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Header @ 1

Procurement Folder: 1732668

Procurement Type: Central Purchase Order

Vendor ID:

Legal Name: MONTUM ARCHITECTURE LLC

Alias/DBA:

Total Bid: \$0.00

Response Date:

Response Time:

Responded By User ID:

First Name:

Last Name:

Email:

SO Doc Code: CEOI

SO Dept: 0603

SO Doc ID: ADJ2600000002

Published Date: 7/28/25

Close Date: 8/11/25

Close Time: 13:30

Status: Closed

Solicitation Description:

Total of Header Attachments: 1

Total of All Attachments: 1



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder: 1732668
Solicitation Description: Camp Dawson Building 202 Renovation
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-08-11 13:30	SR 0603 ESR08102500000000759	1

VENDOR
VS0000013207
MONTUM ARCHITECTURE LLC

Solicitation Number: CEOI 0603 ADJ2600000002
Total Bid: 0
Response Date: 2025-08-10
Response Time: 20:53:51
Comments:

FOR INFORMATION CONTACT THE BUYER
David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor
Signature X **FEIN#** **DATE**

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Camp Dawson Building 202 -Renovation				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments: EOI Response

Extended Description:

Provide professional architectural and engineering design services per the attached documentation.



**Expression of Interest
West Virginia National Guard
Camp Dawson Building 202 Design EOI
Kingwood, WV
CEOI ADJ2600000002
August 11, 2025**



**Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130**

Montum Architecture, LLC

55 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com
montumarch.com



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August 11, 2025

State of West Virginia
Department of Administration, Purchasing Division
2019 Washington St. E.
Charleston, WV 25305

**Subject: National Guard Camp Dawson Building 202 Design EOI, CEOI 0603
ADJ2600000002**

Dear Sirs and Madams,

Montum Architecture, LLC is pleased to submit this Statement of Qualifications to provide architectural and engineering services. Montum is headed by Tom Pritts, an architect with 22 years of experience designing a multitude of project types. He will be the primary contact for the duration and provide architectural design and construction administration services. Tom has completed designs for various State and local government agencies across the state. Previous National Guard work includes Tri-State Readiness Center Addition and Renovation, Bridgeport FWAATS Restroom Renovations, Jackson County AFRC Wash Canopy, USPFO Restroom Renovations, and Camp Dawson FMS4 Fire Protection.

Montum has teamed with Miller Engineering, Inc. to provide mechanical, electrical, and plumbing design services. Miller has completed many the MEP projects for the State of West Virginia and specializes in HVAC, electrical and plumbing renovation projects. We will consult with Arrow Engineering for Structural Engineering, American Geotech for Geotechnical Engineering, and GPRS for utility location services. All members of the project team have worked together on many successful projects.

All four of the identified goals and objectives in the EOI will be addressed by the design team:

2.1 The design team prides themselves in starting new projects looking at all of the existing conditions, project needs, and limitations that inform the best approach to the design process and goals of the project. Our project sheets clearly reflect the extent of previous experience in working in that manner.

2.2 Geotechnical and utility location will be part of the project scope.

Montum Architecture, LLC

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montumarch.com

2.3 The design team will provide the design services including 35%, 65%, 95%, and 100% document submissions, including estimated construction costs.

2.4 Each primary designer remains as the responsible representative for their portion of the work as the project progresses into construction. The continuity of the design-decision knowledgebase positively impacts the administration of construction activities.

Our goal on every project is to provide exemplary designs that perform to the highest standard for the given budget constraints. We feel that by striving to spend every project dollar to our best ability will inherently serve our client's best interest.

Thank you for taking the time to review the attached information about the design team and we are grateful for your consideration.

Respectfully submitted,
Montum Architecture LLC



Thomas Pritts, AIA, CSI-CCS, LEED-AP

Montum Architecture, LLC

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montumarch.com



Montum Architecture, LLC Firm Profile

Who We Are.

Montum Architecture, LLC was founded in 2017 to provide architectural design and consulting services. Montum Architecture is a Limited Liability Corporation filed in the state of West Virginia. The company is also registered in the State of Maryland as a foreign LLC. Montum is staffed by a licensed principal architect and a design professional. They work manage projects together, from conceptual to construction administration, allowing the utmost coordination of building plans and specifications with minimal potential for miscommunication.

Our Services

Government	Planning
Institutional	Building Assessment
K-12 schools	Architectural Detailing
Higher Education	Specification Writing
Multi-Dwelling	Contract Administration
Medical	Design/Bid/Build
Retail	Renovation
Emergency Services	Renderings
Automotive	Life Safety Evaluations
Financial	Design/Build
Warehouse	Project Management

Why Choose Us.

Communication

Tom Pritts will be the primary point of contact for Montum’s architectural services. Montum will manage communication with the Owner, Contractor, and sub-consulted team of members on this project.

