade instability, air and water leakage, mold growth, and aesthetic deficiencies.



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## Architectural Diagnostic Testing & Quality Assurance

WDP regularly performs architectural testing services as an investigative diagnostic tool and for quality assurance during the construction phase of the project. Our staff is well versed in using a wide variety of diagnostic and standard test methods to identify leak paths and verify compliance with written standards, such as Fenestration & Glazing Industry Alliance (FGIA – formerly AAMA) and American Society for Testing and Materials (ASTM). These services are applied to brick and stone masonry as well as metal panel systems and fenestration products including windows, curtain walls, and storefront systems.

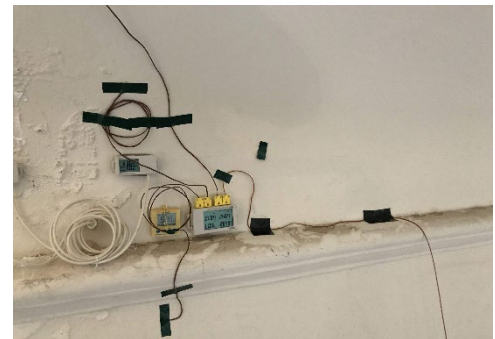


Spray Nozzle Testing

## Building Science

Building science consulting is the intellectual and practical examination of a structure or a building as a comprehensive system, considering how each individual assembly or sub-system (HVAC, building envelope, etc.) affects others within the structure. **Many building owners are actively seeking to add insulation or reduce air leakage on existing buildings to improve energy performance. Our staff developed the ASTM standards used by the industry for the retrofit of mass masonry walls and steep sloped roofs to improve thermal performance without creating new long-term moisture-related issues.** This technical expertise is particularly advantageous when designing the building envelope for structures with stringent standards for air- and water tightness, such as laboratories, hospitals, data centers, and museums.

Over the last 15 years, the industry has shifted dramatically toward more sustainable construction practices and the improvement of energy consumption for existing buildings. The reduction of air leakage and improved thermal performance of envelope systems, generally reduces the energy consumption for a building. However, in doing so, assemblies have a reduced potential for drying and an increased potential for moisture vapor to reach dewpoint temperatures within a wall assembly. This means there are new modes of moisture failure that must be accounted for in new construction, and new modes of failure that require new methods of evaluation to solve moisture related issues on existing buildings.



Hygrothermal Analysis at The College of William & Mary – Wren Building

Our staff have been at the forefront of building science, developing methods and standards for the evaluation of new and existing buildings based on the emerging need for a holistic view of the building envelope. We are intimately familiar with modeling tools and software used to create simulations to predict performance of walls or windows. Additionally, we have developed diagnostic tools using field data acquisition to compile actual project information that can be used to better calibrate models or assess moisture failures in the field.

WDP staff regularly perform hygrothermal analysis to assess wall and roof systems to aid in the placement of materials in exterior wall and roof assemblies based on the vapor permeance and thermal resistance properties of materials.



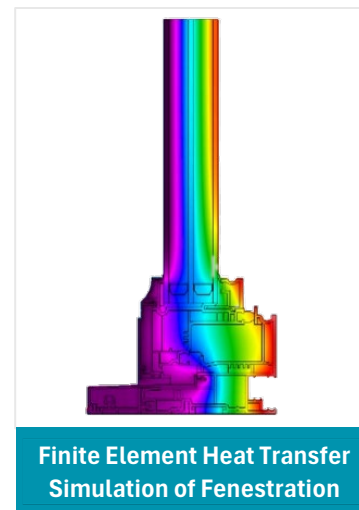
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Assessing the problem based on the properties of building materials, exterior climate, operational conditions and expectations, and HVAC systems sets the issue or failure in the context of the building as a whole and how each system works together. In turn, this understanding must then be assessed globally with code requirements and proper detailing. WDP staff are trained to view structures as interconnected systems and evaluate whether a prescriptive repair is the most appropriate response. The Owner maintains a higher chance of avoiding costly repair mistakes through this approach.

When necessary, our staff have the expertise to perform specialized analysis of the walls for hygrothermal, energy, or structural performance. WDP has staff trained as a Certified Simulator by the National Fenestration Rating Council (NFRC) which uses WINDOW 7 and THERM 7 software programs to determine fenestration product U-factors, Solar Heat Gain Coefficients (SHGC), Visible Transmittance (VT), and Condensation Resistance (CR), all of which can affect the transfer of heat through a fenestration (window) assembly. This analysis provides the opportunity to evaluate the performance of existing assemblies based on actual conditions so project specific solutions can be developed catered to actual conditions. This often leads to more cost effective and functional solutions.

In addition to utilizing this software for ratings of fenestration, THERM can be used to evaluate heat transfer through the fenestration system and surrounding building envelope components to evaluate various configurations that would limit thermal bridging at these critical intersections.



### Goal #1- Assessment

#### **2.1. Assess current front-facade window conditions and provide Tourism with any and all options available to correct and prevent the windows from cracking and failing, including cost estimates.**

To develop an investigation plan, we would perform a site visit with the project stakeholders in attendance. This ensures a shared understanding of the concerns and potential limitations for performing an evaluation. We would interview building occupants and maintenance staff to gain a better understanding of ongoing issues related to the windows including the recent glass breakage along. We would also review available project records, original drawings and specifications, subsequent repair projects, maintenance reports, etc. to build a general understanding of the building history and operation.

Following the site visit, WDP and Silling will develop a project specific investigation plan to present to Tourism. Within this plan, requirements for access, potential disruptions to museum operations, and anticipated evaluation techniques will be discussed. The process of conducting a thorough evaluation to develop an investigation plan will be completed to limit disruptions as much as possible to the Culture Center's operations throughout the testing process. We will perform diagnostic testing consisting of a visual survey, tactile survey, as well as water and air leakage testing, evaluation of thermal and energy performance, along with removal of select components to determine the root cause of the failures within the window glazing. The source of the failures may include but not limited to the window frame and support, flashings, building structural elements, or the plaza itself. Determining the specific cause of the glass failures will aid in developing repair recommendations as a simple window replacement may lead to continued glass failures if the root cause is not addressed. WDP has all the appropriate in-house equipment, capabilities, and expertise to conduct the full diagnostic evaluation. Access to the elevated windows will be achieved through the use of an aerial lift. Following the field evaluation, WDP in conjunction with Silling will develop a comprehensive report that outlines observations and findings in addition to repair recommendations. We find value in presenting repair recommendations in a tiered approach, ranging from maintenance level repairs to comprehensive repairs, with costs estimates for each potential option. This allows an owner to make an informed decision for how best to proceed based on their goals and needs for the project.

