



Purchasing Division
 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: 437126

Doc Description: EOI: Building Four Renovations

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2018-04-02	2018-05-02 13:30:00	CEOI 0211 GSD1800000004	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:

Michael Baker International, Inc.
400 Washington Street East, Suite 301
Charleston, West Virginia 25301
304-769-0821

RECEIVED

2018 MAY -2 AM 10:34

WV PURCHASING
 DIVISION

FOR INFORMATION CONTACT THE BUYER

Michelle L Childers

(304) 558-2063

michelle.l.childers@wv.gov

Signature X

FEIN # 25-1228638

DATE May 2, 2018

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

ADDITIONAL INFORMATION:

Expression of Interest

The West Virginia Purchasing Division for the agency, The West Virginia General Services Division, is soliciting CEOI responses from qualified firms to provide architectural/engineering service contract for evaluation, design, and construction phase services for renovation of Building Four on the West Virginia Capitol Campus, per the attached bid requirements, specifications, and terms and conditions.

INVOICE TO	SHIP TO
DEPARTMENT OF ADMINISTRATION GENERAL SERVICES DIVISION 112 CALIFORNIA AVENUE, 5TH FLOOR CHARLESTON WV25305 US	DEPARTMENT OF ADMINISTRATION GENERAL SERVICES 112 CALIFORNIA AVENUE, 5TH FLOOR CHARLESTON WV 25305-0123 US

Line	Comm Ln Desc	Qty	Unit Issue
1	A/E Svcs: Building Four Renovations Project	0.00000	

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

Building Four Renovations Project



Purchasing Division
 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: 437126

Doc Description: Addendum 1 - EO: Building Four Renovations

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2018-04-24	2018-05-02 13:30:00	CEOI 0211 GSD1800000004	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:

Michael Baker International, Inc.
400 Washington Street East, Suite 301
Charleston, West Virginia 25301
304-769-0821

FOR INFORMATION CONTACT THE BUYER

Michelle L Childers
 (304) 558-2063
 michelle.l.childers@wv.gov

Signature X

FEIN # 25-1228638

DATE May 2, 2018

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

ADDITIONAL INFORMATION

Addendum

Addendum No. 1 issued to provide clarification regarding the availability of original construction drawings, per Attachment A.

End of Addendum

Expression of Interest

The West Virginia Purchasing Division for the agency, The West Virginia General Services Division, is soliciting CEOI responses from qualified firms to provide architectural/engineering service contract for evaluation, design, and construction phase services for renovation of Building Four on the West Virginia Capitol Campus, per the attached bid requirements, specifications, and terms and conditions.

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Line	Comm Ln Desc	Qty	Unit Issue
1	A/E Svcs: Building Four Renovations Project		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

Building Four Renovations Project

SOLICITATION NUMBER: CEOI 0211 GSD1800000004
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

Description of Modification to Solicitation:

Addendum issued to publish and distribute the attached documentation to the vendor community.

1. The purpose of this addendum is to provide clarification regarding the availability of original construction drawings, per Attachment A

No other changes.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A

In Section Three, Item 4.2 of the originally published CEOI, this statement appeared: "Note that original construction drawings are not available for this building."

Please strike that sentence and revise to read as follows: "Original construction drawings of the building will be made available to the successful firm."

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: GSD1800000004

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.

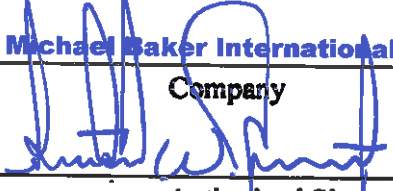
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> 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.

Michael Baker International, Inc.
Company

Authorized Signature
May 2, 2018
Date

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

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: 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 exceeds 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: Michael Baker International, Inc.

Authorized Signature: [Signature] Date: May 2, 2018

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 2 day of May, 2018.

My Commission expires January 3, 2022.

AFFIX SEAL HERE



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Ryan A. Long
400 Washington St. E
Charleston, WV 25301
My Commission Expires January 3, 2022

NOTARY PUBLIC

[Signature]

Purchasing Affidavit (Revised 01/19/2018)

May 2, 2018

Ms. Michelle Childers
West Virginia Department of Administration
Purchasing Division
2019 Washington Street East
Charlestown, WV 25305-0130

**Subject: Expression of Interest, Building Four Renovations Project
CEOI 0211 GSD1800000004**

Dear Ms. Childers,

The Charleston, WV office of Michael Baker International, Inc. (Michael Baker) is pleased to submit this Expression of Interest (EOI) for the Architectural and Engineering Services related to the proposed renovations to Building Four at the Capitol Complex. Michael Baker is interested in the mission of your agency and would like to engage with the General Services Division as a trusted facilities consultant. We believe that our team of professionals is uniquely qualified to partner with the General Services Division on this important project and help bring the vision for Building Four upgrades into reality.

We look forward to the opportunity to provide the State of West Virginia with the high-quality service for which Michael Baker is known. Our unique qualifications and depth of experience make us well-suited to provide all of the services that may be required to deliver this project successfully to the citizens of West Virginia.

Michael Baker has worked across the United States on existing building renovation projects to create improvement and revitalization plans; partnering with local governments, NGOs and nonprofits from planning through construction. We have thoroughly reviewed the EOI and are confident we can deliver the services requested.

Michael Baker is well positioned to assemble a comprehensive design team (in-house) including: Architectural, Interior Design, Mechanical, Electrical, Plumbing, Structural and Fire Protection Engineering as well as IT and Communications expertise. Our diverse team of professionals are well seasoned in the evaluation and documentation of existing conditions, preparation of construction documents, bid specifications, and the application of required code compliance and construction permits. Michael Baker can also provide leadership or assistance during the Bidding process and the appropriate level of Construction Administration during the Construction Phase with dedicated personnel committed to the construction process.

We Make a Difference

Michael Baker understands there are a number of qualified and talented teams that offer similar services as ours, but we feel the following distinguishes our team from the others:

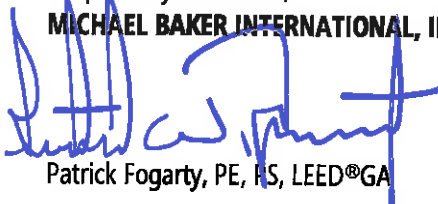
- ✓ We understand the project. Michael Baker performed the master plan for the campus and provided architecture and engineering services for landscaping, security, parking, and pavement projects recommended in the plan.
- ✓ We are a local firm. The principal staff involved with the management, systems design and execution of the field work is minutes away from the State Capitol Complex. Our local office is familiar with the State Capitol Campus, its facilities and staff.
- ✓ We are a nationwide firm. As such, we can draw from additional staff of designers and technical experts, providing you with a team that has the resources available to meet your deadlines.
- ✓ We are a diverse team. Our group of architects, designers, engineers and construction management specialists can address any technical issue that may be encountered during all project phases. We have in-house personnel specializing in telecommunications, LEED/sustainability, historic preservation and construction management that most firms do not.

In summary, Michael Baker's firsthand knowledge of the project building and site, vast building design and inspection expertise, LEED accreditations and sustainable design expertise, and local relationships with Capitol staff make us the most qualified firm for this project. Our team is structured around key personnel that have successfully delivered many similar projects and are committed to the quality and schedule required by the State of West Virginia.

The team pledges our firm-wide resources to provide the State of West Virginia with the highest quality product and excellent client service that will exceed your expectations. We truly appreciate your consideration, and would be delighted to further discuss our proposal upon request, and stand ready to assist at your direction.

Respectfully submitted,

MICHAEL BAKER INTERNATIONAL, INC.



Patrick Fogarty, PE, FS, LEED®GA

Enclosure

Firm Introduction



Michael Baker International, Inc. (Michael Baker), is a Pennsylvania-based corporation, founded in 1940, with its headquarters located in Pittsburgh, Pennsylvania. Michael Baker maintains a local presence in our downtown Charlestown office and is authorized to perform professional engineering services in the State of West Virginia. With over \$1 billion in annual revenue, Michael Baker has nearly 6,000 employees in over 90 offices located across the U.S. and internationally, and is ranked as the 5th largest design firm for government office buildings in the U.S. by Engineering News-Record.

The Michael Baker team of architects and engineers have the experience, understanding, and critical technical expertise necessary to the success of the project. The team is familiar with the challenges of existing buildings and is well versed in the evaluation and reporting of existing conditions. They will ensure the concept plans prepared for Building Four are translated into a well-coordinated, constructible project with a realistic time frame and budget. Our prior experience in plan development and construction management of projects of this nature provides our team with unique insight to keep this project on schedule and within budget.

Michael Baker Local Offices

400 Washington Street East
Suite 301
Charleston, WV 25301

Michael Baker has specialized expertise in all phases of building design. The qualifications of the Michael Baker Team are second to none for building renovation projects like this one.

Michael Baker Knows the West Virginia State Capitol Campus

- Developed the Master Plan for the State Capitol Complex
- Landscaping, security, parking, and pavement design projects in accordance with the Master Plan
- State Capitol Building Restroom Study and Design

Technical challenges for the Building Four renovation include:

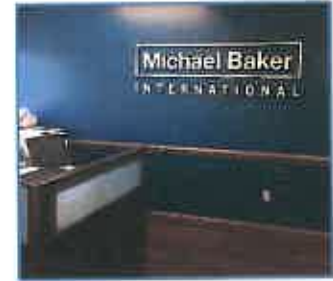
- Lack of Existing Drawings
- Modernization of the Building to Meet Current Codes
- Partial Occupancy During Construction
- Historic Character Preservation
- State-of-the-Art System Integration
- ADA Accessibility
- Possible Secondary Stairwell Addition for Egress
- LEED Silver certification
- Integration with the District Steam and Chilled Water Systems
- Flexibility for HVAC, Electrical and Telecommunications Systems

We have the engineering qualifications and experience to overcome the specific technical challenges of this project and expedite the various approvals needed to advance into construction.

Michael Baker has routinely served as the lead design firm on new and renovation building projects throughout the State. As part of these projects, Michael Baker has performed services including project management, space planning, architecture, structural, MEP and telecommunications infrastructure, environmental services, permitting, and construction support.

Local Management

The project will be delivered with staff from Michael Baker's Charleston, WV and Moon Township, PA offices. The Charleston office is within minutes of the project and contains all of the needed personnel to complete the project. This local office is a "single-stop resource" capable of providing comprehensive professional services, from Mechanical/Electrical and Structural Engineering to Architecture and Planning, final design, and construction management through operational support. Michael Baker will provide the hands-on services needed for this project, from Client meetings to building surveys, design and construction Administration/Inspection. With over 30 in house professionals locally and over 750 regionally, Michael Baker can respond quickly and efficiently to the needs of your project.



Michael Baker's local clients for facility design and renovation projects include, but are not limited to, colleges and universities, schools, counties, parishes, cities, townships, local municipalities, state departments of transportation, military facilities, airports, and private sector clients. Michael Baker's geographic location and extensive experience enables us to respond seamlessly to a wide-range of scopes and services to meet our clients' needs.

In the past decade, Michael Baker was retained by WV General Service Division to develop a Master Plan for the State Capitol Complex and to provide a study of the public restrooms at the historic West Virginia State Capitol Building. As results of the restroom study, Michael Baker was directed to design comprehensive upgrades for 33 restrooms. This work was completed in 2013, but we still retain an extensive understanding of the buildings and operational systems at the State Capitol.

In addition, Michael Baker has worked on numerous architectural, HVAC and sprinkler renovations around the region. Recently, Michael Baker designed and oversaw the renovation of buildings at the relocated WVU Tech campus in Beckley West Virginia. These renovations included; architectural, interior design, new roofing, a new and upgraded fire sprinkler system, upgrades to fire alarm systems, and HVAC renovations and upgrades.

Project Approach and Methodology

The State of West Virginia has been working diligently over the past several years on a vision plan for enhancements of the Capitol Complex. Michael Baker was instrumental in the development of the Campus Master Plan for the State Capitol Complex.

We understand that the goals of that plan include:

- Core mission to provide a functioning and efficient government
- Optimize space usage
- Functions that support the community to bridge boundaries between the complex and the adjoining neighborhoods
- Foster a strong sense of place, making the Capitol Complex a meaningful and distinct place for the people of West Virginia
- Provide facilities and grounds that meet the functional requirements of the state, promoting a cohesive and satisfying experience
- Value natural and architectural heritage, respecting the context of the surrounding natural and built environment
- Provide for prudent expansion of facilities, respecting neighbors and conserving natural resources
- Promote environmental sustainability, encouraging sustainable development and efficient use of resources, energy and materials
- Strengthen community connectivity, maintaining an open complex while providing for safety and security
- Strengthen the pedestrian character of the complex
- Respond to accessibility needs
- Preserve the quality and utility of existing facilities
- Provide controlled vehicle access, limiting the number of vehicles on the core historic complex and developing a compatible system of transportation, circulation and parking



Historic preservation principles include the following:

- Continue a property in the use for which it was originally constructed, or select a new use that minimizes impact on character-defining features
- Retain distinguishing qualities and characteristics
- Repair existing features, materials and finishes; if deteriorated, replace in-kind
- Be authentic: documentation should guide any reconstruction or replacement
- Respect the evolution of historic alterations, style, taste and use
- Do not use treatments that harm historic materials
- New construction should not destroy historic features or materials, nor should it change historic character; additions and new work should be compatible with the existing historic resource
- Interventions in the historic fabric should be reversible

The renovation of Building Four is a key step to achieve the goals of the Master Plan:

- Updating building to current office building standards
- Providing state-of-the-art open office space for multiple agencies and users
- Maintaining the building in a manner consistent with the National Park Service Historic Preservation Standards

Building Type and History

Our basic understanding is that Building Four is a state office building that was completed in 1954. The original construction was rectangular in plan, the building features a central core with two elevators and stairwells. Two east-west corridors flank the core. Offices are laid out around the perimeter of the building.