Project Budget

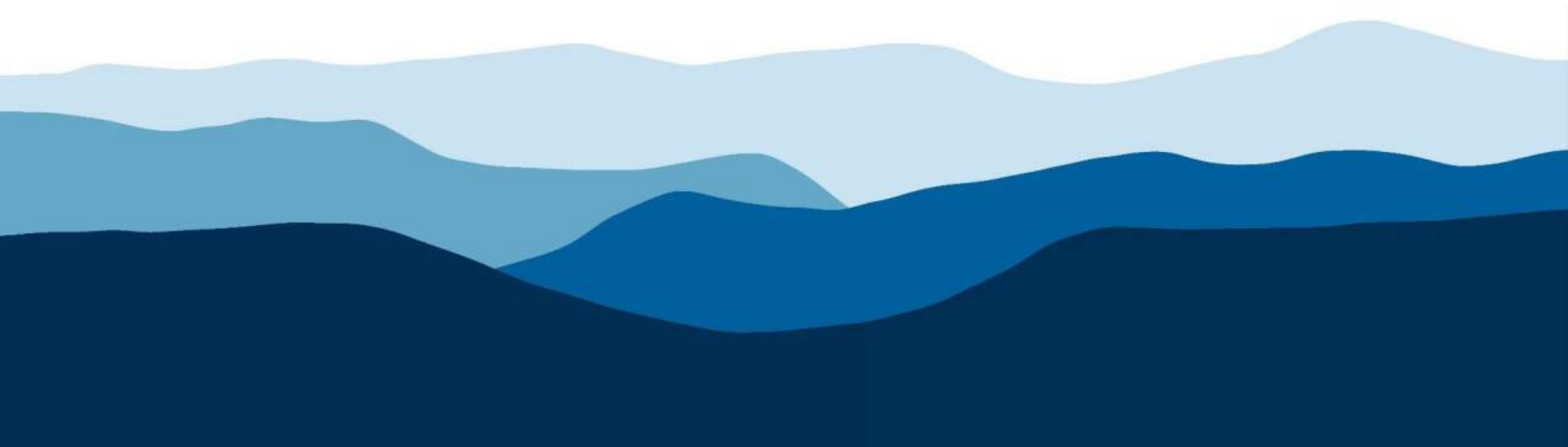
Previous work experience has shown a consistent +/-2%bid-to-budget ratio.

Project Schedule

Montum will monitor and adjust the design tasks in order to complete the design work in the established timetables. They will also work diligently during project construction to maintain the contractual constraints placed as part of the contractor’s bid.

Design Software

Montum utilizes Autodesk Revit for all design projects incorporating three-dimensional modeling and parametric reporting. Existing condition documentation includes drone imaging, 360 camera shots, and handheld LiDAR telemetry.





Firm Profile

MILLER ENGINEERING is a solely held (S) corporation owned by Craig Miller PE, President. The corporation maintains a Certificate of Authority with the WV State PE Board and has carried professional liability insurance since its inception. Neither the firm nor its professional engineers have ever faced disciplinary action in any form from the states in which they are registered.

Our engineered solutions involve a detailed assessment process: investigation, observation, communication with stakeholders, system analysis, building modeling and engagement from our entire team. We approach each and every project with this process and the guiding principle that buildings are designed to be livable and function in their intended purpose.

*Over the past 14 years Miller Engineering, Inc. (MEI) has engineered solutions for over \$23.2M in MEP system upgrades, repairs and renovations for projects of all scopes and sizes, with clients ranging from private owners to local and state governments. With a strict attention to detail and commitment to delivering a job done well and done right the first time, every time, **MEI has accumulated a change order percentage of less than 0.1% over the past 8 years.***

Our team has unique skill-sets regarding engineered renovation solutions. Each member of the team has hands-on mechanical system experience including installation, construction, design and maintenance.

*Miller Engineering takes pride in being **different by design**, and that difference shines through in all phases of our work and continued relationships with our clients.*

- Experienced and Licensed Professional Engineers
- Quality, Value-Engineered Project Delivery
- Qualified Construction Representative on Staff
 - LEED-AP Certified
- Below Industry Change Order Status
 - Building Information Modeling
 - Emergency Facility Response

Engineering Design and Consultation

- Mechanical
- Electrical
- Plumbing
- HVAC Design
- Renovation
- New Construction
- Building Information Modeling

Aquatic Facility Design

Public Pools & Areas
ADA Compliance
Indoor & Outdoor (air flow)
Chlorination/Filtration

Construction Administration

Maintenance/Facility Improvement Plans
Contract Administration
Code Observation

Communication System

Intercomm & Public
AddressVoice/Data/CATV
Urgent Response

Energy

Power Supply (main & backup)
Green & Renewable Consulting
Systems Utilization & Upgrades
Sustainable Solutions

Facility Utilization

Systems Assessment & Solutions
Adaptive Re-use
Planning/Life-Cycle Control
Engineered Replacement

Life Safety Inspection/Design

Fire Protection & Alarm Systems
Access Control
Fire & Electrical Investigation

Industry Experience

Education
Local & State Government
Commercial Development
Healthcare



ARROW

STRUCTURAL ENGINEERING

ARROW'S MISSION

Since 2016, Arrow Engineering has been dedicated to delivering top-tier structural engineering solutions that exceed expectations. Drawing from his extensive background as a contractor, civil engineer, and structural engineer, Michael Howell founded Arrow Structural Engineering to bring a unique blend of practical experience and innovation to every project.

At Arrow Engineering, we understand the paramount importance of a sturdy foundation and impressive design. Whether it is a commercial, industrial, governmental, historic preservation or residential venture, our team is committed to crafting solutions that exceed industry standards. With a focus on safety and durability, trust us to bring your structural visions to life with precision and expertise.



ARROW'S LEADERSHIP



MICHAEL HOWELL, P.E. S.E.

President

Mike's passion for construction began in his youth in New Brighton, Pennsylvania, where early hands-on experiences and volunteer work fueled his interest in structures. He earned a B.S. in Civil and Environmental Engineering from the University of Pittsburgh and an MBA from West Virginia University. His professional journey includes roles at firms such as American Bridge Company, McKinney and Company, Brockenbrough and Associates, and Allegheny Design Services. An active member and leader in groups like the American Society of Civil Engineers and the Richmond Joint Engineers Council, Mike also gives back to his community through board service with organizations like Pace Enterprises and the Spark Imagination and Science Center. Based in Morgantown, West Virginia, he enjoys coaching youth sports and spending time with his two children. As a speaker, he presents on topics such as engineering failures, leadership, and historical insights into modern construction.