### Goal #2 – Design

#### **2.2. Design a front-facade window update that improves safety, durability and longevity of the Culture Center's windows.**

The WDP / Silling Team has extensive experience in evaluating windows and designing window replacements and window repairs as one of the core services of the firms. We can develop contract documents for either a complete window replacement or select repairs to the existing windows once the cause of the failures is determined. As part of a window repair project, we evaluate the performance of the existing windows and compare those to the desired performance to provide the most appropriate repair. Additionally, if it is determined that components outside the window frame are contributing to the observed failures, these repairs will also be incorporated into the repair project including plaza waterproofing and structural repairs. Our engineering team is not only familiar with windows systems but are experts in the entire building envelope and can design repairs to these adjoining conditions to provide seamless integration with the windows.

## 2. PROJECTS AND GOALS



### Goal #3 – Bid Assistance

#### **2.3. Produce specifications that follow industry best practices and Department of Tourism’s purchasing guidelines for use in bidding out the construction phase of the window project.**

The WDP/Silling Team has extensive experience generating Contract Documents for the State of West Virginia to include both drawings and project manuals for repair projects, including façade repairs and window replacements. We are familiar with the requirements in West Virginia State building codes, the process for reviewing the Contract Documents with the State Fire Marshal, and supporting Tourism through the bid process.

When developing Contract Documents, we take pride in developing a set of details and specifications that are unique to the project. Typically, the integration details between a plan view and section view are the most critical for repair; as such, we routinely incorporate isometric details into our drawing packages to clearly convey the repair design at these intersections. Our project specifications are also unique to the project and are often written by the same engineer that is developing the details in the drawings to ensure coordination between the drawings and specifications for the project.

### Goal #4 – Construction Administration

#### **2.4. Provide project management and supervision of the construction phase of the project, including scheduling and leading a pre-bid meeting for the construction phase, as well as managing the construction phase to completion.**

During the construction phase WDP and Silling will work closely together, and investigation and design team will continue to be engaged in assuring that the materials and systems being provided, and installed, comply with the design intent. Adam D’Alessandro, PE – Project Manager will continue to serve as the primary representative of our team and will attend all construction progress meetings. Our construction phase staff will assist in tracking information (incoming and outgoing) during the construction phase to ensure that all parties are responsive to project needs.

Standard construction phase services include:

- Attend regularly construction progress meetings.
- Review and respond to shop drawings and submittals.
- Respond to RFI’s generated during construction.
- Review and respond to change orders as needed.
- Participate as needed in weekly progress update conference with Owner.
- Make site visits to review construction progress and generate an inspection report for each visit.
- Assist with developing a punch-list of remaining work.
- Complete a substantial and final completion inspection.
- Assist as needed in the startup and project closeout process.

Having the direct knowledge of our own repair design helps WDP to provide full time or periodic inspections that ensure that the Contractor is performing the repairs in accordance with that design.



## 2. PROJECTS AND GOALS



With the replacement of window systems and / or repairs to existing buildings, unforeseen conditions can arise during construction. As such, we understand the importance of being actively engaged throughout the construction phase and having a consistent presence on the project site to ensure repairs are executed in accordance with the construction documents. With the proximity of Silling located in Charleston along with the WDP office in Hinton, WV, we can be responsive to issues that may arise on site and can work closely with the project team to quickly address them.

### **SCHEDULE**

Our team understands the schedule limitations for the project and are eager to get a better understanding of the windows and the extent of repairs that will be required. With our background working with the State, we value the relationship we have built and would prioritize staffing to meet the needs of this project. Once the full scope of work is understood for the project, we will develop a design and construction schedule to meet the project completion goal of the State.

As is the nature of repair work on existing structures, unforeseen conditions discovered during a preliminary investigation or during the construction phase of the project could impact the proposed schedule, and our team would be transparent with the State regarding any scope items that we felt could not be completed within the proposed schedule. We would provide the State with the information necessary to determine the extent to which decisions would be schedule-driven or if alternate approaches could be evaluated if they add value to the project.

### 3. Qualifications, Experience, and Past Performance



## WDP's Proposed Team

### Staffing Plan

The following chart illustrates the roles and experience of our key personnel assigned to this project.

<b>REX CYPHERS, PE – PRINCIPAL   COO</b>	<b>PROJECT ROLE: PRINCIPAL IN CHARGE</b>	<b>WDP</b>
Project role will include: <ul style="list-style-type: none"><li>▪ Providing expertise and guidance for the project team during the evaluation, design, and construction phase</li><li>▪ Maintaining client communication and satisfaction</li><li>▪ Ensuring compliance with project delivery dates and milestones</li></ul> <b>Professional Qualifications</b> Professional Engineer – WV, VA, WA, PA, TN		
<b>ADAM D’ALESSANDRO, PE –PROJECT MANAGER</b>		<b>WDP</b>
Project role will include: <ul style="list-style-type: none"><li>▪ Developing project specific assessment plan in coordination with Tourism’s expectations and project goals</li><li>▪ Overseeing execution of assessment and development of repair strategies</li><li>▪ Leading development of repair design and providing on-site construction phase services</li><li>▪ Bid Assistance</li></ul> <b>Professional Registration</b> Professional Engineer – VA		
<b>BRIAN GREEN-CARIÑO, PE – SENIOR ENGINEER</b>		<b>WDP</b>
Project role will include: <ul style="list-style-type: none"><li>▪ Assisting in window assessment</li><li>▪ Development of repair recommendations</li><li>▪ Development of schematic design, design development, and construction documents</li><li>▪ Providing construction phase support, to include site visits, submittal review, and RFI review projects</li></ul> <b>Professional Registration</b> Professional Engineer – VA		
<b>JODY DRIGGS, AIA, NCARB – PROJECT ARCHITECT</b>		<b>SILLING</b>
Project role will include: <ul style="list-style-type: none"><li>▪ Providing overall project quality assurance and quality control</li><li>▪ Providing expertise and guidance for the project team during the evaluation, design, and construction phase</li><li>▪ Ensuring client service and satisfaction</li></ul> <b>Professional Registration</b> Registered Architect – WV, FL, MD, PA, VA, KY, OH		





### 3. Qualifications, Experience, and Past Performance

#### BRIAN ESTEP AIA, NCARB – ARCHITECT

SILLING

Project role will include:

- Assisting in roof system assessment
- Development of schematic design, design development, and construction documents
- Supporting coordination between owner and all team members

#### **Professional Registration**

Registered Architect – WV

#### JEREMY JONES AIA – ARCHITECT

SILLING

Project role will include:

- Assisting in roof system assessment
- Supporting the production of design development and construction documents
- Supporting the review of documents by AHJ, SHPO, and applicable building codes

#### **Professional Registration**

Registered Architect – WV

The following pages include resumes of proposed staff.