The design was intended to “express the business-type functions it will house.” The limestone-clad building is six stories in height with a smaller penthouse above. The façade, the eight-bay west elevation, is symmetrical. A large central entrance dominates the first story of the west elevation. The second through the sixth stories were articulated with regular fenestration: a single double-hung window marked each of the interior six bays, while the outer bays featured paired double-hung windows. The secondary elevations are also regular, with a single double-hung window in each bay at each story.



Plans for this building, were submitted to the City of Charleston in early 1950, but the zoning board initially refused to issue a permit for the building. Steel shortages due to the Korean War, further delayed the construction of the building. Building 4 finally opened in May 1954. The total cost was estimated at \$1,850,000, approximately \$15 million in today's dollars. In early 2009, the windows in Building 4 were replaced due to disrepair and lack of efficiency and functionality.

Evaluation Report and Design

Work Previously Completed - We understand that some building evaluation and design work has been completed. Michael Baker has experience with Value Engineering of existing designs and moving projects across the goal line. Before reviewing work of others, we will procure as much existing information as possible. This may include, but would not be limited to, review of physical site conditions from walkthroughs, photographs and any existing documentation. After we gain a working understanding of the existing conditions, our team will review the completed building evaluation and design work. We will fully incorporate the previous work into our evaluation report to the extent possible, keeping in line with the programmatic, aesthetic, sustainable, and financial goals.

Existing Conditions – We understand that the original building plans will be made available to the successful firm. Our field team will obtain any other existing documentation that is available and field verify conditions to produce preliminary floor plans. The lead architects, engineers, and designers will visit the site to further confirm any existing information, correct documentation deficiencies, and produce accurate plans for the proposed level of construction required.

Historic Preservation – We understand the historical significance of this building and its connection with the entire State Capitol Campus. Our historic preservation specialists will be involved in the design process to maintain the style and character of the building's aesthetics.

Space Planning – The architects and interior designers will meet with the State Project Representative to clarify the project goals. They will utilize industry standard guidelines to provide a consistent space planning approach. This is to support the core mission of providing a functioning and efficient building. The goal will be to provide state-of-the-art open office space for multiple agencies and users in line with the Master Plan.

Life Safety / Fire Suppression / Fire Alarm / Smoke Control – The fire protection and life safety team will review the existing code analysis, further research applicable criteria, and coordinate with the Office of the State Fire Marshal. The existing code findings will be incorporated into our documentation as compliant with the goals of the project. This will inform the space planning layout ensuring proper egress pathways. Further, this will establish criteria for the layout of fire alarm devices and fire suppression systems. If a specialized system is required, such as fire pump design, hydraulic analysis, or clean agent fire suppression, our team can establish the criteria and perform the design.

Data/Communications – The team's Registered Communications Distribution Designer will review the data entrance infrastructure, existing pathways and confirm the ultimate goals with the State's Project Representative. Their expertise allows for a flexible design in accordance with the project needs from simple twisted-pair copper phone systems to Secret Internet Protocol Router Network (SIPRNet) systems as utilized by the Department of Defense. We are cognizant of the need to maintain existing services to the occupants during construction.

Mechanical/Electrical/Plumbing – The HVAC, electrical and plumbing infrastructure will be verified to determine portions available for re-use. A conceptual design will be produced with the goals of energy, water and life cycle cost efficiency. Since many LEED points are gained with MEP systems, our discipline specialists will be involved from the onset of the project. Planned outages will be minimized with provisions for temporary air conditioning, water and power to maintain spaces in operation.

Meetings with maintenance staff are invaluable in the preliminary phases to ascertain their expertise in complex or state-of-the-art systems. A building that is overly intricate quickly becomes inefficient or falls into disrepair due to lack of maintenance. The depth of complexity for systems that require upkeep will align with the comfortability of those that work on its preservation.

Construction Phasing – We have construction phasing experience to ensure to alignment with constructability, financial availability and contract execution timelines. Our construction management team is skilled with phasing of areas, relocations of office personnel, and temporary facilities that may be required to meet the project goals. We will review the completed recommendations and design documentation related to the phased renovation of the partially occupied building. Each discipline will be involved in the establishment of construction milestones and timelines with documentation that defines the process. Documentation will clearly identify construction performance requirements related to the continued use of the building and the safety and well-being of the occupants. As with sustainability, the phasing of construction requires a full team effort and will be considered from the project beginning.

One possible Phasing option could include the build out of one or two of the upper floors and completion of other related components to receive a partial occupancy permit from the Fire Marshal. Offices could then be relocated to the renovated spaces to facilitate work on lower floors. Our team will work with the project stakeholders to determine the best course forward to meet the project goals while minimizing the disturbance to the current occupants.

LEED and Sustainability

Michael Baker LEED Projects

- (3) Certified
 - (39) Silver
 - (32) Gold
 - (2) Platinum
 - (81) additional*
- *did not seek certification

Our team of over 100 LEED accredited professionals representing architecture and all building engineering disciplines has direct knowledge and experience in the development of the checklist and paperwork required for a formal certification, or for self-certification depending on contract requirements. We have completed 70 projects in the last 10 years that have been certified by USGBC. Additionally, we have provided services for more than 80 projects designed to meet LEED Platinum, Gold or Silver accreditation but did not seek accreditation.

Christana Hohman, RA, LEED AP will be responsible for overseeing all aspects of the sustainable design process, from project planning through construction completion. She will work with the owner, the project design team, and the contractor to verify that the project goals for sustainable design and LEED certification are met. The inclusion of a project sustainability coordinator on the team ensures that the sustainable design goals and requirements are not forgotten or dealt with at the last minute; they instead form the

foundation of the project design. Ms. Hohman will utilize an integrated design process to ensure coordination amongst the design team and consideration of all sustainability goals, and will provide an independent review to identify any additional sustainable strategies for implementation.

Ms. Hohman has extensive experience working with the U.S. Green Building Council on LEED certification for building projects. Although the LEED framework provides clear guidance on project documentation requirements, in practice, projects often face unique circumstances that require a novel approach to a LEED credit. Ms. Hohman is trained to spot those opportunities and will regularly work with USGBC staff early in a project to verify that documentation approaches will be in compliance.

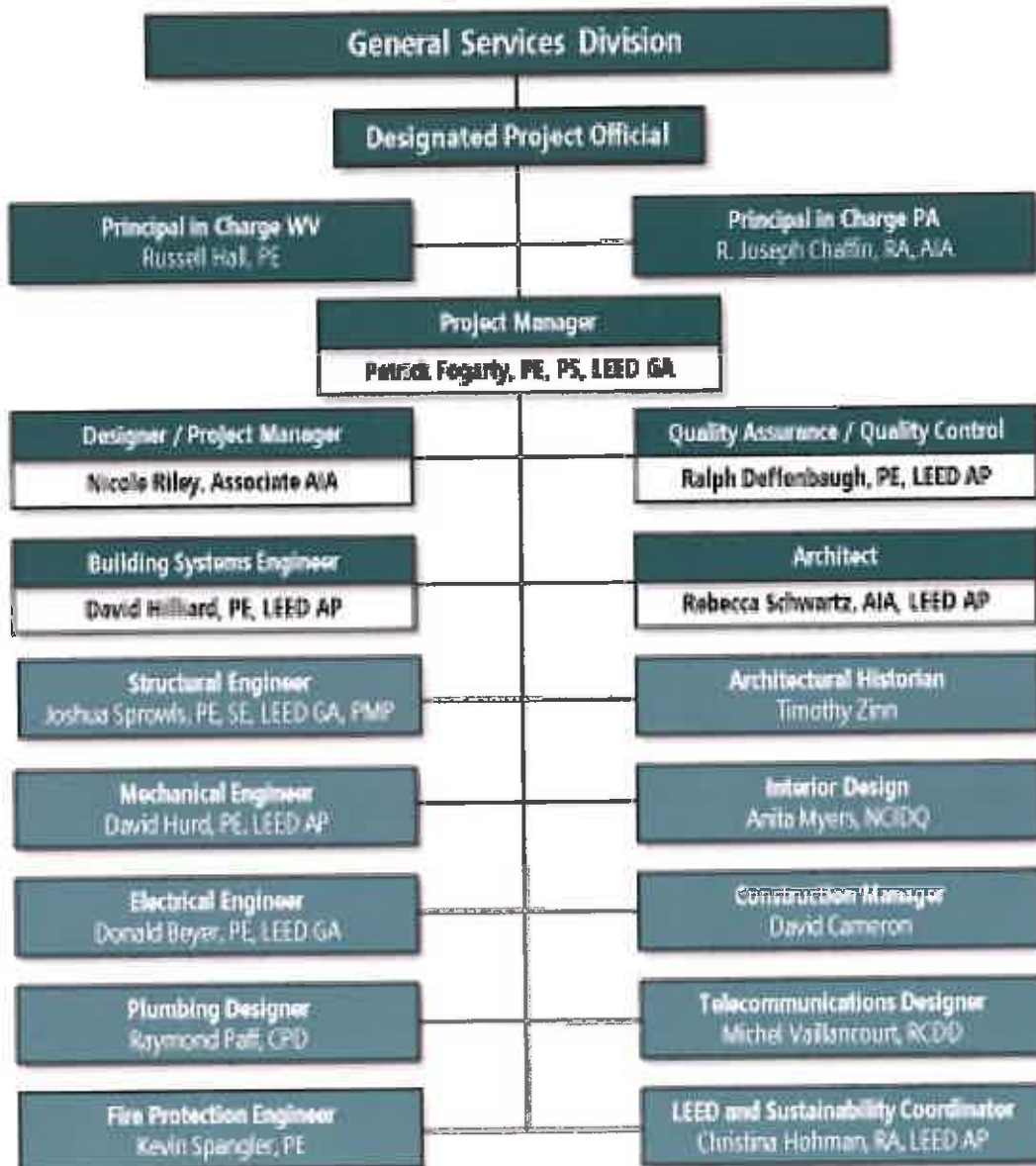
Every lead team member will be involved from the onset, ensuring an integrated design process that is highly collaborative.



Key Personnel

Michael Baker is prepared to commit its personnel and resources to the State of West Virginia for the Buildings Four Renovation Project. Michael Baker offers an experienced team that has completed numerous renovation and restoration projects throughout West Virginia and across the United States. The Organizational Chart below illustrates the streamlined structure of our team.

Organization Chart



Russell Hall, PE

Principal in Charge

Years of Experience: 32

Degrees

B.S., 1985, Civil Engineering, West Virginia University Institute of Technology

Licenses/Certifications

Professional Engineer, West Virginia, 1990

Professional Surveyor, West Virginia, 1996

Mr. Hall currently serves as a Vice President of Michael Baker, as well as Office Executive of our Charleston, West Virginia office. He is an experienced transportation engineer who has been involved in numerous bridge and highway design projects in West Virginia for many years. His project management responsibilities involve overseeing staff from project inception through completion, and ensuring that the clients' needs and requirements are met. He also has many years of office management experience. His office management responsibilities include financial oversight and accountability for a staff of over 30 engineers, scientists, and administrative personnel for Michael Baker's Charleston office. His major strengths include organizing and managing a project team, quality control and quality assurance, and problem resolution. He provides overall direction and maintains direct communications with all clients. Mr. Hall is very proud of the fact that he has been able to spend his entire career in West Virginia working to address West Virginia's transportation needs.

Campus Master Planning and Architectural and Engineering Services for State Capitol Complex, Charleston, West Virginia. *State of WV General Services Division.* Principal-In-Charge. Michael Baker is providing comprehensive master planning services, plans and construction specifications, and construction administration for improvements to the historic West Virginia State Capitol Campus. Master planning services include plans for expansion, location of new buildings, pedestrian and traffic circulation, landscaping, utilities, and site security. Michael Baker is also providing construction plans and contract administration services for some of the security and landscaping improvements.

Open-End Architectural and Engineering Services, West Virginia State University, Institute, West Virginia. *West Virginia State University.* Principal-In-Charge. Responsible for oversight of project finances, resource allocation, schedules, and quality control. Michael Baker provided architectural and multidiscipline engineering services under a ten-year open-end agreement to design renovations, alterations, reconstruction, or extensions of facilities. Michael Baker's services included programming, planning, design development, construction documentation, evaluations, feasibility studies, cost estimating, and construction contract administration.

Thurmond Bridge Rehabilitation Environmental Services, Thurmond, West Virginia. *West Virginia Department of Transportation, Division of Highways.* Principal-In-Charge. Michael Baker provided environmental services for the rehabilitation of the historic Thurmond Bridge. Michael Baker's services included a Department of Transportation Act Section 4(f) evaluation, an environmental assessment, National Historic Preservation Act Section 106 consultation, preparation of all National Environmental Policy Act documentation, and agency coordination.