CAROL STEVENS, P.E. F.ASCE

Chief Engineer

Carol Stevens is a leading structural engineer with decades of experience designing and rehabilitating critical infrastructure throughout West Virginia and beyond. A graduate of West Virginia University and The Pennsylvania State University, she has led CAS Structural Engineering as president since 2001, contributing to landmark projects at Twin Falls, Hawks Nest, and Pipestem State Parks, as well as historic restorations like the First Presbyterian Church and the West Virginia State Capitol Complex. Her award-winning work on the Upshur County Courthouse, Robinson Grand Performing Arts Center, and the Main Capitol Building Dome has earned recognition for design excellence. Actively involved in the American Society of Civil Engineers and the National Society of Professional Engineers, Carol also serves on the West Virginia Board of Registration for Professional Engineers and advises academic institutions, reflecting her dedication to mentoring future engineers and advancing the profession.

Qualification Statement

American Geotech, Inc. (AGI) is a consulting engineering firm specializing in the practice of geotechnical, environmental and testing engineering. The ownership of AGI represents over 40 years of combined engineering experience including completion of geotechnical testing projects in West Virginia, Virginia, Ohio, and Kentucky. American Geotech, Inc. staff includes six (6) full time personnel and four (4) part time personnel. In our professional staff there are one geotechnical engineers, one environmental scientist, seven soil technician, and one secretary.

With its office centrally located in Charleston, West Virginia, AGI can effectively assist owners, architects, planners, design engineers, and contractors in all phases of project design, development, and property utilization throughout the Mid-Atlantic region of the United States. Utilizing proven technology and experience, AGI can work closely with its clients to initiate and complete a variety of engineering projects in a professional and effective manner.

AGI has established a full service for soils testing laboratory in its Charleston office. The laboratory is fully equipped for the performance of soils and concrete testing services in accordance with standards published by American Standard Testing Materials (ASTM) and American Association of State Highway and Transportation Officials (AASHTO).

Geotechnical Engineering Services

Standard geotechnical engineering services which AGI can contribute to a project includes:

- Site exploration and recommendation for Site Development
- Analysis and design recommendations for both shallow and deep foundation systems
- Exploration, analysis, and design recommendations for highways, airport construction and bridge foundation
- Exploration and analysis of utility line installation and construction

Material Testing Engineering Services

Standard soils testing services which AGI can contribute to a project include:

- Classification testing of Soils and Rock

- Strength testing of soils including Unconfined Compression, Triaxial and Direct Shear Testing
- Compressibility and Consolidation Testing of Soils
- Standard and Modified Proctor Tests for Moisture-Density relationships.
- Concrete Testing.
- Steel and Weld Inspection.
- Block and Bricks Testing
- Fire-proofing Thickness
- Grout and Mortar Testing

GPRS is the nation's largest company dedicated to Intelligently Visualizing the Built World® for clients throughout the U.S. What began with a single ground penetrating radar unit in the trunk of founder and President Matt Aston's car in 2001 has grown to a \$200-million company. Our firm now encompasses every area of construction site and facility safety across virtually every industry.

We offer a full suite of project visualization services to help you plan, build, and manage better:

PLAN | BETTER.

Prevent rework and delays with accurate as-built documentation, including utility maps, 2D CAD, and BIM models ■

PLANNING & DESIGN

- REALITY CAPTURE
- EXISTING CONDITIONS DOCUMENTATION
- BIM MODELING
- 3D PHOTOGRAMMETRY & LASER SCANNING
- AS-BUILT CREATION
- CLASH DETECTION

BUILD | BETTER.

Dig, drill, and build with certainty using accurate subsurface and infrastructure data ■

CONSTRUCTION

- GROUND PENETRATING RADAR (GPR)
- CONCRETE SCANNING
- UTILITY LOCATING
- WATER LEAK DETECTION
- CCTV VIDEO PIPE INSPECTION
- 3D LASER SCANNING

MANAGE | BETTER.

Access up to date, layered facility records in SiteMap®, available 24/7 and securely shareable ■