### 3. Qualifications, Experience, and Past Performance





#### Rex Cyphers, PE

Principal-in-Charge

Rex is WDP's Vice President and Chief Operating Officer with 23 years of experience. He specializes in the design and repair of masonry structures, historic preservation, and nondestructive testing. He performs forensic field, façade, roofing, waterproofing, and building envelope investigations; structural inspection /analysis and design; architectural retrofit and repair; and develops design documents and repair recommendations.

#### EDUCATION


 West Virginia University / Civil Engineering / MS – 2003; BS – 2002

 West Virginia University / Graduate Certificate / Cultural Resource Management / 2003

#### PROFESSIONAL REGISTRATION

Professional Engineer: WV, CT, IL, LA, PA, TN, VA

#### PROFESSIONAL MEMBERSHIPS / COMMITTEES

-  ASTM Subcommittee E06.24 Preservation and Rehabilitation Technology
- ASTM E2260 – Task Chair, “Standard Guide for Repointing (Tuckpointing) Historic Masonry”
  - ASTM E3069 Task Chair, “Standard Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to Thermal & Moisture Properties of the Wall”
  - ASTM E3258 Task Chair, “Standard Guide for Evaluation of Changes to the Thermal, Moisture, and Ventilation Performance of Existing Roof Enclosures”

#### REPRESENTATIVE EXPERIENCE

##### **General Services Administration, Edward A. Garmatz Federal Courthouse, Baltimore, MD / Principal-in-Charge (PIC)**

WDP conducted a condition assessment of the original window systems of the courthouse that were constructed in 1976. This included a visual survey, thermal imaging, thermal data collection, and field performance testing. Technical analysis was subsequently completed to further define the performance of the existing systems, and to compare retrofit options. The analysis results were used to define both the environmental impact of the existing systems, and the potential energy savings of window retrofits. The data collected was used to develop a report and to provide recommendations for remediation.

##### **Department of General Services, West Virginia Building 36 Façade Replacement Project, Charleston, WV / PIC**

Building 36 is undergoing a façade repair and replacement project to mitigate water infiltration, failures in adhered veneer cladding, and breakage of glazing in curtain wall assemblies. WDP conducted a comprehensive condition assessment of the Building 36 façade to evaluate these issues. The investigation included document review, visual interior and exterior surveys, diagnostic water testing, infrared thermography, and exploratory openings to determine water infiltration paths and assess the integrity of wall systems. Testing was performed at multiple locations to isolate leakage sources, and findings were used to develop tiered repair strategies ranging from minimum life-safety repairs to enhanced long-term remediation. WDP's work culminated in detailed cost estimates, technical recommendations, development of contract documents for repairs, and construction phase services for the façade replacement project.



### 3. Qualifications, Experience, and Past Performance



Rex Cyphers, PE  
Principal-in-Charge

#### **West Virginia University, Health Sciences Building, Envelope Replacement Study, Charleston, WV / PIC & Designer of Record**

WDP performed structural façade evaluation of the existing brick cladding and glazed ribbon windows installed. Analysis of the existing masonry and lateral load paths for the 4-story, steel framed structure identified cladding backup with limited lateral load carrying capacity, and the related cracking on the upper level had caused bricks to become dislodged at several locations including overhangs and window lintels. WDP designed a temporary restraint system using debris netting to encapsulate the high-risk brick. The need for recladding has allowed the opportunity for upgrading the building aesthetic, and repair design strategy has involved incorporation of curtain walls and metal panels as well as brick masonry to modernize the appearance, while still respecting the architecture of the hospital campus.

#### **Public Service Commission of WV, Charleston, WV / PIC & Designer of Record**

Designer of Record for the complete removal of the facade of the 150,000 SF facility. The facility remained secure and fully operational during the entire project. The design modified the existing wall assembly to strengthen the walls to accommodate the new facade and improve the thermal performance of the walls and glazing. The large curtain wall systems on the building were refurbished and received new high-performing glazing, while punched windows and smaller stacks of curtain walls were designed to be removed and replaced. A phased demolition and construction plan was developed to minimize disruption and to maintain full occupancy.

#### **Senate of West Virginia, West Virginia State Capitol Roof Walkway, Charleston, WV / PIC**

WDP was contracted to perform a structural analysis of the West Virginia Senate Roof, develop a design for an enclosed walkway across the roof based on structural analysis and calculations, coordinate the bidding process for construction of the roof walkway, and provide construction administration services to include preconstruction and progress meetings, review of submittals and RFIs, and performing construction observations.



### 3. Qualifications, Experience, and Past Performance




#### **Adam D'Alessandro, PE**

Project Manager

Adam has 17 years of industry experience working on a wide variety of building envelope and structural engineering projects. Over his 13-year tenure at WDP his work has included condition assessments, failure investigations, rehabilitation of existing structures, development of repair designs and specifications, field testing, and construction administration services.

#### **EDUCATION**

 Clemson University / Civil Engineering / MS / 2007

 Clemson University / Civil Engineering / BS / 2005

#### **PROFESSIONAL REGISTRATION**

Professional Engineer: VA

#### **REPRESENTATIVE EXPERIENCE**

##### **General Services Administration, Edward A. Garmatz Federal Courthouse, Baltimore, MD / Project Manager**

WDP conducted a condition assessment of the original window systems of the courthouse that were constructed in 1976. This included a visual survey, thermal imaging, thermal data collection, and field performance testing. Technical analysis was subsequently completed to further define the performance of the existing systems, and to compare retrofit options. The analysis results were used to define both the environmental impact of the existing systems, and the potential energy savings of window retrofits. The data collected was used to develop a report and to provide recommendations for remediation. Adam is currently managing the development of repair drawings and specifications that include a complete replacement of the windows and the structural attachments.