Blennerhassett Island Bridge, Appalachian Corridor D, Wood County, West Virginia and Washington County, Ohio. *West Virginia Department of Transportation, Division of Highways.* Principal-In-Charge. Responsible for oversight of project finances, resource allocation, schedules, and quality control. Michael Baker provided engineering services for the Blennerhassett Island Bridge; the "missing link" final segment of Appalachian Highway Corridor D. Michael Baker's services included project management, environmental engineering and location studies, permitting, preliminary and final design, and construction services for this network tied-arch bridge that carries U.S. 50 over the Ohio River. The bridge is 100 feet, six inches wide, and the total length of the structure is 4,008 feet, nine inches. It has an 878-foot, six-inch-long main span, network tied arch with a rise of 175 feet and is ranked as the longest of its type in the United States and one of the longest in the world.

R. Joseph Chaffin, RA, AIA

Principal in Charge

Years of Experience: 28

Degrees

B.Arch., 1990, Architecture,
University of Cincinnati

Certificate, 1988, Architecture,
Ecole d'Art Americaines - Ecole des
Beaux Arts

Licenses/Certifications

Registered Architect:

- Michigan, 2012
- Ohio, 1994
- Pennsylvania, 2001
- West Virginia, 2011

NCARB, 1999

In balancing creative, organizational, and technical strengths, Joseph Chaffin's professional experience demonstrates a broad practice of architecture from residential through complex institutional projects. He challenges current capabilities, cultivates leadership, and develops new strengths through his position at Baker. As Director of Architecture, Mr. Chaffin is responsible for the daily operations, design quality, and project execution of the architectural and interior design staff. Mr. Chaffin performs interdisciplinary technical reviews for all designs and oversees coordination of related engineering disciplines. As Operations Manager of the architectural and building engineering design group, he is responsible for the management, design oversight, and quality assurance of all building-related design projects. Ensuring the highest quality design services within budget and schedule parameters, he also emphasizes a "world view," or comprehensive perspective, within which professional services are delivered, prioritizing and maintaining client expectations.

Renovation Design of Defense Logistics Agency Headquarters, Tobyhanna, Pennsylvania. *Tobyhanna Army Depot.* Director. Responsible for design/technical quality and project execution provided by the architectural and interior design staff. Role also included interdisciplinary technical reviews for all design/construction documents. Baker prepared design documents for the partial renovation of Building 12 to serve as the new Defense Logistics Agency headquarters building. The administrative space on the east side of Building 12 required architectural and interior design, building systems upgrade engineering, construction cost estimate development, and as-built plans development.

Design of 1,000-Room Lodge, Fort Lee, Virginia. *U.S. Army Family, Morale, Welfare and Recreation Command (FMWRC).* Project Manager. Responsible for interdisciplinary design project management in conjunction with design-build partner, Korte Construction, from conceptual design through construction. Responsibilities included detailed interdisciplinary reviews of the design/construction documents, with an emphasis on architecture, and technical management of assigned resources. Baker provided design services for a 1,000-room Lodge, comparable to a commercially branded hotel, with associated grounds building and site development. The architectural design approach was influenced by several important factors, including proximity to the Petersburg Battlefield National Park and the adjacent four-story Army Logistics University, for which the Lodge was constructed. Design features include integrated stormwater management with landscape design, wireless communications, Onity system lodging controls, multi-story fire protection and alarm systems, and High-Risk Target antiterrorism and force protection measures. The "green building" is designed and constructed to obtain LEED® Silver certification, achieving LEED® points in the categories of Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation In Design. Energy conservation is integral with the building envelope design and includes a continuous-spray applied, soy-based polyurethane foam insulating air barrier system.

Accessible Elevator Addition for the Historic Cathedral of Learning, Pittsburgh, Pennsylvania. *University of Pittsburgh.* Project Architect responsible for the adaptive re-use design of an existing, abandoned elevator shaft into a two-stop elevator that provides access to the mezzanine level of this historic structure. The project successfully addressed the challenges of blending new lobby areas into the fabric of the existing public areas by complementing and replicating adjacent, existing historic finishes.

Patrick Fogarty, PE, PS, LEED GA

Project Manager

Years of Experience: 32

Degrees

B.S., 1985, Civil Engineering, West Virginia University Institute of Technology

Diploma, 1993, Surveying and Mapping, International Correspondence Schools

Coursework, Business Administration, Heriot-Watt University, Edinburgh College of Art

Licenses/Certifications

Professional Engineer - Civil/Structural, West Virginia, 1990

Professional Surveyor, West Virginia, 1993

Professional Engineer, KY, NC, OH, PA

Professional Surveyor, KY, OH

Construction Documents Technologist, 1996

LEED Green Associate

Mr. Fogarty has over 32 years of civil engineering project design and management experience. He is responsible for the technical and management aspects of civil design and surveying projects within Michael Baker's Charleston, West Virginia office. Mr. Fogarty has designed and managed projects in numerous disciplines including civil, structural, and transportation engineering; site development planning; and surveying. These projects have included retail/commercial site preparation, airports, streets/highways, bridges, parking lots, buildings, retaining walls/foundations, sanitary systems and structures, as well as boundary and topographic and photogrammetric surveys. Duties included field surveying, drawings and specification preparation, design, design drafting, construction inspection, quality control testing, shop drawing review, project management, contract administration and report preparation.

Renovations to Classroom Building, Beckley, West Virginia. WVU Tech/ West Virginia University. Practice Lead. Responsibilities included overseeing and managing the required resources for the design team and quality control. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Coordination of new and old HVAC designs were a large component of this project. University branding elements were incorporated into the interior design to bring new life to a defunct campus. Special consideration was given to coordination with the University's existing door hardware products as well as the design and product specifications for a nationally accredited psychological laboratory within the Project. This project is currently under construction.

West Virginia State Capitol Restroom Renovations. State of WV General Services Division. Project Manager. Responsible for the overall management of the project including the coordination of the subconsultant. Michael Baker is leading a planning study for the renovation of 33 restrooms in the historic West Virginia Capitol Building. The planning study will assess the facilities and their conformance to current code requirements and code-required capacities, compliance with Americans with Disabilities Act (ADA) requirements, quantification of the building occupancy during normal and peak periods, and an evaluation of gender distribution of restrooms within the capitol. Michael Baker will provide design, construction sequence, and scheduling recommendations. Upon approval of the design, Michael Baker will prepare construction documents and provide construction administration services for the renovation of three restrooms on the basement level.

Little Kanawha Bus Facility, Calhoun County, West Virginia. WV Division of Public Transit. Project Manager. Responsible for the civil, site and structural engineering components of the project. Michael Baker is providing architectural and engineering services, landscape architecture, and construction-phase support for a new, 9,900-square foot, pre-engineered, metal and brick bus maintenance and transit operations facility. The 5,100-square-foot administrative area will include offices, a conference room, a money-counting room, and a driver-training room, and the 4,800-square-foot bus maintenance area will include storage for seven buses. The facility will be ADA-compliant and is being designed to achieve LEED® certification. Services include site survey and design, geotechnical testing, environmental compliance, utility coordination, bid documents, bid-phase support, and as-built drawings.

Renovations to the Benedum Center, Beckley, West Virginia. WVU Tech/ West Virginia University. Practice Lead.

A sister project to the above referenced Classroom Building, this 21,000 S.F. project ran concurrent and also stemmed from a Feasibility Study requested by the Owner. Primarily responsibilities included overseeing and managing the required resources for the design team and quality control. This project is currently under construction.

A/E Services for the Office of the Adjutant General, West Virginia Army National Guard, Division of Engineering and Facilities, Charleston, West Virginia. *State Army National Guard Headquarters.* Project Manager. Responsible for the management and coordination of all activities. The Facilities Management Officer (FMO) for the State of West Virginia, Division of Engineering and Facilities (DEF), West Virginia Army National Guard (WVARNG) selected Michael Baker for a lump sum/fixed fee contract for architectural and engineering services. Michael Baker was selected by the Division of Engineering and Facilities to provide complete design and construction administration services for the renovation of the first floor of the entire wing of the Office of the Adjutant General (TAG). The Owner requested the need for modernization of approximately 12,000 square feet of existing outdated office space - project elements included new acoustical ceilings, flooring, energy-saving light fixtures, duplex outlets, communications jacks, alterations to the existing floor plan, exterior door replacements, new interior doors and hardware, new wall finishes and asbestos removal.

Lost Creek Train Depot Rehabilitation, Lost Creek, West Virginia. *Town of Lost Creek.* Project Manager. Responsible for the management and coordination of all activities as well as all engineering design. The Town of Lost Creek retained Michael Baker for the planning and design of the rehabilitation of a historic train depot adjacent to the Harrison County Rail Trail. Michael Baker prepared a plan to raise the structure, make repairs to the deteriorated timber, excavate and place the concrete foundation system, then lower the structure to rest on the new foundation. Michael Baker provided construction administration and inspection services as well as periodic site review during construction.

Master Planning & AE Services for State Capitol Complex, Charleston, West Virginia *West Virginia General Services Division.* Project Manager. Responsibilities included project management of the planning and infrastructure analysis and the coordination of six (6) specialized subconsultants. Michael Baker is providing comprehensive master planning services, plans and construction specifications, and construction administration for improvements to the historic West Virginia State Capitol Campus. Master planning services include plans for expansion, location of new buildings, pedestrian and traffic circulation, landscaping, utilities, and site security. Michael Baker is also providing construction plans and contract administration services for some of the security and landscaping improvements.

Open-End Architectural and Engineering Services, West Virginia State University, Institute, West Virginia. *West Virginia State University.* Project Manager. Engineer-of-Record. Responsible for the engineering design. Michael Baker provided architectural and multidisciplinary engineering services under a ten-year open-end agreement to design renovations, alterations, reconstruction, or extensions of facilities. Michael Baker's services included programming, planning, design development, construction documentation, evaluations, feasibility studies, cost estimating, and construction contract administration.

On-Call Engineering/Architectural Services, Yeager Airport (CRW), Charleston, West Virginia. *Central West Virginia Regional Airport Authority.* Assistant Project Manager. Responsible for management planning and lead design for miscellaneous assignments. Additionally, provided engineering consultation on a current construction project as needed. Michael Baker provided multi-discipline, on-call services to the Central West Virginia Regional Airport Authority (CWVRAA), which owns and operates Yeager Airport (CRW). Michael Baker provided a full range of services to CWVRAA on an "On-Call/As-Needed" basis, including architecture, civil, structural, mechanical, electrical and environmental engineering, general engineering administration, surveying, and construction management.

Nicole Riley, AIA

Associate Architect / Project Manager

Years of Experience: 18

Degrees

Bachelor of Architecture, Virginia Tech

Licenses/Certifications

Associate A.I.A.

Ms. Riley brings more than 17 years of experience to the project. While at Michael Baker, Ms. Riley has focused her time on the client's needs while leading the design team from the early assessment of project planning stages to the construction administration. Ms. Riley's project design experience includes project for entrepreneurs, correctional, educational, institutional, military installations, commercial, residential, and religious facilities. She is experienced with the submittal and construction process for various state agencies including the WV State Fire Marshal. She has served as the Designer and Project Manager for a multitude of renovations.

Renovations to Classroom Building, Beckley, WV WVU Tech/ West Virginia University Responsibilities included facilitating complete design package and collaboration with WVU Tech staff for the 31,000 S.F. facility. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Coordination of new and old HVAC designs were a large component of this project. University branding elements were incorporated into the interior design to bring new life to a defunct campus. Special consideration was given to coordination with the University's existing door hardware products as well as the design and product specifications for a nationally accredited psychological laboratory within the Project. This project is currently under construction.

Renovations to the Benedum Center, Beckley, West Virginia WVU Tech/ West Virginia University A sister project to the above referenced Classroom Building, this 21,000 S.F. project ran concurrent and also stemmed from a Feasibility Study requested by the Owner. Primarily an interior design heavy project, this building required new retrofitted ADA toilet facilities as well as door hardware and HVAC systems coordination. This project is currently under construction.

Renovations to Maclin Hall, Montgomery, West Virginia* WVU Tech Responsibilities included facilitating complete renovation design package as programmed by the Owner and collaboration with WVU Tech staff for the four level, mixed use facility. Special consideration given to durable interior design finishes selection, new technology infrastructure and concealment, student safety, West Virginia State Fire Code and ADA.

Multi- Purpose Facility for the West Virginia State Police Academy, Institute, West Virginia* WV State Police Academy Responsibilities included site investigation, cost estimate, architectural design and collaboration with geotechnical engineer as well as the West Virginia State Police staff overseeing the project. The facility employs a skylight system in the main gym, intended to provide natural light to the user as well as lowering electricity expense. Special consideration was given to the underground foundation and location of the facility at the Academy.

Economic Development Center, Charleston, West Virginia* West Virginia State University Responsibilities included feasibility study, budget development and construction documents and construction administration services for total renovation of a 5,000 S.F. facility. Diverse use of facility lent to consideration for recording studios, digital green studio, office space for entrepreneurs, and public gathering space.

Glen Jean AFRC/ Military Entrance Processing Station, Glen Jean, West Virginia* *WV Army National Guard* Responsibilities included complete design package and collaboration with staffs from both the state and federal entities for the 110,000 S.F. facility. Special consideration given to force protection, geotechnical challenges, helipad design and location, vehicle repair and petroleum storage, adequate mustering space, as well as medical office spaces.