FACILITY & PROJECT MANAGEMENT

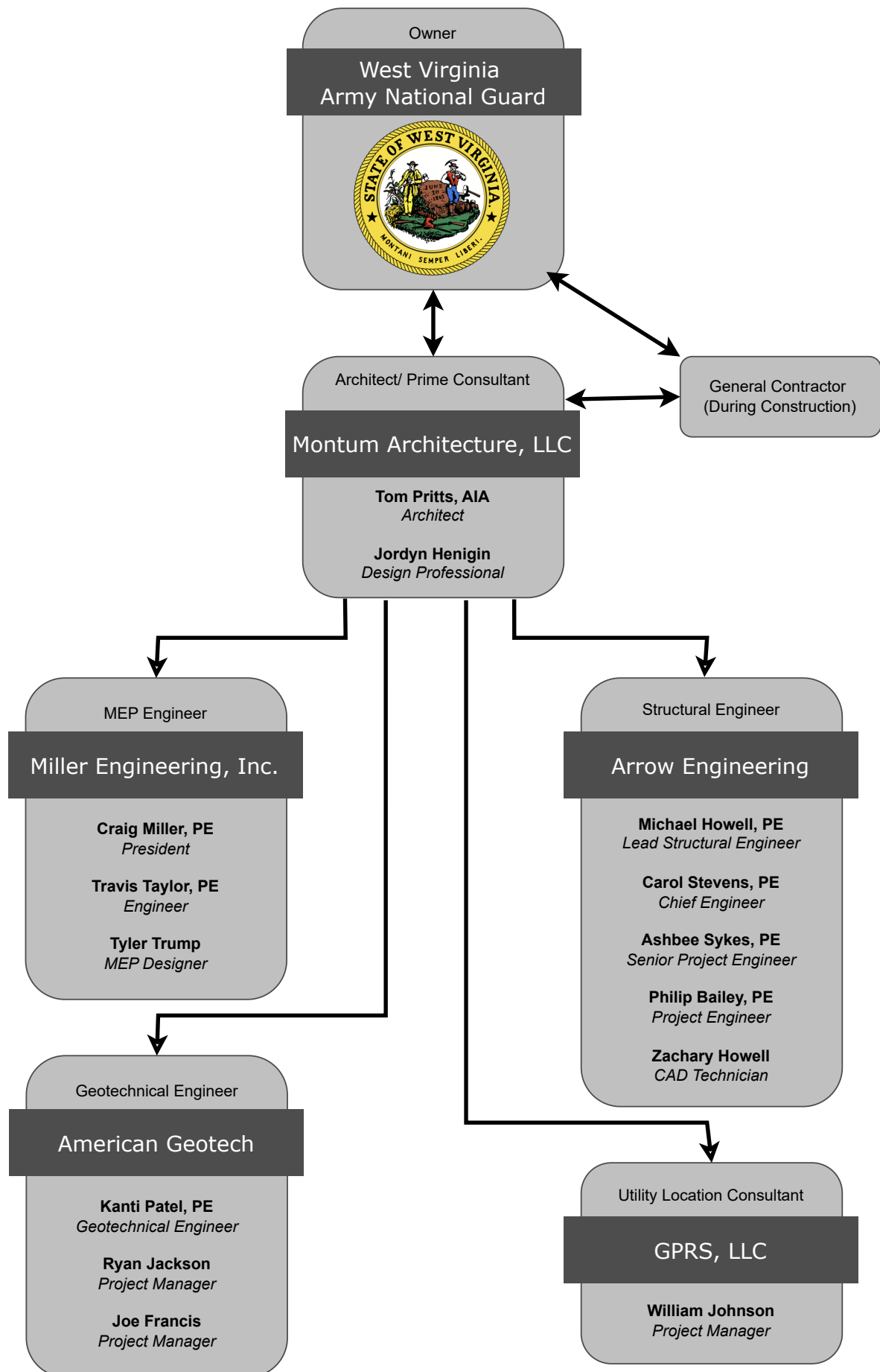
- SITEMAP GIS PLATFORM
- VIRTUAL TOURS
- UPDATED FLOORPLAN AND REFLECTED CEILING PLANS
- BOMA MEASUREMENTS
- DIGITAL PLAN ROOM
- AS-BUILT DRAWING UPDATES

Our Rapid Response Team of Project Managers serve every major U.S. market, and all are trained in Subsurface Investigation Methodology (SIM), the most rigorous and specialized non-destructive investigation training available. There's a reason we call our field team Project Managers. It is because they are highly trained to provide a consultative approach to your job – to go above and beyond to provide you with the accurate information you need. **In many cases, you can have a Project Manager on site within 48 hours, almost anywhere in the country.**

We provide complimentary SiteMap® Personal access and free PDF and .KMZ files of every outdoor utility locate, and can craft customized reports, maps, and models to meet your needs, from pre-planning and prefabrication through operation and maintenance.

The GPRS Difference: GPRS has a 99.8% accuracy rate in utility locating and concrete scanning because providing accurate data isn't just about using the best technology, it's about making sure the people using it are the best in the business.







Staff – Proposed Staffing Plan:

**Architect/ Team Leader/
Primary Point of Contact**

Thomas Pritts, AIA

**Lead Designer/BIM Specialist/
BIM Coordinator**

Jordyn Henigin

**Engineer in Responsible Charge
Lead MEP Engineer
MEP Designer**

***Craig Miller, PE
Travis Taylor, PE
Tyler Trump***

**Lead Structural Engineer
Chief Engineer
Senior Project Engineer
Project Engineer
CAD Technician**

***Michael Howell, PE, SE
Carol Stevens, PE, F.ASCE
Ashbee Sykes, PE, SE
Philip Bailey, PE
Zachary Howell***

**Geotechnical Engineer
Project Manager
Project Manager**

***Kanti Patel, PE
Ryan Jackson
Joe Francis***

Utility Location Project Manager

William Johnson

Montum Architecture, LLC

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montumarch.com



Thomas Pritts, AIA, LEED-AP, CSI-CCS

Tom founded Montum Architecture in 2017. He has more than 15 years experience in design, specification, and project management. During his former employment, Tom has designed and managed dozens of built projects. His experience encompasses a wide range of projects including K-12 and higher education facilities, financial Institutions, emergency services buildings, and automotive dealerships. A native of Mineral County, Tom is member of the West Virginia Chapter of American Institute of Architects and was involved in the establishment of the US Green Building Council's West Virginia chapter. He is highly skilled in the design of complex building systems, technical construction detailing and specifying, and construction contract administration. These skills were critical in the development and maintaining of many multi-year, multi-project relationships with Clients in his previous employment.

Project Role: Relationship Manager – Primary Point of Contact

- Principal in Charge
- Design and Project Management
- Concept and Construction Design
- Quality Assurance and Control

Professional History

2017- Present	Montum Architecture	Architect
2004-2017	Alpha Associates	Associate and Architect
2003	Marshall Craft Associates	Architectural Intern

Education

2004	Virginia Tech	Bachelors of Architecture
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Licenses and Certifications

- Licensed Architect (West Virginia, Maryland)
- NCARB Certificate
- Construction Specifier Institute – Certified Construction Specifier
- LEED-AP Certified
- 30-hour OSHA Card

Professional Project Highlights

- Potomac State College – Bachelor of Nursing Renovation
- Wyoming East High School HVAC Renovation – Wyoming County Schools, WV
- Mountainview and MTEC HVAC Renovation – Monongalia County Schools, WV
- Berkeley Springs State Park – Pool Bathhouse Roof Replacement
- Berkeley Springs State Park – Old Roman Bath Renovation
- Blackwater Falls State Park – Boiler Room Renovation
- Our Lady of the Mountains Parish – Bathroom Renovation
- Mountain View Assembly of God – Rec Hall Ceiling Design



Professional Project Highlights (former employment built projects)