##### **Roanoke Higher Education Center, Water Leakage Investigation, Roanoke, VA / Project Manager**

WDP conducted a water leakage investigation on a building constructed in 1931 in the Modern Art Deco fashion featuring complex ornamental brick, yellow precast pediments and weatherings, and cast aluminum accents and ornamental features. During the leakage investigation, significant damage was observed to the steel support systems, exterior masonry façade, and ornate masonry/precast parapets. WDP designed veneer stabilization repairs, weatherization improvements, and window replacement alternatives. WDP provided construction administration services for the duration of the project while the building remained occupied. Adam contributed to the design efforts and was the lead for the construction administration, working on site daily.



### 3. Qualifications, Experience, and Past Performance



Adam D'Alessandro, PE  
Project Manager

#### **University of Virginia, McCormick Road Dorms Renovation, Charlottesville, VA / Structural Engineer**

The McCormick Road Dormitories consist of 6 student housing buildings. The project included the replacement of all of the exterior windows. Adam was involved in performing peer review of window details and aiding in the development of the window flashing installation procedure. As part of the peer review, he reviewed the brick masonry chimney repairs, conducted periodic site visits during construction to review the installation progress of the windows, and performed quality assurance field testing on select installed windows.

#### **James Madison University, The Hub, Water Infiltration Investigation & Window Repair, Harrisonburg, VA / Project Manager**

WDP performed diagnostic water testing at the Hub building led by Adam to determine the cause of reported water leakage at several existing storefront window systems. Based on results from the diagnostic testing, a window replacement repair was selected. Adam also led the design of the storefront window replacement and flashing integrations at the leaking windows.

### 3. Qualifications, Experience, and Past Performance



#### **Brian Green-Cariño, PE**

Senior Engineer

Brian has been a Senior Engineer with WDP since June 2022. Having eleven years of experience, he specializes in structural investigation, analysis, and design, as he guides projects from initial concept developments through to the final completion of construction. His projects focus on the assessment and repair or alteration of buildings including concrete, steel, masonry, and timber structures. When making assessments, he utilizes document review, visual survey, non-destructive testing, and exploratory probing plans to assemble detailed descriptions of observed conditions and to prepare specific repair and maintenance plans. He proactively identifies coordination items and invokes the expertise of other design professionals to generate comprehensive design solutions thanks to his background contributing to design projects with multiple design disciplines involved. He works diligently throughout the design process and actively engages construction teams with the same dedication.

#### **EDUCATION**

Cornell University / Civil Engineering / BS / 2014

#### **PROFESSIONAL REGISTRATION**

Professional Engineer: VA, DC, MD

#### **PROFESSIONAL MEMBERSHIPS / COMMITTEES**

- American Society of Civil Engineers (ASCE)
- National Society of Professional Engineers (NSPE)

#### **REPRESENTATIVE EXPERIENCE**

##### **West Virginia General Services Division, Diamond Building Roof / Parapet Repairs, Charleston, WV / Sr. Engineer**

WDP evaluated the roof of the Diamond Building designed its replacement for the GSD. On-site investigation identified severe degradation of the gypsum roof deck and damage to the parapets requiring repair. WDP designed the roof replacement to include repairs of the discovered damage. Brian leads WDP's construction administration services for this project which include on-site coordination with the contractor, submittal reviews, responses to RFIs, and progress reports.

##### **Senate of West Virginia, West Virginia State Capitol Roof Walkway, Charleston, WV / Sr. Engineer**

WDP coordinated the design of an enclosed rooftop walkway for the WV Senate. WDP analyzed the roof structure to determine requirements for its support. The project included coordination of bids for the walkways' construction, as well as construction administration services in the form of progress meetings, on-site observations, and submittal and RFI review. Brian led WDP's design services for the project which included concept development, structural modeling of the walkway, coordination with and exploratory verification of existing conditions.





### 3. Qualifications, Experience, and Past Performance



Brian Green-Cariño, PE  
Senior Engineer

#### **Parkside Place, Inc., Parkside Place Facade Investigation, Charleston, WV / Sr. Engineer**

WDP performed an investigation of reported facade deformation and warped structures for Parkside Place, Inc. The investigation involved review of existing drawings and coordination of exploratory openings to verify existing conditions, determination of the facade anchoring system, and identification of hazardous materials that could affect repair efforts. Brian led the investigation effort and prepared a report recommending replacement of corroded lintels and angles, installation of flashing, anchoring of coping stones, and general maintenance of the facade.

#### **Loudoun County Department of General Services, Loudoun Heights Fire & Rescue Station 26, Settlement Investigation, Purcellville, VA / Sr. Engineer**

WDP provided geotechnical and structural investigation/analysis to assess the probable cause(s) of apparent differential settlement occurring within the fire station. Brian led the initial investigation of the observable conditions, performed exploratory openings to further verify existing conditions. After delivery of the report, he further analyzed the structure, designed repairs, and provided direct support to the construction team.

#### **Fauquier County, Vint Hill Library Renovation, (c/o RRMM Architects), Warrenton, VA / Project Manager**

WDP was retained to perform a feasibility study into the renovation of an existing structure into a library. Brian performed the field survey to document the existing structure, analyzed the floor structure for increased library floor loads, and recommendations for the intended use of the structure.



## Jody Driggs, AIA, NCARB

Principal-In-Charge

Jody is a twenty-nine-year member of Silling Architects and has served as a Principal since 2001. Under his leadership, the firm has grown in expertise and recognition as an award-winning regional thought leader serving a multitude of building typologies and service markets. Jody's work has received dozens of design awards, elevating pragmatic facility planning with a focus on cultural connections to people and place. Through his background in campus planning and urban design, Jody understands his projects' responsibilities in shaping engaging civic spaces, contributing to a public realm that reflects and reinforces our societal values. The variety of architectural language and character in the firm's work is evidence of his approach and commitment to client-centeredness and critical design. Jody continues to serve as an active Project Architect and has led many of the firm's most prominent and challenging design projects. In addition to his leadership with the firm, Jody has maintained an active voice at the state and local chapter level of the American Institute of Architects, serving continually for over twenty years in the offices of President, Vice-President, Treasurer, Director, Foundation for Architecture Chair, and Scholarship Committee Member.