Parkersburg South High School, Parkersburg, West Virginia* *Wood County Schools* Responsibilities included complete design package and collaboration with staffs from both the state and federal entities for the 250,000 S.F. facility. Special consideration given to student security, geotechnical challenges, campus enclosure, music and chorale practice suites, laboratory spaces, fire suppression, and ADA.

Other Notable Projects:

St. Alban's High School*; focus on selective demolition and design detailing for the 172,596 S.F.

Robert C. Byrd Training Institute*; design/ production team. Interior design for the 148,000 S.F.

Sherrard Middle School*; addition of commons area, commercial kitchen, classroom renovation, 64,000 S.F.

*Denotes experience prior to becoming a team member at Michael Baker International.

Ralph Deffenbaugh, PE, LEED AP

Quality Assurance / Quality Control

Years of Experience: 38

Degrees

B.A.E., 1980, Architectural Engineering
(Structural Design Option), The
Pennsylvania State University

Licenses/Certifications

Professional Engineer, West Virginia, 2004,
[REDACTED]

Professional Engineer, KY, LA, MA, MD,
MI, OH, PA, VA

LEED Accredited Professional. 2007

Mr. Deffenbaugh provides leadership for project quality and interdisciplinary coordination for the architecture engineering group. In his wide-ranging experience, he has provided oversight of the engineering efforts focusing on integration of systems, development of energy reduction strategies, and detailed quality assurance reviews of various types of facilities for military, government, commercial, public, and private clients. His experience includes serving as project manager, lead structural engineer, resident structural engineer, or project/design engineer for various types of facilities, including tactical equipment maintenance facilities, vehicle maintenance facilities, barracks, military facilities, administrative/office buildings, bus maintenance facilities, manufacturing plants, fabrication facilities, utility buildings, clean rooms, administrative facilities, transit stations and park-n-rides, water storage, and water/wastewater treatment facilities. In 2007, Mr. Deffenbaugh received his LEED® accreditation from the U.S. Green Building Council.

Master Planning & AE Services for State Capitol Complex, Charleston, West Virginia *West Virginia General Services Division.* Responsibilities included quality assurance reviews for civil, structural, architectural, mechanical, and electrical drawings and specifications. Facilitated QC review process utilizing discipline review checklists, RFP scope checklists, and coordination of drawings. Michael Baker is providing comprehensive master planning services, plans and construction specifications, and construction administration for improvements to the historic West Virginia State Capitol Campus. Master planning services include plans for expansion, location of new buildings, pedestrian and traffic circulation, landscaping, utilities, and site security. Michael Baker is also providing construction plans and contract administration services for some of the security and landscaping improvements.

A/E Services for the Office of the Adjutant General, West Virginia Army National Guard, Division of Engineering and Facilities, Charleston, West Virginia. *State Army National Guard Headquarters.* Responsibilities included coordinating the quality assurance reviews for architectural, mechanical, and electrical drawings. Facilitated QC review process utilizing discipline review checklists, RFP scope checklists, and coordination of drawings. The Facilities Management Officer (FMO) for the State of West Virginia, Division of Engineering and Facilities (DEF), West Virginia Army National Guard (WVARNG) selected Michael Baker for a lump sum/fixed fee contract for architectural and engineering services. Michael Baker was selected by the Division of Engineering and Facilities to provide complete design and construction administration services for the renovation of the first floor of the entire wing of the Office of the Adjutant General (TAG). The Owner requested the need for modernization of approximately 12,000 square feet of existing outdated office space - project elements included new acoustical ceilings, flooring, energy-saving light fixtures, duplex outlets, communications jacks, alterations to the existing floor plan, exterior door replacements, new interior doors and hardware, new wall finishes and asbestos removal.

Building Renovation Design, CG Station Brant Point, Nantucket, Massachusetts. *U.S. Coast Guard, CEU Providence.* Responsibilities included quality assurance reviews for civil, structural, architectural, mechanical, and electrical RFP drawings and specifications. Facilitated QC review process utilizing discipline review checklists, RFP scope checklists, and coordination of drawings. Michael Baker performed site investigations and engineering calculations, prepared construction drawings and technical specifications, and developed cost estimates for mitigation and maintenance of the Multi-Mission Building (MMB) and Uniformed Personnel Housing (UPH) Building. Renovations included heating and electrical system upgrades, water mitigation, basement wet room and toilets-bathroom remodeling, and window replacement. The designs employ modern technology and methods to keep users safe, comfortable, and ready for duty, while maintaining the current outward appearance of these historically significant buildings.

Building 355 Renovation Design, Joint Base McGuire-Dix-Lakehurst, Lakehurst, New Jersey. *U.S. Army Corps of Engineers, Philadelphia District.* Responsible for performing an interdisciplinary technical quality review of the interim and final set of construction documents, including detailed review of the civil, structural, architectural, mechanical, and electrical systems. Major challenge was to develop solutions to address the future demolition and renovation of the 2nd and 3rd floors so that the 1st floor renovation work would not be impacted by the future work. Michael Baker provided construction documents for all work necessary to selectively demolish and renovate the first floor and construct a new elevator core/tower of the south side lean-to of Building 355 in the NAVAIR Test Area along Taxiway Four. The project included exterior renovations, renovations to the existing first floor, and a new elevator/stair/egress tower to comply with Americans with Disabilities Act (ADA) Standards for Accessible Design and Department of Defense regulations. It also included new restroom facilities and replacement of finishes, floors, walls, electrical, plumbing, fire protection, windows, and telephone and computer networking systems. The first floor included a coffee bar area/kitchenette sized for the occupants of all three floors. Michael Baker developed construction documents for demolition of all interior spaces to accommodate a new "collaborative" type open office space for personnel. Michael Baker provided designs for all systems to be removed and replaced and for construction of a new hydraulic and pit-less elevator core with emergency egress.

Historic Marine Barracks Washington Building 8 Renovation Design-Build RFP, Marine Barracks Washington, Washington, D.C. *U.S. Navy NAVFAC Washington.* Responsible for performing an interdisciplinary technical quality review of the interim and final set of RFP documents, including detailed review of the civil, structural, architectural, mechanical, and electrical systems. Michael Baker provided design, engineering, and historic preservation services for the renovation of Building 8, a 47,000-square-foot historic structure constructed between 1903 and 1906 that is part of the U.S. Marine Corps Barracks and Commandant's House National Historic Landmark Site. The project included a sensitive phased renovation with integration of existing communications and networks running through the building from other sections of the campus to the Commandants House at the north end of the site. The scope of the renovation work addressed structural modifications to reflect space requirements; mechanical, electrical, and plumbing systems upgrade; communication system upgrade; fire protection system and life safety review and upgrade; Americans with Disabilities Act (ADA) analysis and compliance; and anti-terrorism/force protection (AT/FP) compliance to the maximum extent practicable. The procurement documents required integration of sustainability design into the renovation work, and the building is expected to meet a LEED® Silver certification.

Design of U.S. Army Reserve Center Renovation and Expansion, Homewood, Illinois. *U.S. Army Corps of Engineers, Louisville District.* Responsibilities included quality assurance reviews for civil, structural, architectural, mechanical, and electrical drawings and specifications. Facilitated QC review process utilizing discipline review checklists, RFP scope checklists, and coordination of drawings. As designer of record, Michael Baker provided architectural and engineering services for the renovation of a 400-member U.S. Army Reserve Center (ARC) and construction of two single-story additions totaling 35,694 square feet—a 34,294-square-foot Training Building and a 1,400-square-foot ancillary structure—along with a 3,500-square-foot Unheated Storage Building. The new construction includes a 22,000-square-foot parking area for military equipment and 140 parking spaces for privately owned vehicles. Tasks were performed under an indefinite quantity-indefinite delivery engineering agreement. Michael Baker designed the training facility to meet LEED® Silver certification. Michael Baker's services included architecture, surveys, environmental and geotechnical investigation, all site and building engineering, cost estimating, value engineering, and LEED® credit template documentation. Administrative and training 60,500-square-foot building. This project has achieved LEED certification.

Baltimore Penn Station Restroom Renovations, Baltimore, Maryland. *Amtrak.* Responsible for performing an interdisciplinary technical quality review of the final set of construction documents, including detailed review of the civil, structural, architectural, mechanical, and electrical systems. Michael Baker provided architectural and engineering services for renovations to the public restrooms in the historic Baltimore Penn Station. Michael Baker's services included architectural design; space planning; historic preservation; mechanical, electrical, and plumbing design; bidding-phase support; and construction-phase services.

David Hilliard, PE, LEED AP

Building Systems Engineer

Years of Experience: 29

Degrees

B.S.M.E., 2005, Mechanical Engineering,
West Virginia University Institute of
Technology

B.S., 2002, Mathematics and Science,
West Virginia State College

Licenses/Certifications

Professional Engineer, West Virginia 2011

Professional Engineer, MS, LA, KY

LEED AP BD+C, 2010

Mr. Hilliard has a wide range of "hands on" design, engineering, and construction experience. From his beginnings as a carpenter he has expanded his professional abilities to a senior engineer for Michael Baker. His recent design experience has included the design of new campus water lines and other service utilities at West Virginia State University, the complex mechanical design of such projects as a large Charleston, West Virginia hospital, a Bus Maintenance Garage and office building for the West Virginia Department of Transportation, an Army National Guard Armory HVAC/Electrical renovation, Master Planning and engineering at the West Virginia Capitol Complex including plumbing renovation design on the historic State Capitol Building. His resume covers over 30 years of real world work in engineering, design, fabrication and construction in the mechanical, electrical and general trades.

Over the years, while practicing his profession, Mr. Hilliard continued his education by studying mathematics, civil and mechanical engineering, finally taking degrees in both mathematics and mechanical engineering. He has continued his professional development through his involvement with ASME, ASHRAE, ASPE, USGBC, and other pertinent organizations.

Master Planning & AE Services for State Capitol Complex, Charleston, West Virginia *West Virginia General Services Division.* Planner. Currently providing the State of West Virginia General Services Division a comprehensive campus-wide master plan for the 55+ acre State Capitol Campus. Working in conjunction with a team of specialized consultants, currently providing programming, cost estimating and facilities planning support. Services included HVAC Loads as well as utility evaluation and planning for future growth. Michael Baker is providing comprehensive master planning services, plans and construction specifications, and construction administration for improvements to the historic West Virginia State Capitol Campus. Master planning services include plans for expansion, location of new buildings, pedestrian and traffic circulation, landscaping, utilities, and site security. Michael Baker is also providing construction plans and contract administration services for some of the security and landscaping improvements.

West Virginia State Capitol Restroom Renovations, Charleston, West Virginia *State of WV General Services Division.* Mechanical, Electrical and Plumbing Engineer of Record. Mr. Hilliard provided the State of West Virginia General Services Division with a comprehensive MEP study of the Capitol building related to the renovation and renovation of the 33 restrooms. He worked diligently to verify and document existing building components and assisted in providing overall design, construction sequence, and scheduling recommendations. Construction Documents were developed and completed for an extensive plumbing renovation, electrical and fire alarm upgrades as directed by GSD. The construction project was defunded and has not been built.

Architectural/Engineering Services for Multiple Projects, Romney, West Virginia *WV School for the Deaf and Blind* Project Manager and MEP Engineer of Record. 3-year Contract. Mr. Hilliard is currently working as the project manager and MEP Engineer of Record for multiple projects at the school including; a campus wide Life Safety System, HVAC upgrades in two buildings, fire alarm upgrades, new and upgraded sprinkler systems in multiple buildings.

Renovations to Classroom Building, Beckley, West Virginia *WVU Tech/ West Virginia University.* MEP Designer and Engineer of Record. Responsibilities included facilitating complete design package and collaboration with WVU Tech staff for

the 31,000 S.F. facility. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Renovation old HVAC systems, electrical upgrades, fire alarm upgrades, and a new building wide sprinkles system were undertaken, as well as the design of new ADA restrooms. Special consideration was given to the design and product specifications for a nationally accredited psychological rat laboratory within the Project. This project is currently under construction.

Renovations of Existing buildings at the WVU Tech Campus West Virginia University. Mechanical Engineer. Provided project management, mechanical, electrical, and plumbing engineering for the renovation of a 31,000 SF building for engineering labs and a 21,000 SF building for offices and student government.

Little Kanawha Bus, Calhoun County, West Virginia WV Division of Public Transit Engineer responsible for the Mechanical, Electrical and Plumbing Design, MEP Document Preparation, and Construction Administration for a new bus maintenance and office facility for Gilmer County. Duties include the design of the vehicle storage, cleaning and maintenance mechanical systems, as well as oil pumping and collection systems. The design of an energy efficient HVAC system for the entire building is also part of his responsibilities. The facility was designed as a LEED® project.

WVSU Open-End Architectural/Engineering Services, Institute, West Virginia West Virginia State University 10 year IDIQ. Mechanical/Electrical and Plumbing Designer and Engineer of Record for on-demand projects at West Virginia State University. Involved with and coordinated all aspects of the various tasks which have included; programming, planning, design development, construction documentation, systems evaluations, and feasibility studies, as well as cost estimating. Also included were mapping, evaluation and design services for storm and sewer line systems, a campus wide domestic water loop system design, football field upgrades and overall facility maintenance support as requested by the University. He has also been involved with the development and acquisition of WVDEP permits for both MS4 and Air Perming.