- Potomac State College – ADA Connector Building, Church-McKee Plaza, Shipper Library Façade
- WVU Engineering Sciences Building – East Wing Addition, 10th Floor Fit-Out, Basement Renovation
- WVU Engineering Research Building – G07 & G08 Renovation
- WVU Equine Education Center
- WVU College of Physical Activities and Sports Sciences/ Student Health Center
- WVU Center for Alternative Fuel Engines and Emissions
- WVU Colson Hall Water Infiltration Repairs
- WVU Mountainlair Water Infiltration Repairs
- WVU Chemistry Research Laboratories Fit-Out
- WVU Creative Arts Center Wheelchair Lift
- Alderson Broaddus University – Pyles Arena Deck Replacement
- Glenville State College – Morris Stadium Skybox
- Washington High School, Jefferson County Schools, WV
- Pineville Elementary School, Wyoming County Schools, WV
- Huff Consolidated School, Wyoming County Schools, WV
- Aurora School Addition, Preston County Schools, WV
- Riverview High Field House Design-Build, McDowell County Schools, WV
- Safe School Entries, Monongalia County Schools, WV
- Morgantown High Elevator, Monongalia County Schools, WV
- 2010 Comprehensive Education Facilities Plan- Monongalia County Schools, Wyoming County Schools
- Clear Mountain Bank Branches, Oakland, MD - Reedsville, WV - Kroger-Sabraton, WV
- Grant County Bank, Petersburg, WV
- Fairmont Federal Credit Union, Bridgeport, WV
- Freedom Ford, Kia, and Volkswagen Automotive Dealerships, Morgantown and Clarksburg, WV
- Jenkins Subaru Addition, Bridgeport, WV
- Elkins Fordland Renovation - Elkins Chrysler Dealership, Elkins, WV
- Harry Green Nissan Design-Build, Clarksburg, WV
- Cool Green Automotive Addition and Renovation, Shepherdstown, WV
- Veteran's Affairs – OI&T Office Fit-Out, Shepherdstown, WV
- OPM, Eastern Management Development Center Addition, Shepherdstown, WV
- National Energy Technology Laboratory – Building B-8 Roof Replacement, Morgantown, WV
- US Coast Guard – Conference Room Renovation, Martinsburg, WV
- Eastern Panhandle Transit Authority Addition, Martinsburg, WV
- Cacapon State Park – Old Inn HVAC and Interior Renovation
- WV National Guard - Armory Office Fit-out, Parkersburg, WV
- South Berkeley Fire Station, Inwood, WV
- Jefferson County Emergency Services Agency – New Headquarters
- Berkeley County Ambulance Authority – South Station Renovation and Addition
- Poolhouse Renovation, McMechen, WV
- Community Center, Ridgeley, WV
- Wastewater Treatment Plant Renovations, Martinsburg, WV
- Public Works Building, Fairmont, WV
- Oatesdale Park Little League Fields, Martinsburg, WV
- St. Luke Canopy Replacement, Morgantown, WV
- Freshwater Institute – Aquaculture Building, Shepherdstown, WV
- Clarion Hotel Renovation, Shepherdstown, WV
- Shenandoah Village Apartments – Façade and Deck Replacement, Martinsburg, WV
- Regional Eye Associates/ Surgical Eye Center, Morgantown, WV
- Bavarian Inn – Infinity Pool/ Pool Bar, Shepherdstown, WV



Jordyn Henigin, M.Arch

Jordyn joined Montum Architecture in May 2020. A recent graduate of Fairmont State University, She has been eager to enhance her skills in the business field and develop a stronger knowledge of architectural design principals and methods. Jordyn is in the process of pursuing her goal to become a licensed Architect.

Project Role: Design Professional

- Concept and Construction Design
- Building Information Modeling – Revit
- Architectural Rendering - Lumion

Professional History

2020- Present	Montum Architecture	Design Professional
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Education

2020	Fairmont State University	Bachelors of Architecture
2022	Fairmont State University	Masters of Architecture

Licenses and Certifications

- LEED-Green Associate
- 30-hour OSHA Card

Associations and Memberships

- Assoc. AIA

Professional Project Highlight

- Watters Smith State Park, Lost Creek WV
- Mon Co Schools Transportation Addition, Morgantown WV
- Jackson Co ARFC Wash Bay, Millwood WV
- BUMFS Staggers Recovery, Burlington WV
- BUMFS Knobley Rehab, Burlington WV
- Aging & Family Services of Mineral County - Keyser Senior Center, Keyser WV
- Mineral County Detention Center, Courthouse, and Annex addition and renovations, Keyser WV
- Larenim Park Amphitheater, Burlington WV
- Building 25 HVAC, Parkersburg WV
- WVGSD Elevator Modernizations
- Westside HVAC and Roof, Clear fork WV
- Ed Kelley Memorial, Keyser WV
- Cass Campground, Cass WV
- Waxler Warehouse, Keyser WV
- Greenbrier SF Headquarters, White Sulphur Springs WV
- FWAATS, Bridgeport WV
- WV Challenge Academy Maclin Hall



B. Craig Miller, PE

Craig founded Miller Engineering in 2003, and serves as President and Principal Engineer. He has more than 20 years experience in design, specification, operations and project management. During his employment with WVU, Craig was directly involved with approximately \$130 million in new capital construction. His experience with a wide range of projects including HVAC, electrical, plumbing, infrastructure upgrades, building automation, energy efficiency and maintenance/renovation, among others, allows him to serve in multiple capacities within a given project. Craig will serve as the "Relationship

Manager" for Miller Engineering as the main communication interface between the Owner, the design team, contractors and end users.