#### EDUCATION

University of Tennessee / BA /  
1996

#### PROFESSIONAL REGISTRATION

Registered Architect: WV, FL,  
MD, PA, VA, KY, OH

#### PROFFESIONAL MEMBERSHIPS / COMMITTEES

- / American Institute of Architects (AIA)
- / National Council of Architectural Registration Boards (NCARB)
- / AIA West Virginia – Past President
- / AIA West Virginia – Scholarship Committee
- / AIA Academy of Architecture for Justice (AAJ)

#### REPRESENTATIVE EXPERIENCE

**Kanawha County Public Library – Window Replacement,  
Charleston, WV**

**Monongalia County Justice Center – Building Envelope  
improvement, Roof and Window Replacement, Morgantown, WV**

**Cabarrus County Courthouse – Comprehensive Building Envelope  
improvement, Roof and Window Replacement, Concord, NC**

**Marshall University Performing Arts Center – Renovations,  
Huntington, WV**

**West Virginia State University, D. Stephen & Diane H. Walker  
Convocation Center, Institute, WV**

### 3. Qualifications, Experience, and Past Performance



#### **Brian Estep, AIA, NCARB**

Architect & Studio Director

Brian is a Director in our Charleston design studio. In his 33 years of experience, he has cultivated a career delivering impactful design solutions across law enforcement, public safety, justice, civic and educational building types - each crafted with a deep understanding of function, security, and community engagement. Throughout his career Brian has collaborated with multidisciplinary teams and stakeholders to ensure every project resonates with its users while standing the test of time. He is driven by a passion for clean, purposeful design, creating spaces where form meets function and clarity encourages confidence. He approaches every project with an emphasis on thoughtful planning, quiet precision, and a belief that thoughtful, well-executed design can elevate how people live, work, and connect.



#### **EDUCATION**

University of Tennessee / BA / 1992

#### **PROFESSIONAL REGISTRATION**

Registered Architect: WV

#### **PROFFESIONAL MEMBERSHIPS / COMMITTEES**

-  American Institute of Architects (AIA)
-  AIA Academy of Architecture for Justice (AAJ)

#### **REPRESENTATIVE EXPERIENCE**

**Kanawha County Public Library – Window Replacement, Charleston, WV**

**West Virginia State Capitol – Exterior Lighting Complex, Charleston, WV**

**Afton Ridge Library & Active Living Center, Kannapolis, NC**

**Raleigh County Sheriff’s Department Beckley, WV**

**Martinsburg Police Department & Municipal Court, Martinsburg, WV**

**Putnam County Sheriff’s Department, Winfield, WV**

**Charleston Public Safety Center, Charleston, WV**

**Kanawha County Public Library Eastern Branch Library, Marmet, WV**

**West Virginia State University, D. Stephen & Diane H. Walker Convocation Center, Institute, WV**



### 3. Qualifications, Experience, and Past Performance



#### Jeremy Jones, AIA

Architect

Jeremy has over 20 years of experience in architectural planning and design with a primary focus on our firm's courts, law enforcement, corrections/detention, and public safety projects. As a project manager, he provides valuable leadership in delivering high-quality, client-oriented services from initial planning through design and construction. Exceptional communication and technical skills allow him to effectively build consensus among a highly diverse body of project stakeholders.

#### EDUCATION

University of Tennessee / BA / 2007

#### PROFESSIONAL REGISTRATION

Registered Architect: WV

#### PROFFESIONAL MEMBERSHIPS / COMMITTEES

- / American Institute of Architects (AIA)
- / AIA Academy of Architecture for Justice (AAJ)
- / AIA WV – President (2022-2023)

#### REPRESENTATIVE EXPERIENCE

**Monongalia County Justice Center - Building Envelope improvement, Roof and Window Replacement, Morgantown, WV**

**Cabarrus County Courthouse – Comprehensive Building Envelope Improvement, Roof and Window Replacement, Concord, NC**

**Kanawha County Judicial Building – Expansion & Renovation, Charleston, WV**

**Raleigh County Judicial Center, Beckley, WV**

**Randolph County 911/OEM Center, Elkins, WV**

**Lewis County Judicial Annex Weston, WV**

**Lewis-Gilmer 911/OEM Center, Weston, WV**

**Martinsburg Police Department & Municipal Court, Martinsburg, WV**

**Marshall County Public Safety Building Moundsville, WV**

**Southampton County Courthouse – Expansion & Renovation Courtland, VA**

### 3. Qualifications, Experience, and Past Performance



## Relevant Experience

The following pages include relevant projects performed by the project team.

#### Owner / Client

West Virginia General  
Services Division

### Building 36 – One Davis Square Façade Replacement and Restoration Charleston, WV

#### Point of Contact

Aaron Armstrong, PE

Project Manager

304-352-5534

[Aaron.M.Armstrong@wv.gov](mailto:Aaron.M.Armstrong@wv.gov)

#### Project Goals and Objectives

- // Evaluate and remediate cracking of glazing units within curtain wall systems
- // Evaluate and remediate failures of granite cladding components
- // Evaluate and remediate bulk water infiltration and air leakage through the building envelope

#### Project Type

Façade replacement and  
restoration

#### Scope of Services

- // Field investigation
- // Water infiltration testing
- // Repair recommendations
- // Repair design development
- // Bid assistance
- // Construction administration
- // Curtain wall assembly replacement and restoration
- // Below-grade repairs

#### Delivery of Project

Spring 2022 – Summer 2025

WDP performed diagnostic water testing and exploratory openings at Building 36 to assess the condition of the façade and evaluate ongoing moisture related issues and damage the building is experiencing. The variety in cladding assemblies throughout the enclosure has revealed a unique set of performance issues including but not limited to granite tile debonding, exterior cracking, sporadic window shattering within the curtain wall, air/water infiltration and biological growth.



shattered spandrel glass within existing curtain wall system with exposed mineral wool

WDP conducted an initial field investigation prior to developing the design documents for the project. The field investigation revealed that the attachment of the curtain wall system was not structurally secure. This condition likely caused differential movement within the curtain wall system leading to failures within the glazing. Additional investigation of the curtain wall integration with adjacent cladding system revealed a likely path for water infiltration. While other repairs were incorporated as part of the overall repair project, WDP designed a new curtain wall that mimicked the existing system but that was higher performing from a thermal standpoint as well as resistance to

water penetration and air leakage. The new design also included new integrations with the surrounding cladding system. New structural framing supports were also designed for the new fenestration and exterior cladding components.