Auto Repair Garage and Administrative Office Facility, Charleston, West Virginia Good News Mountaineer Garage Mechanical Engineer. Responsible for the Mechanical, Electrical and Plumbing Design, MEP Document Preparation, and Construction Administration for newly renovated Auto Repair garage and administrative office facility for this non-profit organization. The Good News Mountaineer Garage accepts donations of vehicles that are repairable for a reasonable amount of money. These donated cars are then distributed to families with low incomes for transportation to work.

Army National Guard Headquarters Renovations, Charleston, West Virginia. State Army National Guard Headquarters. Mechanical Engineer. Responsible for all mechanical design oversight and construction management. Michael Baker performed complete planning, design, and construction management services for renovations to the Office of the Adjutant General at the State Army National Guard Headquarters in Charleston, West Virginia. Project elements included a complete renovation and replacement of the HVAC system with a Loop Heat Pumps, new acoustical ceilings, flooring, energy-saving light fixtures, several new wall partitions, new interior doors and hardware, new wall finishes and asbestos removal. Michael Baker provided Construction Administration and inspection services as well as periodic site review during construction.

Open-End Architectural and Engineering Services, Institute, West Virginia. West Virginia State University. Engineer in charge of investigative and design services for the university on various projects. Duties included utility infrastructure assessment and design and building component repair. Michael Baker provided architectural and multidisciplined engineering services under a ten-year open-end agreement to design renovations, alterations, reconstruction, or extensions of facilities. Michael Baker's services included programming, planning, design development, construction documentation, evaluations, feasibility studies, cost estimating, and construction contract administration.

Rebecca Schwartz, AIA, LEED AP

Architect

Years of Experience: 18

Degrees

B.Arch., 2000, Architecture, The Pennsylvania State University, College of Architecture

Licenses/Certifications

Registered Professional Architect, PA, NY, KY

NCARB, Pennsylvania, 2011

LEED Accredited Professional, 2002

LEED Accredited Professional BD+C, 2011

Ms. Schwartz is an architect with experience in commercial, higher education, and military facilities. She manages and develops projects from Pre-design through Contract Administration phases, including all aspects of a project: drafts proposals and contracts, documents existing conditions, performs code analysis, prepares architectural programming documentation pertinent to clientele, proposes and develops design schemes, creates and revises construction documents, compiles specifications, reviews shop drawings and submittals, reviews request for payments, and prepares field reports and records. She maintains direct working relationships with clients, consultants, contractors, and governing authorities throughout the design process.

Historic Marine Barracks Washington Building 8 Renovation Design-Build RFP, Marine Barracks Washington, Washington, D.C. U.S. Navy NAVFAC Washington. Technical Manager. Responsibilities as Architecture Technical Manager included managing the work effort of the professional and technical staff in the architecture group within the overall architecture engineering

practice. Essential duties are comprised of providing technical guidance, preparing scope of work and cost estimates for the project, managing staff utilization by scheduling, monitoring and revising assignments related to the project, and satisfying project requirements by ensuring that quality standards and deadlines are met through internal design reviews. Michael Baker provided design, engineering, and historic preservation services for the renovation of Building 8, a 47,000-square-foot historic structure constructed between 1903 and 1906 that is part of the U.S. Marine Corps Barracks and Commandant's House National Historic Landmark Site. The project included a sensitive phased renovation with integration of existing communications and networks running through the building from other sections of the campus to the Commandants House at the north end of the site. The scope of the renovation work addressed structural modifications to reflect space requirements; mechanical, electrical, and plumbing systems upgrade; communication system upgrade; fire protection system and life safety review and upgrade; Americans with Disabilities Act (ADA) analysis and compliance; and anti-terrorism/force protection (AT/FP) compliance to the maximum extent practicable. The procurement documents required integration of sustainability design into the renovation work, and the building is expected to meet a LEED® Silver certification.

Rehabilitation of the Ernie Pyle U.S. Army Reserve Center, Fort Totten, Queens, New York. U.S. Army Corps of Engineers, Louisville District. Architect. Provided architectural support to the project architect such as space planning and other tasks. Michael Baker was tasked to provide Design-Bid-Build documents for the renovation of a 41,312-square-foot U.S. Army Reserve Center, the addition of a 4,994-square-foot Unheated Storage Building, and the addition of MEP and POV parking. The renovation included storage and office areas on two floors, electrical, mechanical, plumbing, and fire protection on all three floors, as well as vault and elevator construction and asbestos removal. Renovation included compliance with Anti-terrorism and Force Protection Requirements, as well as Handicapped Accessibility.

Design of 1,000-Room Lodge, Fort Lee, Virginia. U.S. Army Family, Morale, Welfare and Recreation Command (FMWRC). Project Architect. Responsibilities included coordination with the design-build contractor and engineering disciplines. Generated construction documentation. Michael Baker provided design services for a 500,000-square-foot, 1,000-room lodge, comparable to a commercially branded hotel, with associated grounds building and site development. The architecture approach for the seven-story structure was influenced by several important factors, including proximity to the Petersburg Battlefield National Park and the adjacent four-story Army Logistics University, for which the Lodge was constructed. Design features include integrated stormwater management with landscape design, wireless communications, Onity system lodging controls, multistory fire protection and alarm systems, and High-Risk Target antiterrorism and force protection measures. The "green building" is designed and constructed to obtain LEED® Silver certification.

Joshua Sprowls, PE, SE, LEED GA, PMP

Structural Engineer

Years of Experience: 15

Degrees

M.B.A., 2013, Business (Finance),
University of Pittsburgh, Katz Graduate
School of Business

M.S.C.E., 2010, Civil Engineering,
Carnegie Mellon University

B.S.C.E., 2003, Civil Engineering, United
States Military Academy, West Point, New
York

Licenses/Certifications

Professional Engineer – Civil/Structural,
DE, IA, MD, OH, PA, VA, WV

NCEES Certified, 2014

Project Management Professional (PMP),
2010

LEED Green Associate, 2009

Mr. Sprowls provides leadership and design expertise to the structural engineering group at Michael Baker. His unique background in structural engineering started by leading soldiers as a U.S. Army engineer officer designing structures internationally and continuing with advanced degrees in civil engineering and business administration. His structural design experience includes serving as project manager and lead structural engineer for U.S. Army training facilities, high-rise and low-rise residential buildings, communication data centers, mixed-use transportation and office buildings, aircraft hangars, natural gas plant design projects, oil refinery projects, power generation and chemical processing plant design, and material handling design.

1324 N. Broad Street High-rise Apartment Building. 1324 N. Broad St LLC. Structural Engineer of Record. Responsible for the structural design of a 17-story high-rise apartment building in downtown Philadelphia. The building was supported by deep foundation elements using concrete drilled shafts (caissons) with depths to -45 feet. The caissons were connected to very thick concrete pile caps that supported the reinforced concrete columns and reinforced concrete shear walls. The building was supported by reinforced concrete columns for the gravity system and the lateral system was composed of seven reinforced concrete shear walls that included an elevator core area. The floors were reinforced concrete flat slab construction utilizing precast form panels called "Filigree" panels that are very common in the New Jersey and Eastern Pennsylvania regions.

Building Addition Design and Construction Administration, Norfolk, Virginia. Cox Communications. Structural Engineer of Record. Designed the structural steel framing, structural steel composite roof beams, reinforced masonry shear walls, and the shallow building foundations for the telecom building addition. Michael Baker provided design, engineering, and construction administration services for a new, single-story, approximately 1,715-square-foot building addition that will house a telecom equipment space. The site disturbance is expected to be more than 2,500-square feet. The scope included site modification to accommodate the new structure, sidewalks, parking areas, landscape, and stormwater management design. Michael Baker provided project planning, structural design, building information modeling (BIM), landscape architecture, building permit submissions, bid documentation and review, construction documentation, and quality review. Michael Baker also provided life safety, fire alarm, and fire protection design.

Reconfigure Hangars Cape Cod. U.S. Coast Guard. Structural Engineer. Responsible for the structural evaluation of three aircraft hangers in Cape Cod, MA for the USCG. Performed a wind and seismic analysis of a post-tensioned T-beam frame hanger built in the late 1960's. Evaluated whether the structure would support current seismic and wind loading conditions as required by the current Massachusetts building code.

COX Construction Management Services. Cox Communications. Structural Engineer. Responsible for the structural engineering for numerous client structures located in Louisiana, Georgia, and Virginia. Performed the structural design of data centers in each of these locations that consisted of stand alone buildings as well as renovations and additions. The structures all had high risk category IV designation per the International Building Code that increased the wind and seismic load demands.

David Hurd, PE, LEED AP

Mechanical Engineer

Years of Experience: 21

Degrees

Mechanical Engineering, The Pennsylvania State University

Licenses/Certifications

Professional Engineer, PA

LEED Accredited Professional BD+C,
2017

Mr. Hurd has extensive knowledge designing a vast range of HVAC systems from modern DDC heat pump to pneumatically controlled steam systems. He is experienced in the design of plumbing, fire-protection, electrical, and BAS. He is skilled in project management from design through construction completion. Mr. Hurd is versed in review process for the City of Pittsburgh BBI, PA L&I, Code-Sys and various local municipalities, ICC codes, NFPA, and local amendments. He is accomplished in LEED and energy reduction projects.

Design and Construction Management Master Services Contract, Southwestern, Pennsylvania. Duquesne Light Company. Mechanical Engineer. Managed team of engineers and designers for the HVAC and

plumbing design. Served as Mechanical Engineer responsible for QA/QC reviews of systems to ensure constructability and code compliance. Michael Baker is providing architectural and engineering services under a three-year master services agreement for design, preconstruction, bid phase, construction management, and other services for the renovation or improvements to the company's facilities and for major Capitol projects and programs. Michael Baker's services include project management, architectural and engineering design, design management and design reviews, cost estimates, construction sequencing, bidding-phase support, and construction management and inspection.

Architecture and Engineering Services for Facility Design, Statewide, Pennsylvania. Pennsylvania Department of Transportation, Central Office. Mechanical Engineer. Managed team of engineers and designers for the HVAC and plumbing design. Served as Mechanical Engineer responsible for QA/QC reviews of systems to ensure constructability and code compliance. Michael Baker is providing architectural and engineering services under an open-end agreement for services on various statewide facility projects. Michael Baker is providing design services for building construction, including new construction and renovations to district and county maintenance offices and buildings, salt storage buildings, personnel staging buildings, warehouse buildings, stockpiles, and other facilities.

General Architect and Engineering Services Contract, U.S. and its Territories. U.S. Coast Guard, CEU Cleveland. Mechanical Engineer. Managed team of engineers and designers for the HVAC and plumbing design. Served as Mechanical Engineer responsible for QA/QC reviews of systems to ensure constructability and code compliance. Michael Baker is providing services under a U.S. Department of Homeland Security \$50 million, 10-year indefinite delivery-indefinite quantity general architect and engineering contract for work at U.S. Coast Guard facilities within the U.S. and its territories. The scope of the contract includes modifications and renovations to existing structures as well as new construction. Facility types and applications include space planning, light commercial buildings and their mechanical and electrical systems, site utilities, waterfront facilities, dredging, structural inspections, and runways.

P-478 Navy Gateway Inn & Suites (NGIS), Naval Station Newport, Rhode Island. NAVFAC MIDLANT NEIPT. Mechanical Engineer. Responsible for development of RFP response. Oversight of energy modeling. Michael Baker is the designer of record for the new 200 key, 104,000-square-foot Navy Gateway Inns & Suites hotel. Michael Baker's services included architecture, interior design, civil engineering, landscape architecture, mechanical engineering, plumbing design, fire protection design, and sustainable design.

Rail Station General Engineering Services Agreement, Nationwide, United States. Amtrak. QA/QC Engineer. Performed heating analysis and formulated rehabilitation recommendations for QA/QC review. Michael Baker provided architectural and engineering services for the renovation of historic passenger rail stations under a one-year general engineering services agreement. Michael Baker's services included architectural and interior design; heating, ventilation, and air conditioning design; lighting and electrical design; plumbing design; historic preservation; and construction administration.

Donald Beyer, PE, LEED GA

Electrical Engineer

Years of Experience: 32

Degrees

B.S.E.E., 1986, Electrical Engineering,
Carnegie Mellon University

Licenses/Certifications

Professional Engineer - Electrical, IN, LA,
MD, MI, MS, NC, NY, OH, PA, TN, VA, WV

NCEES Certified, 2013

LEED Green Associate, 2013

Mr. Beyer is experienced in electrical engineering. He is the electrical department manager for Michael Baker's Moon Township office and leads their electrical department. Mr. Beyer's experience ranges from new buildings to historic renovations and includes commercial, civic, educational, retail, multi-family, healthcare, and hospitality industry projects.

As a department manager, Mr. Beyer is responsible for maintaining the company's reputation for high quality design both internally through team building, and externally by closing the feedback loop with clients. His in-house goals include improving office standards and details, improving interdepartmental quality control processes, and streamlining the work flow to improve efficiency, and ultimately, the deliverable.

Architecture and Engineering Services for Facility Design, Statewide, Pennsylvania. *Pennsylvania Department of Transportation, Central Office.* Technical Manager. Provided lighting, lighting controls, and power design for a tenant fit out, including applicable COMcheck forms for L&I submission. Michael Baker is providing architectural and engineering services under an open-end agreement for services on various statewide facility projects. Michael Baker is providing design services for building construction, including new construction and renovations to district and county maintenance offices and buildings, salt storage buildings, personnel staging buildings, warehouse buildings, stockpiles, and other facilities.