Project Role: Relationship Manager – Primary Point of Contact

- *Engineer in Responsible Charge*
- *Design and Project Management of Mechanical, Electrical, Plumbing Projects*
- *Concept and Construction Design*
- *Business Operations and Financial Management Oversight*
- *Quality Assurance and Control*

Professional Project Highlights

- Morgantown High School Area 4 HVAC Renovations
- WVU Life Sciences Building and Student Recreation Center – Owner's Engineer
- WVANG Bridgeport FWAATS Restroom Renovations
- ChalleNGe Academy Maclin Hall Make Up Air Unit Replacement
- Advanced Surgical Hospital
- Camp Dawson FMS4 Fire Protection
- Chief Logan Lodge HVAC Renovations
- Cheat Lake Elementary & Middle School Renovations

Professional History

2003- Present	Miller Engineering, Inc.	President, Relationship Manager
2002-2003	Casto Technical Services	Existing Building Services Staff Engineer
2001-2002	Uniontown Hospital	Supervisor of Engineering
1995-2001	West Virginia University	Staff Engineer
1990-1995	BOPARC	Caretaker – Krepps Park
1983-1988	University of Charleston	Electrician/HVAC Mechanic

Education

1995	West Virginia University	BS- Mechanical Engineering
1988	University of Charleston	BA- Mass Communications

Licenses and Certifications

- Professional Engineer (West Virginia, Pennsylvania, Maryland, and Ohio)
- Licensed Master Plumber
- LEED-AP Certified



Travis Taylor, PE

Experience in project management facilitates Travis's ability to create and design constructible projects. Prior to joining the Miller Engineering team he was directly responsible for managing \$10 million in electrical construction budgets. His experiences encompass both new construction and renovation. Travis maintains professional competencies by attending seminars and continuing education classes. These include local ASHRAE classes in addition to classes on electrical systems, and also steam systems through Shippenburg Pump Company. As lead engineer he provides HVAC, mechanical, plumbing, and electrical design solutions and services for our clients. In addition, he is part of our team's complete assessment process in both planning and MEP design through construction administration.

Project Role: Lead MEP Engineer

- *Design of Mechanical, Electrical, and Plumbing Systems*
- *Building Information Modeling - Revit*
- *Constructible Materials Evaluation*
- *Site Evaluation and Mechanical System Review*
- *Submittal and RFP Review*
- *RFI Coordination, Review, and Response*
- *Construction Observation*

Professional Project Highlights

- WVANG Bridgeport FWAATS Restroom Renovations
- WVANG USPFO Buckhannon Restroom Renovations
- Camp Dawson FMS4 Fire Protection
- WVANG Jackson County AFRC Canopy
- WV State Building 25 (Piping, HVAC, Lighting)
- Hawks Nest Lodge Renovations
- Blackwater Falls Lodge Renovations
- Holly River State Park Primary Electric Service Replacements Phase I & II
- Pipestem Lodge McKeever Lodge HVAC Piping Replacement

Professional History

2011-Present	Miller Engineering, Inc.	Staff Engineer
2006-2011	Tri-County Electric, Co.	Project Manager
2006-2006	Schlumberger	Field Engineer Trainee - MWD

Education

2006 West Virginia University, BS – Mechanical Engineering

Licenses and Certifications

- Professional Engineer - State of West Virginia, Maryland
- OSHA 10-hour Course: Construction Safety & Health



Tyler Trump

Tyler joined Miller Engineering in August 2022. A recent graduate of West Virginia University, he has been eager to learn the means and methods of MEP consulting. Tyler assists the MEP design team with design calculations and is rapidly learning design software such as Autodesk REVIT and Hourly Analysis Program by Carrier. He is also learning construction administrations along with building, electrical, and plumbing codes and standards. Tyler is currently preparing to take the Fundamentals of Engineering Exam.

Project Role: Junior Engineer

- *Design Calculations*
- *Drafting of MEP Systems*
- *Assist with Construction Administration*

Professional Project Highlights

- Cass Scenic Railroad State Park Campground
- Lost River Campground
- Mountain Line Transit Authority Office Renovation
- WV Building 25 Lighting Upgrades
- Ronald McDonald House Morgantown Addition & Renovations
- McKeever Lodge Boiler Replacement
- Chief Logan Lodge HVAC Renovations
- ChalleNGe Academy Maclin Hall Make Up Air Unit Replacement

Professional History

2022- Present Miller Engineering, Inc. MEP Designer

Education

2022 West Virginia University, BS - Mechanical Engineering

Licenses and Certifications

Our Team



MICHAEL HOWELL P.E., S.E.

President & CEO

UNIVERSITY OF PITTSBURGH

Bachelor's of Science, Engineering

WEST VIRGINIA UNIVERSITY

Master's of Arts Business Administration

Mike's passion for construction ignited during his youth in New Brighton, Pennsylvania. From helping his father build a deck to volunteering on construction mission trips, his fascination with structures blossomed. He pursued this passion academically, earning a B.S. in Civil and Environmental Engineering from the University of Pittsburgh and later obtaining a Master's in Business Administration from West Virginia University.

Throughout his career, Mike has honed his expertise with reputable firms such as American Bridge Company, McKinney and Company, Brockenbrough and Associates, and Allegheny Design Services. Actively involved in professional organizations, he has held leadership roles in the American Society of Civil Engineers and the Richmond Joint Engineers Council. Mike's commitment extends beyond his professional realm; he engages in community service, serving on boards for organizations like Pace Enterprises and the Spark Imagination and Science Center. Residing in Morgantown, West Virginia, Mike balances his career with coaching youth sports and cherishing time with his two children.

As a professional speaker, Mike lectures on construction topics such as 'Lessons from the Great Builders: What History Teaches Us About Modern Construction,' 'Failure: When Engineers Make Mistakes,' and 'When Engineers Manage.'

PROFESSIONAL LICENSURE:

WV, VA, PA, IN, LA, CA, TN, MD, KY, TN, NJ, OH

Michael Howell, P.E., S.E.