### 3. Qualifications, Experience, and Past Performance



Repairs were executed while the building was fully occupied. Interior barrier walls were constructed to separate the interior space while the exterior walls and windows could be removed to perform the work. Insulation and air seals were incorporated into the barrier walls to better maintain interior conditions within the building while the work was performed. A detailed phasing plan was developed that was coordinated with the building occupants to limit disruptions and displacement of occupants from their offices and workspaces.

WDP provided design and construction phase services for the project and is currently in the process of closing out the project.



### 3. Qualifications, Experience, and Past Performance



#### Owner / Client

Public Service Commission  
of West Virginia / Pullman

## Public Service Commission Façade Replacement

Charleston, WV

#### Point of Contact

Mark Bott

Branch Director

(412) 505-7937 /

[mbott@pullman-  
services.com](mailto:mbott@pullman-services.com)

#### Project Goals and Objectives

- /// Evaluate building exterior
- /// Improve wall assembly thermal performance
- /// Replace building façade

#### Project Type

Façade replacement

#### Scope of Services

- /// Designer of Record
- /// Condition assessment /  
field investigation
- /// Structural and building  
envelope deficiencies
- /// Architectural / structural  
design
- /// Construction  
administration

#### Delivery of Project

Feb 2015 – May 2017

Originally constructed in 1984, the headquarters for the Public Service Commission of West Virginia is a steel-framed structure supported by spread footings. The building provides office space for various public divisions such as Utilities and Administration. In 2015, the Public Service Commission issued a request for proposals for a Design-Build renovation of the building's façade including improvements to the performance of the wall assembly and fenestration assemblies, new eye-catching metal work logos of the Public Service Commission for the exterior, and restoration of the steel framed arch at the front facade of the building. Demolition and construction process began in March of 2016 with the requirement of maintaining building occupancy throughout the entirety of the project.

WDP conducted an initial field investigation prior to developing the design documents for the project. The field investigation provided the opportunity to uncover some of the existing conditions so the design details could be developed based on actual construction. The design involved a complete removal of the building's exterior, providing temporary enclosures to protect interior finishes and building



### 3. Qualifications, Experience, and Past Performance



occupants, and replacement with new brick, air barrier and thermal insulation on a phased demolition and construction plan to ensure minimal disruption to the building occupants. The large curtain wall systems on the building were refurbished and received new high-performing glazing, while punched windows and smaller stacks of curtain walls were designed to be removed and replaced. WDP designed new structural supports for the punched windows and incorporated new integrations with the surrounding walls to ensure continuity of the air/water barrier.



### 3. Qualifications, Experience, and Past Performance



#### Owner / Client

The Senate of West Virginia

#### West Virginia State Capitol Roof Walkway

Charleston, WV

#### Point of Contact

Lee Cassis

Clerk of the Senate

(304) 357-7800

[senate.clerk@wvsenate.gov](mailto:senate.clerk@wvsenate.gov)

#### Project Goals and Objectives

- Design a new enclosed walkway connecting the main Capitol Building to the wings
- Provide visibility to the Capitol Dome while passing through the walkway
- Provide structural support and watertight integrations with existing conditions



#### Project Type

Structural

Building Envelope

#### Scope of Services

Field survey

Develop design documents

Renderings of new, curtain wall-enclosed walkway

Construction administration

The State Capitol Building is a 1930s-structure designed by architect Cass Gilbert (designer of the United States Supreme Court Building). WDP was contracted to perform a structural analysis of the existing low roof structures at the West Virginia Capitol Building and develop a design for an enclosed walkway across the roof. WDP developed a design strategy to preserve the historic character of the Capitol building. Our strategy, which was approved by the Capitol Building Commission (CBC), relied on visual distinctions between old and new. A contemporary curtain wall system was selected for the enclosed walkway to distinguish itself from the historic masonry at the main Capitol building.

#### Delivery of Project

Fall 2021 – Spring 2024

Where the new curtain wall system abuts the profile of the historic masonry, the integrations were carefully detailed to ensure that a continuous building enclosure was maintained. WDP designed new structural supports that were integrated into the existing roof deck



### 3. Qualifications, Experience, and Past Performance



system to ensure maximum loads were not exceeded. The new curtain wall assemblies were evaluated for condensation potential using 3-dimensional and 2-dimensional heat flow modeling software to determine the risk for surface temperatures of the curtain wall frame to drop below the dew point temperature within the new enclosed space based on the placement and outputs of the new mechanical system.

WDP developed construction documents, assisted with the bidding process, and provided construction administration services including preconstruction and progress meetings, review of submittals and RFIs, and performing construction observations.

### 3. Qualifications, Experience, and Past Performance



#### Owner / Client

General Services  
Administration

#### Garmatz Building Window Study

Baltimore, MD

#### Point of Contact

Evan Shillington

Project Manager

(267) 226-0231

[evan.shillington@gsa.gov](mailto:evan.shillington@gsa.gov)

#### Project Type

Window study and  
replacement

#### Scope of Services

- Window condition assessment
- Field testing
- Window replacement

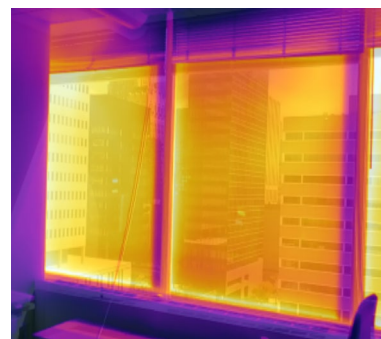
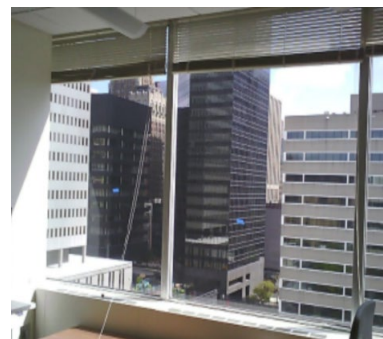
#### Delivery of Project

July 2023 – December 2025

#### Project Goals and Objectives

- Evaluate existing windows for performance
- Repair recommendations
- Replace existing windows

The Edward A. Garmatz Building is a federal courthouse located in Baltimore, Maryland that was constructed in 1976. Maintained by the GSA, the courthouse had reported various issues relating to their original window systems. The GSA reported issues including “daylighting control failures, possible degradation of window seals, leaking air and water from the gaskets, and unwanted transfer of cold or heat.” WDP was hired to investigate these window systems, and to provide recommendations for repair.