General Architect and Engineering Services Contract, U.S. and its Territories. *U.S. Coast Guard, CEU Cleveland.* Technical Manager. Provided lighting, lighting controls, power, and lightning protection design for a helicopter hangar. Michael Baker is providing services under a U.S. Department of Homeland Security \$50 million, 10-year indefinite delivery-indefinite quantity general architect and engineering contract for work at U.S. Coast Guard facilities within the U.S. and its territories. The scope of the contract includes modifications and renovations to existing structures as well as new construction. Facility types and applications include space planning, light commercial buildings and their mechanical and electrical systems, site utilities, waterfront facilities, dredging, structural inspections, and runways.

Systems Integration Maintenance Office, Fort Campbell, Kentucky. *U.S. Army Corps of Engineers, Louisville District.* Technical Manager. Provided QA/QC support. Michael Baker was the designer of record for a 48,400-square-foot Systems Integration Maintenance Office (SIMO) facility. The facility includes administrative space; classrooms; conference rooms; laboratory spaces; storage spaces; metal fabrication shop; computer labs; flight lockers; showers and restrooms; mechanical, electrical and communication rooms; intrusion detection; surveillance; and electronic access control. Spaces support SIMO flight operations, mission planning, and pilot flight planning. Site design included parking, stormwater management/bio-retention, landscaping and site utilities. The project is designed to achieve a LEED Silver Certification.

USAFCENT Headquarters Building 1130 Repairs, Shaw Air Force Base (SSC), Sumter, South Carolina. *Bristol Environmental & Engineering Services Corporation.* Technical Manager. Provided construction administration support for lighting and controls related RFIs.

1324 N. Broad Street Highrise Apartment Building. *1324 N. Broad St. LLC.* Technical Manager. Electrical engineering design oversight for an 18-floor residential project.

E03520 W024 Dist. 11 Offices. *Pennsylvania Department of Transportation, Central Office.* Technical Manager. Provided lighting, lighting controls, and power design for a tenant fit out, including applicable COMcheck forms for L&I submission.

Raymond Paff, CPD

Plumbing Designer

Years of Experience: 40

Degrees

Certificate, 1987, Visual Arts, Art Institute of Pittsburgh

A.S., 1977, Architectural Engineering Technology, The Pennsylvania State University

Licenses/Certifications

Certified Plumbing Designer, 1981

Mr. Paff is a senior designer responsible for the design and specification of a variety of projects involving all building plumbing systems, vehicle fluid systems, vehicle fuel systems; gasoline and diesel, medical gas, generator fuel oil systems, site drainage, deionized water systems, fire protection (sprinkler and halon FM 200), life safety systems, water supply systems, and natural gas systems with leak detection. He has worked on military, transit, aviation, commercial, industrial, health care, and institutional projects.

Camp Geiger East Infantry Training Complex, Marine Corps Base Camp Lejeune, North Carolina. Naval Facilities Engineering Command, Mid-Atlantic. Designer. Senior Plumbing Designer. Responsible for the design of domestic hot and cold water; sanitary; and stormwater systems. Michael Baker

served as the lead designer for the design-build delivery of a 137,850-square-foot infantry training complex on five acres at Camp Geiger. The project included the construction of a two-story headquarters and academic building, a warehouse, a consolidated issue facility, an armory building, and an emergency weather center, the demolition of five buildings and various electrical distribution upgrades. The project was designed to meet the requirements for LEED® Silver certification.

Lancaster Station Renovations, Lancaster, Pennsylvania. Amtrak. Designer. Responsible for designing sanitary, vent, hot and cold water system for the toilets rooms. Since the sanitary could not flow by gravity to the city sewer system a sewage pump system needed to be designed. Michael Baker provided architectural and engineering services for renovations to the historic Lancaster Station. Michael Baker's services included architectural and interior design, mechanical and plumbing design, historic preservation, and construction administration.

Baltimore Penn Station Restroom Renovations, Baltimore, Maryland. Amtrak. Senior Designer. Responsible for design review of plumbing and fire protection systems to meet International Plumbing Code. Systems include, sanitary, vent, hot and cold water piping, and domestic water heating. Michael Baker provided architectural and engineering services for renovations to the public restrooms in the historic Baltimore Penn Station. Michael Baker's services included architectural design; space planning; historic preservation; mechanical, electrical, and plumbing design; bidding-phase support; and construction-phase services.

P-478 Navy Gateway Inn & Suites (NGIS), Naval Station Newport, Rhode Island. NAVFAC MIDLANT NEIPT. Designer. Responsible for QA/QC of the plumbing design drawings. Michael Baker is the designer of record for the new 200 key, 104,000-square-foot Navy Gateway Inns & Suites hotel. Michael Baker's services included architecture, interior design, civil engineering, landscape architecture, mechanical engineering, plumbing design, fire protection design, and sustainable design.

Findlay Township Municipal Engineering Services, 1998 - 2012, Clinton, Pennsylvania. Findlay Township. Designer. Responsible for design of plumbing and fire protection systems to meet International Plumbing Code design standards for an office building. Michael Baker is the retained municipal engineer for Findlay Township and has maintained a relationship with the Township since 1998. As the Township's municipal engineer, Michael Baker has provided on-call, as-requested consulting engineering services to support the operations of the Township.

WRS Interior Renovations. Duquesne Light Company. Designer. Provided design for the plumbing systems (sanitary, vent, hot and cold water) for the toilet room renovations.

Kevin Spangler, PE

Fire Protection Engineer

Years of Experience: 10

Degrees

M.S., 2008, Fire Protection Engineering,
University of Maryland, College Park
Campus

B.S., 2006, Agricultural and Biological
Engineering, The Pennsylvania State
University

Licenses/Certifications

Professional Engineer, CA, CT, ID, IL, MD,
MN, MS, NV, NY, PA, SC, VA

Mr. Spangler is a registered fire protection engineer experienced with fire protection and detection systems for new building designs and renovation projects, domestically and internationally. Responsibilities include provision of design services and performance of independent technical quality reviews for fire protection designs including sprinklers and fire alarms, and review of life safety analysis. Project types include Department of Energy and Department of Defense facilities such as laboratories, fuel cell and corrosion control hangars, shipping and receiving facilities, storage facilities and warehouses, administrative and office buildings, training centers, vehicle maintenance facilities, and hotel, dormitories, and barracks.

J.J. Pickle Federal Building Renovations, Austin, Texas. *General Services Administration.* Fire Protection Engineer. Responsible for the renovation of the 9 story federal building. Responsible for life safety analysis, fire alarm design,

and sprinkler system design. Michael Baker is providing engineering services for building system renovations to the building. Michael Baker's services include mechanical, electrical, and plumbing design; exterior repairs; and space planning.

Fire Alarm System Replacement, Greensburg, Westmoreland County, Pennsylvania. *Pennsylvania Department of Transportation, Central Office.* Fire Protection Engineer. Fire protection engineer of record for the replacement of a fire alarm system. Performed a site investigation to document existing conditions. Designed new fire alarm system and assisted client with commissioning of installed system. Fire alarm system was designed and installed in accordance with NFPA 72. Michael Baker provided engineering services for the replacement of the fire protection system in the Westmoreland County maintenance office. Michael Baker's services included project management, fire protection system performance design, permitting, and construction consultation. The project included the installation of a new fire alarm system, including a new fire detection and notification system. The project was an emergency project and the schedule was accelerated due to the critical life-safety nature of the project.

Building 12 Defense Logistics Agency Headquarters Renovation Design, Tobyhanna, Pennsylvania. *Tobyhanna Army Depot.* Fire Protection Engineer. Responsible for the ITR of the fire protection design including sprinklers, fire alarm, and life safety analysis. Michael Baker prepared design documents for the partial renovation of Building 12 to serve as the new Defense Logistics Agency headquarters building. Work was performed under a three-year indefinite delivery-indefinite quantity contract. Michael Baker's tasks included architecture, building systems engineering, construction cost estimate development, and as-built plans development.

Montgomery County Multiagency Service Park, Rockville, Maryland. *Montgomery County, Department of General Services.* Fire Protection Engineer. Provided fire protection technical expertise and performed internal technical review of fire protection engineer designer of record's work. Michael Baker is providing architectural and engineering services for the development of the Montgomery County Multiagency Service Park. Michael Baker's services include site design, architecture, engineering design, landscape architecture, stormwater management, sustainable design, civil design, parking structure design, and site security design. Campus with one 14,990-square-foot public safety training academy, one 171,612-square-foot administrative and maintenance depot and one 73,000-square-foot food services facility.

Renovation Designs for Building 4A Firefinder Area, Tobyhanna, Pennsylvania. *Tobyhanna Army Depot.* Fire Protection Engineer. Responsible for review of fire protection design including sprinklers and fire alarm. Reviewed Life Safety analysis. Michael Baker field-verified existing conditions and developed design and construction drawings and construction cost estimates for the renovation of the Firefinder components area of Building 4A.

Timothy Zinn

Architectural Historian

Years of Experience: 31

Degrees

M.A., 1996, Historic Preservation, Middle Tennessee State University

B.S., 1986, Accounting/Computer Science, Salem College

Licenses/Certifications

Architectural Historian (36 CFR61) Qualified

2.7.1 Sec. 4 (F)/6 (F) Evaluations, Pennsylvania, 2005

2.8.1 Surv., Res. & Doc. of Hist. Build, Str. & O, Pennsylvania, 2005

2.11.1 Historical and Archival Research, Pennsylvania, 2005

Mr. Zinn is a historic preservation specialist and architectural historian manager for the Pittsburgh office. He has many years of experience in the Mid-Atlantic region, serving as both principal investigator and project/task manager for numerous historic resource projects in multiple states. Mr. Zinn has a proven track record in Section 106 documentation, including Historic Resource Surveys, Determination of Eligibility studies, Criteria of Adverse Effect findings, Memoranda of Agreement, National Register of Historic Places nominations, Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, and State Historic Resource surveys.

Recordation of Buildings within the Historic District, Allegheny County Airport (AGC), Pittsburgh, Pennsylvania. Allegheny County Airport Authority. Architectural Historian. Assisted with the field recordation, the written and photographic documentation, and the completion of Pennsylvania Historic Resource Survey forms for buildings identified for demolition in the airport's Programmatic Agreement. Michael Baker prepared documentation of three buildings within the airport's historic district that were scheduled for demolition, in accordance with the terms of a programmatic agreement between the Federal Aviation Administration and the Pennsylvania Historical

and Museum Commission—State Historic Preservation Office. Michael Baker's efforts included field surveys, physical description of the buildings, site plans and mapping, photographic documentation, reproduction of historic plans, and agency coordination.

S.R. 28, East Ohio Street Improvement Project, Allegheny County, Pennsylvania. Pennsylvania Department of Transportation, District 11-0. Architectural Historian. Assisted with Phase II archaeological investigation by performing archival research and conducting oral interviews for the development of a historic context. Also responsible for conducting archaeological monitoring, assisting with feature identification, and assisting with the development of historic resource mitigation measures including the recording of buildings and structures to state recordation standards and the development of fitness trail signage interpreting prevalent historic themes identified within the project area. Michael Baker provided comprehensive engineering and environmental services to upgrade a 2-mile, four-lane section of S.R. 28 between the Chestnut Street Ramps and the Millvale Interchange to a limited-access expressway. The project included the addition of median barrier on S.R. 28, a grade-separated interchange at 31st Street, and new southbound on and off ramps at 40th Street to allow continuous mainline flow. Project challenges included minimizing hillside impacts, maintaining railroad capacity, constructing within a tight corridor, and accommodating historic structures, while enhancing safety, improving traffic flow, and coordinating with multiple stakeholders with diverse needs. Michael Baker's services included project management; environmental compliance services; value engineering; roadway, bridge, interchange, retaining wall, and multiuse trail design; utility coordination and relocation design; stormwater management design; aesthetic design; complex construction sequencing and traffic control plans; intelligent transportation system design; and construction consultation.

Second IDC Contract for Master Planning and GIS, Aberdeen Proving Ground, Aberdeen, Maryland. U.S. Army Corps of Engineers, Baltimore District. Architectural Historian. Responsible for conducting research and prepared building histories prior to building demolition. Michael Baker held a second five-year contract with the Baltimore District Corps of Engineers to provide U.S. Army Master Planning, GIS, other computerized and digital technology applications and related services for U.S. Army Aberdeen Proving Ground (APG), Maryland. This re-bid was from September 1999 through September 2004 and allowed the Michael Baker Team to continue to provide master planning, GIS, related computer and web-based applications and general A/E services to APG.

Anita Myers, NCIDQ*Interior Designer***Years of Experience:** 30**Degrees**B.S., 1988, Interior Design, Indiana
University of PennsylvaniaCertificate, 1994, AutoCADD, Pittsburgh
Technical InstituteCoursework, 1986, Business
Administration, Community College of
Allegheny County**Licenses/Certifications**National Council for Interior Design
Qualification, Pennsylvania, 1997

Ms. Myers' experience includes programming, planning, design and project management. She has worked on commercial, industrial, governmental, retail, educational, religious, and financial projects. Ms. Myers is responsible for overseeing the interior design of all projects and ID personnel. She also performs interdisciplinary technical reviews of all designs.