President/CEO



EDUCATION

University of Pittsburgh

BSCE, 2005

West Virginia University, Executive Program

MBA 2014

The Pennsylvania State University

PhD of Engineering *Expected 2027*

PROFESSIONAL REGISTRATION

P.E. Alabama

P.E. Arkansas

P.E./S.E. California

P.E. Kentucky

P.E. Maryland

P.E. Missouri

P.E. North Carolina

P.E. Ohio

P.E. Pennsylvania

P.E. Tennessee

P.E. Virginia

P.E. West Virginia

BACKGROUND SUMMARY

2019 – Present	President Arrow Structural Engineering
2012 – 2019	Director of Sports & Recreation Senior Structural Engineer Allegheny Design Services
2008 – 2012	Structural Engineer Brockenbrough and Associates
2007 – 2008	Civil Engineer McKinney and Company
2005 – 2007	Field Engineer American Bridge Company

PROFESSIONAL SUMMARY

A 2005 graduate of the University of Pittsburgh with a Bachelor of Science in Civil Engineering and a 2014 graduate of West Virginia University with a master's degree in business administration. Licensed in numerous states as both a Professional Engineer and Structural Engineer. Experience in residential, commercial, heavy-highway, and industrial projects. Structural Engineering experience includes the design, specification, and evaluation of all typical construction materials including timber framing, structural steel, cold-formed steel, cast-in-place concrete, precast concrete, masonry, and aluminum. Performed forensic investigations, structural assessments, and has been a consultant for attorneys, real estate agents, insurance companies, and property owners in several legal cases. Expertise in historical and existing building assessments and renovations, risk assessment, structural failure and analysis, foundation design, subsidence evaluation, seismic and wind force detailing, and constructability assessments. Employment history includes tenures as a contractor, field engineer, civil engineer and structural engineer. Has presented numerous times on engineering management practices, design methods, and project case studies.

PROFESSIONAL ASSOCIATIONS

Pace Enterprises Board of Directors
Habitat for Humanity Construction
Barlett House Board of Directors
Spark Innovation and Science Center Board President
American Society of Civil Engineers Branch President
Richmond Joint Engineers Council Chair
Structural Engineers Institute Business Practice
ASCE 7 Timber Design Subcommittee



CAROL STEVENS P.E., F.ASCE

Chief Engineer

WEST VIRGINIA UNIVERSITY

Bachelor's of Science in Civil Engineering

THE PENNSYLVANIA STATE UNIVERSITY

Master's of Engineering in Engineering Science

Carol Stevens has established herself as a leading structural engineer with a robust background in designing and rehabilitating critical infrastructure across West Virginia and beyond. A graduate of West Virginia University with a Bachelor of Science in Civil Engineering and a Master's degree from The Pennsylvania State University, Carol boasts a remarkable career spanning several decades.

Since 2001, she has served as the president of CAS Structural Engineering, where her expertise has been instrumental in the design and structural repair of various facilities. Her portfolio features significant projects at Twin Falls Resort State Park, Hawks Nest State Park and Pipestem State Park, and historic restorations for structures such as the First Presbyterian Church and the West Virginia State Capitol Complex, all reflecting her commitment to maintaining architectural integrity while enhancing functionality.

Throughout her career, Carol has not only demonstrated her engineering prowess but has also garnered recognition for her contributions to the profession. Her work on the Upshur County Courthouse and the Robinson Grand Performing Arts Center earned a WVAIA Honor Award for Design Excellence, while her innovative repairs to the Main Capitol Building Dome received a NYAIA Merit Award for Design Excellence. With active involvement in professional associations including the American Society of Civil Engineers and the National Society of Professional Engineers, Carol is dedicated to advancing the field of civil engineering. Her advisory roles with various academic institutions further signify her commitment to mentoring the next generation of engineers. She is also a member the West Virginia Board of Registration for Professional Engineers. With a blend of technical skill and leadership, Carol Stevens continues to make significant strides in the field of structural engineering.

PROFESSIONAL LICENSURE:

WV, VA, PA, MD, KY, OH

Carol A. Stevens, PE, F.ASCE

Chief Engineer



EDUCATION

West Virginia University, BSCE, 1984
Chi Epsilon National Civil Engineering Honorary
The Pennsylvania State University, ME Eng Sci, 1989

PROFESSIONAL REGISTRATION

P.E.	1990	Pennsylvania
P.E.	1991	West Virginia
P.E.	1994	Maryland
P.E.	2008	Ohio
P.E.	2010	Kentucky
P.E.	2013	Virginia

BACKGROUND SUMMARY

2025 – Present	Chief Engineer Arrow Structural Engineering
2001 – 2025	President, Structural Engineer CAS Structural Engineering, Inc.
1999 – 2001	Structural Engineer Clingenpeel/McBrayer & Assoc, Inc.
1996 – 1999	Transportation Department Manager Structural Engineer Chapman Technical Group, Inc.
1995 – 1996	Structural Engineer Alpha Associates, Inc.
1988 – 1995	Structural Department Manager Structural Engineer NuTec Design Associates, Inc.
1982 – 1988	Engineer AAI Corporation, Inc.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and
Environmental Engineering Advisory Committee
West Virginia University Institute of Technology
Department of Civil Engineering Advisory Committee
West Virginia Board of Registration for Professional
Engineers

EXPERIENCE

West Virginia, Odd Fellows Structural Repairs:

Structural evaluation report and construction documents for repairs to foundations and slabs for historic building located in downtown Charleston, WV.

West Virginia, Great Escape Theater:

Investigation and evaluations report followed by preparation of construction documents for foundation and concrete slab stabilization for existing move theater structure.

West Virginia, General Services Division Building 25:

Investigation of office building in Fairmont, WV with moisture infiltration and potential pyrites below basement slab. Basement floor was heaved in several locations and pyrites are common in areas where there are coal seams.