Thermal Image of Window System

A thorough condition assessment of the existing window systems was performed, which included a visual survey, thermal imaging, thermal data collection, and field performance testing. The results from performance testing were compared to industry-accepted standards to quantify the performance of the existing systems. Technical analysis was subsequently completed to further define the performance of the existing systems, and to compare retrofit options. Collected thermal data was analyzed using computer applications, including THERM and COMFEN. The analysis results were used to define both the environmental impact of the existing systems, and the potential energy savings of window retrofits. The data collected was used to develop a report and to provide recommendations for remediation.

Analysis results were used in conjunction with collected visual observations and test results to compile five retrofit options. Options included the installation of a thermal film, a baseline window replacement, a quad-pane window replacement, a smart-glazing window replacement, and daylighting controls. Each option reported typical considerations, such as cost, effectiveness, and feasibility. Other criteria were investigated specific to the client, such as blast





### 3. Qualifications, Experience, and Past Performance



resistance, embodied carbon, and environmental affect to present a thorough list of recommendations to the client.

After submission of the assessment report, the GSA selected a full window replacement project. WDP is in the process of developing the window replacement design to include new high performance curtain wall windows.



### 3. Qualifications, Experience, and Past Performance



#### Owner / Client

West Virginia University (WVU)

#### Point of Contact

John Thompson

Director of Design and  
Construction

(304) 293-3625 /

[john.thompson@mail.wvu.edu](mailto:john.thompson@mail.wvu.edu)

#### Project Type

Window replacement design

#### Scope of Services

- /// Comprehensive investigation & repair scope development
- /// Designer of Record for repairs
- /// Cladding backup and window lintel replacement
- /// Masonry façade and parapet repairs

#### Delivery of Project

Comprehensive Investigation – 2019

Schematic Design – 2021

Construction Documents – 2022

## WVU Health Science Center – Charleston, Façade Investigation and Repair Design

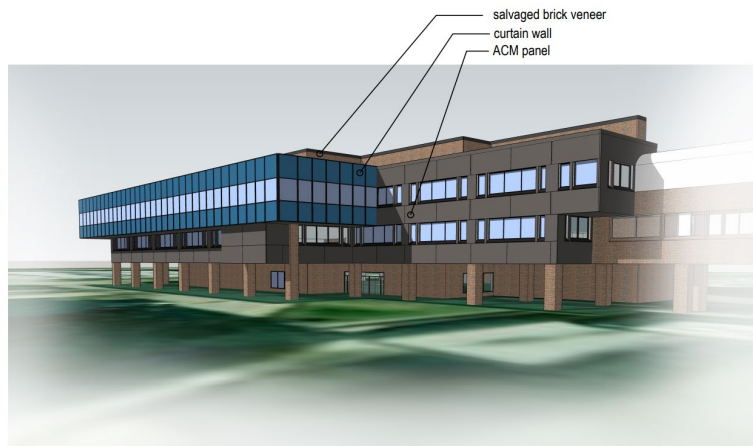
Charleston, WV

#### Project Goals and Objectives

- /// Investigation of cracked glass and window failure
- /// Replacement design for full window replacement program

Part of the West Virginia University School of Medicine, the WVU Health Sciences Building in consists of four above grade floors, each with a unique floor plate, creating the effect of distinct bands of cladding projecting at differing depths.

A careful analysis of the existing masonry and lateral load paths for the 4-story, steel-framed structure identified cladding backup with only limited lateral load-carrying capacity, and the related cracking on the upper level had caused bricks to become dislodged at several locations including reinforced masonry window lintels. This hazard to public safety was exacerbated by the spontaneous glass breakage of the ribbon windows with insufficient movement joints between the cantilever structures of the third floor and roof structure above. WDP designed a temporary restraint system using debris netting to encapsulate the high-risk areas to mitigate the immediate hazard while the long-term repair strategy was developed and designed.



Architectural Cladding Concept Rendering

Working closely with the University, the repair approach was developed to divide the scope into two phases with the first phase intended to address the most critical problems identified during our investigation. The repair must address structural deficiencies and improve energy performance to meet or exceed current energy code provisions. Capitalizing on the opportunity to update the appearance of the building, the design aims to modernize the exterior of the building while allowing the façade replacement to integrate seamlessly with the first-



### 3. Qualifications, Experience, and Past Performance



floor cladding to remain as well as the rest of the Charleston Area Medical Center Campus. WDP teamed with Zervas Architects to propose several cladding concepts and ultimately prepared design documents for the façade and parapet replacement of the upper three floors of the building.

As a result of the cantilever design of the building's upper floors there are a number of unique window attachments and masonry façade support conditions. The repair, which includes the replacement of all the windows, must implement substantial changes to the window perimeter and support conditions to accommodate differential building movement which was found to be contributing to glass breakage. Where feasible, the back-up walls and window lintels had to be reinforced and connected to the structure to properly transfer the lateral loads and limit the out of plane movements that are contributing to façade instability. In other locations the backup CMU will be replaced with new light gauge framing backup and new painted interior drywall finishes to further modernize the building appearance.

At the parapets of each floor level, which were previously supported by an unreinforced CMU backup, a creative solution was implemented where the parapet CMU is either replaced by a cantilever portion of the curtain wall from the exterior wall below or braced to the roof deck.