Historic Marine Barracks Washington Building 8 Renovation Design-Build RFP, Marine Barracks Washington, Washington, D.C. U.S. Navy NAVFAC Washington. QA/QC. Provided project review. Michael Baker provided design, engineering, and historic preservation services for the renovation of Building 8, a 47,000-square-foot historic structure constructed between 1903 and 1906 that is part of the U.S. Marine Corps Barracks and Commandant's House National Historic Landmark Site. The project included a sensitive phased renovation with integration of existing communications and networks running through the building from other sections of the campus to the Commandants House at the north end of the site. The renovation scope addressed structural modifications

to reflect space requirements; mechanical, electrical, and plumbing systems upgrade; communication system upgrade; fire protection system and life safety review and upgrade; Americans with Disabilities Act (ADA) analysis and compliance; and anti-terrorism/force protection (AT/FP) compliance to the maximum extent practicable. The procurement documents required integration of sustainability design into the renovation work, and the building is expected to meet a LEED® Silver certification.

Program Management for New Haven Rail Yard Facilities Improvement, New Haven, Connecticut. *Connecticut Department of Transportation.* Interior Designer. Lead Interior Designer. Designed and assembled an FFE bid package for the CCO Facility at New Haven Rail Yard which included approximately 200,000 sf of space with FFE. Developed furniture standards for users. Wrote specifications, created database reports to identify items to be bid plus drawings to be included in bidding documents. The total FFE budget was 2.75 million. Michael Baker is providing program and construction management services to transform the existing New Haven Rail Yard into a state-of-the-art coordinated campus to serve the expanding Metro-North rail car fleet, enhancing Metro-North commuter rail service to New York City and supporting Connecticut's vision of improved rail and transit service into the 21st century. Michael Baker's tasks include developing federally mandated management plans; performing reviews of designer and contractor plans; providing support for project and program-wide schedule reviews and constructability reviews; and performing interagency and railroad coordination, public outreach, and website development. Maintenance, administrative, and transportation facilities total 220,000 square-feet.

Design and Construction Phase Services for Renovation of Building 12 Administrative Space, Tobyhanna, Pennsylvania. *Tobyhanna Army Depot.* Interior Designer. Responsible for the design and selection of interior finishes and furniture. Work involved attending design charrettes, client meetings, and design reviews, creating a Comprehensive Interior Design, Structural Interior Design, and Furniture Fixtures and Equipment sample binder for the User, as well as producing interior design construction documents. Work was performed under a three-year indefinite delivery, indefinite quantity contract. Tasks included architecture, building systems engineering, construction cost estimate development, and as-built plans development.

Design and Construction Management Master Services Contract, Southwestern, Pennsylvania. *Duquesne Light Company.* Interior Designer. Provided "on-call" services for interior design. Michael Baker is providing architectural and engineering services under a three-year master services agreement for the renovation or improvements to the company's facilities and for major Capitol projects and programs.

David Cameron

Construction Manager

Years of Experience: 45

Degrees

A.S., 1980, Construction Management,
Community College of Allegheny County

Mr. Cameron manages specific projects, as well as maintained oversight project management, providing design and construction phase services to both internal and external clients. Services provided include project/program planning, design management, value analysis/engineering, budgeting, cost estimating, construction scheduling, project phasing and logistics, bid phase services, subcontractor coordination, inspection, forensic investigation, claims mitigation, litigation support, and overall construction administration associated with

Michael Baker's facility construction management practice. Mr. Cameron also serves as the liaison between the office and field staff, ensuring appropriate coordination and communication among all parties involved with the projects. Well versed in general contracting, design-build and construction management-At Risk & for Fee contracting services, Mr. Cameron has worked for a variety of public and private sector clients including military, judicial/corrections, commercial, government (non DoD), mining, educational, transit, hospitality, aviation, health care, and recreational. As a project manager, he has been responsible for the successful completion of individual projects ranging in value from \$1 million to \$800 million.

Wilmington Station Renovation and Restoration Construction Management and Inspection, Wilmington, Delaware. *Amtrak.* Technical Advisor. Provided technical consultation related to constructability, schedule, and estimating services. Michael Baker provided construction management and inspection services for the restoration and renovation of the historic Wilmington Station. Michael Baker's services included preconstruction design reviews; risk analyses; constructability reviews; review of VE proposals; construction scheduling, quality/control reviews; monitoring the construction budget and minimizing change orders; and construction inspection. Construction work was performed without disruptions to train service.

Construction Management Services for College Campus Additions and Alterations, Monaca, Pennsylvania. *Community College of Beaver County.* Project Director. Responsibilities included monitoring design and oversight of the construction management and inspection services. Tasks included constructability and quality reviews during design, bid and contracting on the client's behalf, as well as full construction phase administration, from schedule and coordination to quality and closeout. Michael Baker performed pre-construction tasks and construction management services for a new maintenance building and renovations to numerous facilities at the college's Center Township campus.

Rehabilitation of the Ernie Pyle U.S. Army Reserve Center, Fort Totten, Queens, New York. *U.S. Army Corps of Engineers, Louisville District.* Technical Advisor. Responsibilities included providing logistics, constructability and schedule consultation. Michael Baker was tasked to provide Design-Bid-Build documents for the renovation of a 41,312-square-foot U.S. Army Reserve Center, the addition of a 4,994-square-foot Unheated Storage Building, and the addition of MEP and POV parking. The renovation included storage and office areas on two floors, electrical, mechanical, plumbing, and fire protection on all three floors, as well as vault and elevator construction and asbestos removal.

Montgomery County Multiagency Service Park, Rockville, Maryland. *Montgomery County, Department of General Services.* Technical Advisor. Responsibilities included providing schedule, constructability and estimating consultation on an as needed basis. Michael Baker is providing architectural and engineering services for the development of the Montgomery County Multiagency Service Park. Michael Baker's services include site design, architecture, engineering design, landscape architecture, stormwater management, sustainable design, civil design, parking structure design, and site security design. Campus with one 14,990-square-foot public safety training academy, one 171,612-square-foot administrative and maintenance depot and one 73,000-square-foot food services facility.

Michel Vaillancourt, RCDD

Telecommunications Designer

Years of Experience: 43

Licenses/Certifications

Registered Communications Distribution Designer, 2004

Network Transport Systems Designer (NTS), 2007

Information Technology Project Management Certification, 2011

Mr. Vaillancourt is an accomplished telecommunications professional and a proven leader with a wide range of professional experiences and practical knowledge in industry standards and practices. He is experienced in Information and Communications Technology (ICT), network design, and project management of expansive infrastructure construction for enterprise, industrial, healthcare, and government.

Architecture and Engineering Services for Facility Design, Statewide, Pennsylvania. *Pennsylvania Department of Transportation, Central Office.* Communications Designer. Responsible for leading the ICT design on this project. Provided design, monitoring, and guidance on all design and

technical matters to project team members. Responsibilities included the design and specifications of Inside Plant (ISP) and Outside Plant (OSP) infrastructures, CATV, access control, audio-visual communications systems, CCTV, and security systems on this project. Michael Baker is providing architectural and engineering services under an open-end agreement for services on various statewide facility projects. Michael Baker is providing design services for building construction, including new construction and renovations to district and county maintenance offices and buildings, salt storage buildings, personnel staging buildings, warehouse buildings, stockpiles, and other facilities.

Systems Integration Maintenance Office, Fort Campbell, Kentucky. *U.S. Army Corps of Engineers, Louisville District.* Communications Designer. Responsible for leading the ICT design on this project. Provided design, monitoring, and guidance on all design and technical matters to project team members. Responsibilities included the design and specifications of Inside Plant (ISP) and Outside Plant (OSP) infrastructures, CATV, access control, audio-visual communications systems, CCTV, and security systems on this project. Michael Baker was the designer of record for a 48,400-square-foot Systems Integration Maintenance Office (SIMO) facility. This project complied with UFC 4-010-01 DoD Anti-Terrorism Force Protection requirements and per unified facilities criteria and Mission Planning spaces complied with ICS 705-1, 705- 2, and TER room were designed to comply with AR 380-5 requirements. The project is designed to achieve a LEED Silver Certification.

Camp Geiger East Infantry Training Complex, Marine Corps Base Camp Lejeune, North Carolina. *Naval Facilities Engineering Command, Mid-Atlantic.* Communications Designer. Responsible for leading the ICT design on this project. Provided design, monitoring, and guidance on all design and technical matters to project team members. Responsibilities included the design and specifications of Inside Plant (ISP) and Outside Plant (OSP) infrastructures, CATV, access control, audio-visual communications systems, CCTV, and security systems on this project. Michael Baker served as the lead designer for the design-build delivery of a 137,850-square-foot infantry training complex on five acres at Camp Geiger. The project included the construction of a two-story headquarters and academic building, a warehouse, a consolidated issue facility, an armory building, and an emergency weather center, the demolition of five buildings and various electrical distribution upgrades. The project was designed to meet the requirements for LEED® Silver certification.

MDL - Education Center Reno. *U.S. Army Corps of Engineers, Philadelphia District.* Communications Designer. Responsible for leading the ICT design on this project. Provided design, monitoring, and guidance on all design and technical matters to project team members. Responsibilities included the design and specifications of Inside Plant (ISP) and Outside Plant (OSP) infrastructures, CATV, access control, audio-visual communications systems, CCTV, and security systems on this project. The project involves renovating existing floor plans and parking area.

Christina Hohman, RA, LEED AP

LEED and Sustainability Coordinator

Years of Experience: 8

Degrees

M.S., 2009, Sustainable Design, Carnegie Mellon University

B.Arch., 2008, Architecture, Carnegie Mellon University

Licenses/Certifications

Registered Architect, Pennsylvania, 2014

LEED Accredited Professional BD+C, 2009

Ms. Hohman is a registered architect and serves as sustainability coordinator. Her background and experience focuses on sustainability in a variety of contexts, including architectural design, construction, operations and maintenance, and public policy. She is actively involved in the green building community locally. As sustainability coordinator, she frequently organizes LEED documentation for projects of varying sizes, as well as providing sustainability oversight for a variety of projects. Her project management experience is focused in sustainability, planning, conceptual design, consultant coordination, budgeting and identifying funding.

Historic Marine Barracks Washington Building 8 Renovation Design-Build RFP, Marine Barracks Washington, Washington, D.C.U.S. Navy NAVFAC Washington. Sustainability Manager. Responsible for managing Leadership in Energy and Environmental Design (LEED) v3.0 Silver certification with the U.S.

Green Building Council. Michael Baker provided design, engineering, and historic preservation services for the renovation of Building 8, a 47,000-square-foot historic structure constructed between 1903 and 1906 that is part of the U.S. Marine Corps Barracks and Commandant's House National Historic Landmark Site. The project included a sensitive phased renovation with integration of existing communications and networks running through the building from other sections of the campus to the Commandants House at the north end of the site. The scope of the renovation work addressed structural modifications to reflect space requirements; mechanical, electrical, and plumbing systems upgrade; communication system upgrade; fire protection system and life safety review and upgrade; Americans with Disabilities Act (ADA) analysis and compliance; and anti-terrorism/force protection (AT/FP) compliance to the maximum extent practicable. The procurement documents required integration of sustainability design into the renovation work, and the building is expected to meet a LEED® Silver certification.

P-478 Navy Gateway Inn & Suites (NGIS), Naval Station Newport, Rhode Island. NAVFAC MIDLANT NEIPT. Sustainability Manager. Responsible for QA/QC review of design-phase LEED v3.0 documentation and updating the documentation to meet client review and Michael Baker standards. Michael Baker is the designer of record for the new 200 key, 104,000-square-foot Navy Gateway Inns & Suites hotel. Michael Baker's services included architecture, interior design, civil engineering, landscape architecture, mechanical engineering, plumbing design, fire protection design, and sustainable design.

14LRL13 Independence FFRDB RFP. U.S. Army Corps of Engineers, Louisville District. Sustainability Manager. Responsible for writing RFP documents focused on sustainability requirements, including a preliminary LEED v4 scorecard to achieve LEED v4 Certified level. Client required additional review and analysis of the change from LEED v3.0 to LEED v4, so they could understand the implications of their standard approach to design and its impact on the project's ability to achieve a certain level of performance in the LEED certification system.

DO 008 Attleboro ARC-Taunton. U.S. Army Corps of Engineers, Louisville District. Sustainability Manager. Responsible for managing Leadership in Energy and Environmental Design (LEED) v3.0 Silver certification with the U.S. Green Building Council.

LRL 14 Doxx Ft McCoy FY18 DFAC. U.S. Army Corps of Engineers, Louisville District. Sustainability Manager. Responsible for managing Leadership in Energy and Environmental Design (LEED) v4 approach and documentation for the design phase.

LRL14 DO11 Ft McCoy DFAC Base. U.S. Army Corps of Engineers, Louisville District. Sustainability Manager. Responsible for managing Leadership in Energy and Environmental Design (LEED) v3.0 Silver certification with the U.S. Green Building Council.

Qualifications and Similar Experience

The following projects highlight our skills and experience that are critical to successfully completing the Building Four renovation project:



Montgomery County Public Safety Training Academy - Rockville, Maryland

Michael Baker served as the designer of record and provided complete architectural and engineering services for a new 280,000 square-foot Public Safety Training Academy (PSTA) as part of ongoing inclusive design services for the multimillion-dollar Montgomery County Multiagency Service Park.

Michael Baker's services for the PSTA included project management and quality control, architecture, parking garage design and structural engineering, landscape architecture, MEP engineering, fire protection and life safety engineering, interior design, sustainable design, and construction administration.



Overall Campus Design

Since 2009, Michael Baker has been providing full architectural and engineering services for the Montgomery County Multiagency Service Park. The 210-acre, 43-building multi-use campus includes administration and academic facilities, public safety headquarters and training facilities, foodservice facilities, a firing range, an emergency driving track, vehicle training support and vehicle maintenance buildings, a skills pad and a skid pan, fueling facilities, training garages and shops, a secured parking garage, and transit facilities.

Michael Baker's team worked closely with county representatives to design a campus that responds to user operational and functional needs and is designed to attain the highest degree of sustainability possible. The team has delivered a compact site layout solution that efficiently promotes shared facilities and efficient land use and maximizes green space;

Client

Montgomery County, Department of
General Services
9th floor, 101 Monroe Street
Rockville, Maryland 20850

Completion Date

2017

Michael Baker's Role

- Project management and quality control
- Designer of record
- Space Planning
- Structural engineering
- Landscape architecture
- Interior design
- Sustainable design
- MEP engineering
- Fire protection and life safety engineering
- Construction administration

provides the county with a "destination" and a place where county staff and visitors gather to work, train, live, and enjoy recreational activities; is context-sensitive and compatible with the surrounding community; and whose design meets schedule and budget constraints. **Michael Baker's design solution establishes a consolidated complex that houses several functions, agencies, and facilities to create a cohesive, positive, flexible, and professional training and working environment that meets the client's vision and mission.** The design aesthetics reflect a community orientation that promotes camaraderie among users and visitors.

The campus consists of two main sites: the east side and the west side, which are divided by a stream valley. The east side features approximately 530,000 square feet of building area and includes a single shared compound for three main facilities—the Montgomery County Public Schools Food Distribution Center, the Montgomery County Public Schools Facilities Maintenance Depot, and the Park and Planning Facilities Maintenance Depot. The area includes two secured gates for service vehicle access and a shared garage centered on a public-entry court.

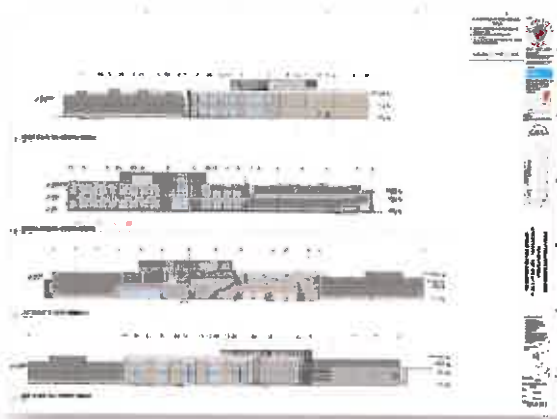
With approximately 280,000 square feet of building area, the west side houses the new PSTA, which includes a two-story police and fire training and administrative building; a firing range; a gym; a skills pad and a skid pan, with observation pavilions and skills pad building, including a classroom, simulator room, and administrative spaces; a mock-up cityscape for training purposes, including a burn facility with a high bay and apparatus bay; a driver training range; a canine training center; and a structured parking garage. The west side is centered on a gracious court that provides entry to the campus and includes frontage on a publicly accessible service lane, which provides access to the shared fuel facility. The public and secured areas of the campus are clearly delineated with two gated entries, a landscaped courtyard for casual and ceremonial uses, and a comprehensive system of internal streets and pedestrian circulation. All buildings are stacked and graded to permit direct shop access to their respective yards and are designed and programmed for future expansion capability.

PSTA Design

Design Approach

The PSTA facilities and their corresponding outdoor areas are designed as a unit to create a functional, visually appealing compound that effectively addresses the requirements of the various county agencies and is a source of pride for users and owners. Michael Baker's basis of design approach optimizes the use of natural landscape features by siting the main academic building to create prominent architectural facade elements that easily identify the main entry points to the facility and equally strong facade features facing the courtyard and landscaped areas that establish a functional, unified connection with user and visitor parking areas and structures. The PSTA building also serves as an attractive front that encloses parking and service areas and screens them from sight; the structure is the most prominent in the complex and is the design starting point for the image of the entire campus.

The overall visual appeal of the facilities is accomplished by combining easily identifiable, prominent glass elements with exterior precast and masonry unit components finished with masonry and metal panel systems as the main facade materials. These materials provide the durability and aesthetics appropriate for the varying uses of the PSTA buildings; the result is a carefully scaled, rhythmic use of architectural elements and fenestration. These features are treated in a contemporary manner, establishing a consistent architectural theme throughout the integrated complex that will serve as the aesthetic standard against which all future development in the area will be measured.



Exterior Design

Roofing materials with a solar reflectance index (SRI) of at least 78 are used for the low-sloped roofs. Roofing materials with an SRI of at least 29 are used for steep-sloped roofs. Also, to further reduce solar gain and improve stormwater management, vegetated roofs are employed to the maximum extent possible.

An energy-efficient building envelope was developed through the use of higher-insulation R-values for walls and roofs and higher-performance windows as compared to ASHRAE 90.1-2007 baseline minimum performance requirements.

Interior Design

Energy star products are used where possible. In addition, a commissioning authority performed fundamental commissioning of building energy systems as appropriate, including heating, ventilation, HVAC, and refrigeration systems and associated controls, lighting and daylighting controls, and domestic hot water systems.

Energy Efficiency and Sustainability

The PSTA design specifies the use of regional materials and those with recycled content. Low-emitting finish materials are incorporated when possible.

Energy conservation was a priority. Daylight and views are provided for regularly occupied spaces. The electrical design reduces the lighting wattage per square foot in comparison to ASHRAE 90.1 allowances through use of the most current energy-efficient technologies, such as high-efficiency fixtures, high-efficiency lamps and ballasts, and advanced computer modeling of the lighting array to achieve the required light intensities with a minimum number of fixtures. Also, the design plans specify increasing the reflectivity of room finishes to further reduce lighting requirements. LED site lighting was employed, as feasible, and within budget constraints.

Reduction of water consumption within the PSTA involved strategies to use less water than the water-use baseline calculated for the facility through measures that included installation of low-flow aerators on lavatories and sinks. Drought-resistant plants reduce site water usage.



WVARNG Charleston Armory HVAC & Architectural Renovations – Charleston, West Virginia



The West Virginia Army National Guard (WVARNG) Construction and Facilities Management Office (C&FMO) requested a study be conducted of the consolidated mechanical and electrical components of the consolidated facility known as the Charleston Armory. Such items were considered as the condition of existing HVAC/MEP systems and design improvements or upgrades to those systems and examination of the existing building envelope and recommend possible improvements to the Envelope, HVAC, Electrical and Plumbing systems. During the renovation process, mold was discovered growing in certain areas of the building. An investigation was undertaken, building

humidity was logged and measures were implemented to install dehumidification in existing equipment in the building, building leaks were sealed and existing mold was remediated. Baker's design also addressed the repair of the existing roofing system, addition and repairs of roof curbs for HVAC equipment, repositioning of blocking and walk pads around the roof, and installation, repair and patching of the existing EDPM roofing system and maintaining the existing warranty.

WVU Institute of Technology, Classroom Building – Beckley, West Virginia

The Classroom Building required extensive coordination between generations of building engineering systems as well as selective demolition of architectural interior systems to allow for update use. The 31,000 SF facility was designed originally as a junior high school in the 1940's and was renovated to house state-of-the-art mechanical, hydraulic and computer engineering laboratories. To bring the facility to the 21st century, a student lounge, student rest and study spaces- where electronics can be utilized and charged- were devised from a former kitchen and corridor locker areas, respectively. A modern mechanical distribution system was designed to support air conditioning while a new, building-wide fire suppression system, complete with a larger water supply line, was engineered.



West Virginia State University - Institute, WV

Michael Baker provided architectural and multidiscipline engineering services under a ten-year open-end agreement to design renovations, alterations, reconstruction, or extensions of facilities. Michael Baker's services included programming, planning, design development, construction documentation, evaluations, feasibility studies, cost estimating, and construction contract administration.

Marine Barracks Washington Building 8 Renovation – Washington DC

Michael Baker provided design, engineering, and historic preservation services for the renovation of Building 8, a 47,000-square-foot historic structure constructed between 1903 and 1906 that is part of the U.S. Marine Corps Barracks and Commandant's House National Historic Landmark Site. The project included a sensitive phased renovation with integration of existing communications and networks running through the building from other sections of the campus to the Commandant's House at the north end of the site. The scope of the renovation work addressed structural modifications



to reflect space requirements; mechanical, electrical, and plumbing systems upgrade; communication system upgrade; fire protection system and life safety review and upgrade; Americans with Disabilities Act (ADA) analysis and compliance; and anti-terrorism/force protection (AT/FP) compliance to the maximum extent practicable. The procurement documents required integration of sustainability design into the renovation work, and the building is expected to meet a LEED® Silver certification.

Training and Doctrine Command (TRADOC) Headquarters – Fort Eustis, VA

As designer of record, Michael Baker provided architecture, interior design, and landscape architecture for the design-build of a new headquarters and band facility for the U.S. Army Training and Doctrine Command (TRADOC). The new 263,670-square-foot, state-of-the-art headquarters building provides high-quality, commercial-style office space, auditorium, emergency operations center, conference space, and a sensitive compartmented information facility for approximately 1,260 employees. A single-story, 18,840-square-foot training facility to accommodate 66 personnel for the TRADOC Band on the site uses the same architectural vocabulary to create an integrated campus environment.



Systems Integration Maintenance Office – US Army, Fort Campbell, KY

Michael Baker was the designer of record for a 48,400-square-foot Systems Integration Maintenance Office (SIMO) facility. The facility includes administrative space (private offices and open office space); classrooms; conference rooms; laboratory spaces; storage spaces; metal fabrication shop; computer labs; flight lockers; showers and restrooms; mechanical, electrical and communication rooms; intrusion detection; surveillance; and electronic access control. Spaces support SIMO flight operations, mission planning, and pilot flight planning. This project complied with UFC 4-010-01 DoD Anti-Terrorism Force Protection requirements and per unified facilities criteria and Mission Planning spaces complied with ICS 705-1, 705- 2, and TER room were designed to comply with AR 380-5 requirements. Site design included parking, stormwater management/bio-retention, landscaping and site utilities. The project is designed to achieve a LEED Silver Certification.



Administrative Office of the U.S. Courts - Nationwide

Michael Baker developed long-range facilities plans of U.S. Circuit and District Courts under a four-year basic purchase agreement to develop long-range facilities plans for future leases, building renovations, or construction of new courthouse buildings to meet the projected needs of the federal judiciary for the next 30 years. Michael Baker's services included project management; stakeholder coordination; facility assessments; demographic and economic analyses; caseload and operations analyses; personnel projections; space inventories and projections; and documentation, including maps, graphs, diagrams, floor plans, and photographs. Michael Baker coordinated with a wide range of stakeholders, including judges; clerks of court; chief probation and pretrial officers; and representatives of the U.S. General Services Administration, U.S. Attorneys' offices, and the U.S. Marshals Service.

Duquesne Light Company – Pittsburgh, PA

Michael Baker developed a comprehensive space utilization plan for the company's headquarters office, three regional offices, and five service centers; approximately 350,000 square feet of existing administrative space serving approximately 1,300 personnel. Michael Baker's services included data collection and analysis, building surveys, stakeholder interviews, space requirements analysis, conceptual design, space standards update, and report preparation.



Naval Criminal Investigative Services (NCIS) Security Building - Camp Pendleton, CA

Michael Baker served as the designer of record for a 21,753-square-foot Naval Criminal Investigative Services (NCIS) building that includes administrative, office, interrogation and investigation, evidence storage, and training space. Michael Baker also designed the government parking area, a storage evidence yard, and all site improvements. NCIS intends this facility to be the "Model Field Office" and be the example for future design projects for all NCIS buildings worldwide.



AMTRAK Station Renovations Penn Station – Baltimore, MD Lancaster Station – Lancaster, PA

Michael Baker provided architectural and engineering services for renovations in the historic Penn and Lancaster Stations. Michael Baker's services included architectural and interior design; space planning; historic preservation; mechanical, electrical, and plumbing design; bidding-phase support; and construction-phase services.

U.S. Army Reserve Center Renovation and Expansion - Homewood, IL

As designer of record, Michael Baker provided architectural and engineering services for the renovation of a 400-member U.S. Army Reserve Center (ARC) and construction of two single-story additions totaling 35,694 square feet—a 34,294-square-foot Training Building and a 1,400-square-foot ancillary structure—along with a 3,500-square-foot Unheated Storage Building. The new construction includes a 22,000-square-foot parking area for military equipment and 140 parking spaces for privately owned vehicles. Tasks were performed under an indefinite quantity-indefinite delivery engineering agreement. Michael Baker designed the training facility to meet LEED® Silver certification. Michael Baker's services included architecture, surveys, environmental and geotechnical investigation, all site and building engineering, cost estimating, value engineering, and LEED® credit template documentation. Administrative and training 60,500-square-foot building. This project has achieved LEED certification.