### 3. Qualifications, Experience, and Past Performance



## References

#### **West Virginia General Services Division**

##### **Building 36 — One Davis Square Façade Replacement and Restoration**

Aaron Armstrong, PE – Project Manager

304-352-5534 / [Aaron.M.Armstrong@wv.gov](mailto:Aaron.M.Armstrong@wv.gov)

#### **Public Service Commission Façade Replacement**

##### **Public Service Commission Headquarters**

Cheryl Ranson – Director of Administration

(304) 340-0356 / [cranson@psc.state.wv.us](mailto:cranson@psc.state.wv.us)

#### **The Senate of West Virginia**

##### **West Virginia State Capitol Senate Roof Walkway**

Lee Cassis – Clerk of the Senate

(304) 357-7800 / [senate.clerk@wvsenate.gov](mailto:senate.clerk@wvsenate.gov)

#### **General Services Administration**

##### **Garmatz Building Window Study**

Evan Shillington – Project Manager

(267) 226-0231 / [evan.shillington@gsa.gov](mailto:evan.shillington@gsa.gov)

#### **Charleston Area Medical Center (CAMC)**

##### **WVU Health Science Center – Charleston, Façade Investigation and Repair Design**

John Thompson – Director of Design and Construction

(304) 293-3625 / [john.thompson@mail.wvu.edu](mailto:john.thompson@mail.wvu.edu)



### 3. Qualifications, Experience, and Past Performance

#### Point of Contact

Ben Thomas

President

(304) 347-1121 /

[bthomas@bowlesrice.com](mailto:bthomas@bowlesrice.com)

#### Project Scope

// 80,000 gsf

// Additions & Renovations

***\* The overall project scope included comprehensive building envelope improvements, including a roof and window replacement.***

#### Delivery of Project

Completed in 2022

#### Awards

// (2) Honor Awards, AIA West Virginia

// Honor Award, AIA Cleveland

## Kanawha County Public Library

Charleston, WV



The design team of Silling and HBM Architects have “reimagined” Kanawha County’s historic downtown library, providing a dynamic transformation that features fully renovated existing space, 20,000 square feet of new space, and beautifully sculpted glass walls reaching to the sky, creating a 21st century library that will serve our region for decades to come. This new main library building will allow Kanawha County’s library system to provide more efficient services to its nearly 117,000 card holders.

The new library building includes a total of 80,000 square feet of space: 60,000 square feet fully renovated and 20,000 square feet of expanded space, two new additions including a three-story addition to what is now the rear of the library that serves as the new entrance to the building, as well as a two-story addition utilizing space along an alley between the library and the KB&T building. A third floor covered walkway above Quarrier Street will take library patrons from the Summers Street Parking Garage to the library. The project provides approximately 10,000 square feet of children’s activity space, more than double the current size, for collections, story time, a craft room, and other activities. More public space for the community, including much needed and often-requested reading areas, study rooms and flexible meeting space for groups of up to 200 are also incorporated into the design.

By renovating and expanding its century-old space, the Kanawha County Public Library revives an iconic landmark in downtown Charleston and brings an exciting, fresh, new space to serve as the community’s gathering place.



### 3. Qualifications, Experience, and Past Performance

#### Point of Contact

Renetta McClure

County Administrator

1 (304) 291-7281 /

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#### Project Scope

// 84,000 gsf

// Adaptive Reuse/Renovations

// 8 Courtrooms

***\* The overall project scope included comprehensive building envelope improvements, including a roof and window replacement.***

#### Delivery of Project

Completed in 2016

#### Awards

Honor Award, AIA West Virginia

## Monongalia County Justice Center

Morgantown, WV



Originally built in the 1970s, the former Harley O. Staggers Federal Building and regional post office presented a very unique and exciting opportunity to serve the growing judicial services of Monongalia County. Having been vacant and closed for more than eight years, county leaders would ultimately purchase the 84,000 square foot, four-level building in 2007. The project made responsible use of the public investment while also contributing to the overall reduction of environmental impact in reuse of the existing building stock. The design's resulting expression provided a strong community presence with an elegant exterior facelift while also introducing a more ordered, functional and secure setting for the County's court operations.

The design implements three major ideas: clear and well-defined public spaces with a strong sequence from the entry to the courtrooms; introduction of natural daylighting; and the use of high contrast interior finishes to create dignified spaces. High volume functions of the court are located near the lobby and on lower floors. The circulation is simple, direct and distinctly separated into public, private and secure paths of movement.

Courtrooms are located on the upper floors stacked and grouped inwardly oriented on the floor plan. They are served by intermediate secure detainee elevators and holding cells as well as jury deliberation rooms in immediate adjacency. Courtrooms are equipped with zoned lighting as well as state-of-the-art technology and audio visual features including interactive monitors, evidence presentation cart, sound system with assisted listening, and large format screens with video conferencing capabilities all fully operational from sophisticated bench control software.

### 3. Qualifications, Experience, and Past Performance

#### Point of Contact

Kyle Bilafer

Area Manager of Operations

1 (704) 305-9723 /

[Kyle@fortiuscapitalpartners.com](mailto:Kyle@fortiuscapitalpartners.com)

#### Project Scope

// 312,000 gsf total

// 12 Courtrooms

// New Construction

// Renovations

// Urban Planning

***\* The overall project scope included comprehensive building envelope improvements, including a roof and window replacement, to the existing 1980s era courthouse.***

#### Delivery of Project

Completed in 2024

#### Awards

Merit Award, AIA West Virginia

## Cabarrus County Courthouse

Concord, NC



The Cabarrus County Courthouse Project brings a significant new addition to the courthouse campus while connecting to and renovating the existing structure to deliver a relevant and contextually sensitive place for justice and civic engagement within Concord's charming downtown district. Due to the dramatic growth of the county population over the last several decades, the Cabarrus County courts system had vastly outgrown the existing 1975 courthouse constructed along Union Street and required significant increases in courtrooms and accompanying public, staff, and security-related spaces.

The ground level houses public entry, screening, and the heavily trafficked clerk departments, while District and Superior Courts hierarchically stretch and stack along Church Street. Primary massing of the new construction completes the street edges to the north. Judges and District Attorney office spaces form the connection to the existing courthouse on the upper floors. The entry pavilion draws pedestrians through the newly created civic plaza, with interior public circulation animating the building edges.

Overall, the project includes 240,000 square feet in new construction, 72,000 square feet in existing facility renovations, four Superior Court jury-capable courtrooms, six District Court courtrooms, two future courtrooms, a 45,000 square foot shell space for future expansion, and 14,000 square feet of expansion space in the new facility.