West Virginia, State Capitol Complex, Main Capitol Building Exterior Façade Restoration:

Investigation and preparation of details for repairs to limestone and terra cotta exterior façade. Building is on the National Register of Historic Places and was constructed in the 1920's and 1930's.

West Virginia, Roane County Courthouse:

Structural analysis of existing floor framing for addition of new high-density file storage system on upper floor level.

West Virginia, Lewis County Courthouse:

Structural investigation for work required to update structure and apply for grant monies through WVCFIA.

West Virginia, Tucker County Courthouse: Structural investigation for work required to update structure and apply for grant monies through WVCFIA.

West Virginia, Boone County Courthouse: Structural analysis of existing floor framing for addition of high-density file storage systems at different locations.

West Virginia, Gilmer County Courthouse: Structural analysis of existing floor framing for addition of high-density file storage system on upper floor level.

ARROW'S TEAM



ASHBEE SYKES, P.E. S.E.

Senior Engineer

Originally from Kitty Hawk, North Carolina, Ashbee brings a deep understanding of construction and structures to his work as a structural engineer. His background working with a family construction business provided hands-on experience ranging from framing houses to engineering multimillion-dollar projects, informing his approach to the intricacies and impact of design decisions. Inspired by his early days as a carpenter, Ashbee's journey led him to West Virginia. A graduate of West Virginia University with degrees in Mechanical and Aerospace Engineering, Ashbee is currently advancing his expertise in Structural Engineering at The Citadel. As a licensed Professional Engineer since 2019, he's committed to delivering excellence in every project.



ALEX YODER

Junior Engineer

From working in his father's wood shop to building storage sheds and remodeling houses, a passion for design and construction eventually led Alex to pursue a B.S. in civil engineering with a focus on structures from Bucknell University in Lewisburg, PA.



PHILLIP BAILEY, P.E.

Project Engineer

With a background in civil engineering and construction management, Phillip brings practical experience and academic knowledge to our projects. Phillip holds B.S. in Civil Engineering from West Virginia University, and has a background in construction management working for Yates Construction on the WVU Medicine Children's Hospital. Having worked on significant projects like WVU Medicine Children's Hospital, Phillip is well-prepared to lead complex building and design endeavors. As a licensed Engineering Intern in West Virginia, he's committed to delivering top-notch results. Phillip is a member of West Virginia University's Chi Epsilon Honorary Academic Fraternity.



ZACHARY HOWELL

CAD TECHNICIAN

As Arrow's sole CAD Technician, Zachary plays a vital role in the team. His expertise in engineering technology and design enables him to create both 2D and 3D designs, ensuring Arrow produces top-quality plans for superior structures. Beyond design, Zachary also assists with field work, measuring structures and conducting assessments. His attention to detail makes him an essential part of the team. Zachary received AutoDesk Certification from the Virtual Design Construction Institute, further validating his skills in CAD.

Kanti S. Patel

Geotechnical Engineer

EDUCATION B.E. Civil Engineering, Gujarat University, 1977
 M.S. Civil Engineering, West Virginia University, 1979

PROFESSIONAL
REGISTRATION Licensed Professional Engineer in the following states and commonwealths:

West Virginia
Ohio
Kentucky
Virginia

YEARS OF
EXPERIENCE 31

PROFESSIONAL
AFFILIATIONS National Society of Professional Engineers
 American Society Of Civil Engineers
 Association of Soils and Foundations Engineers
 Association of Engineering Geologists

PROFESSIONAL
EXPERIENCE Mr. Patel has over 31 years of experience in the field of geotechnical engineering. He has been responsible for a wide variety of soils and foundation projects throughout West Virginia, Ohio, Virginia and surrounding states. His experience includes initiation, investigation, analysis, and design of classic geotechnical projects including residential, commercial, industrial facilities, and landslide stabilization.

He has performed and supervised a large variety of engineering projects including: School buildings, hospitals, office buildings, chemical facilities, motel building, shopping mall, roadways, air facilities and runways, and solid waste landfills. He has coordinated the drilling and soil laboratory analysis programs for large projects such as the Mt. Olive Prison site, Riverside High School, Embassy Suites Hotels, Holiday Inn Hotels, Ladely Tower. He is thoroughly knowledgeable of the soil and subsurface conditions in West Virginia, Virginia, Pennsylvania, Ohio, Kentucky, and Maryland. He has performed over 100 landslides study and stabilization project in West Virginia, Virginia, Ohio and Kentucky.

Ryan D. Jackson

Project Manager

EDUCATION: B.S. Ag. in Environmental Protection, West Virginia University, May 1997
M.S. in Environmental Science, Marshall University, Current

PROFESSIONAL
CERTIFICATION: ASTM E 1527 - Phase I Assessment - 1998
ASTM E 1903 - Phase II Assessment - 2000
Wetlands Regulations in WV - 1999
Certified Compaction Technician - WV Department of Highways
Certified Environmental Inspector

YEARS OF
EXPERIENCE: 16

PROFESSIONAL
AFFILIATIONS: Environmental Assessment Association
Certified Environmental Inspector

PROFESSIONAL
EXPERIENCE: Mr. Jackson has over 12 years of training and experienced in the environmental field. His experience includes performance of numerous Phase I and II Environmental Site Assessments throughout West Virginia, Ohio and Kentucky, UST removal and tank pit closure to WVDEP specifications, site characterization, environmental sampling, and asbestos inspections.

Mr. Jackson has over 12 years of experience in the field of testing and inspection of construction materials. His experience includes inspection of shallow and deep foundation system (caissons and auger-cast piling), soil compaction testing, concrete testing, placement of stone base, boring inspector on various WVDOH projects, boring inspection on numerous geotechnical exploration project, and various laboratory testing.

His responsibilities have included all Phases of quality control on numerous large projects (schools, hospitals, commercial buildings, bridges and roadways).

Joe H. Francis

Project Manager

EDUCATION:

A.A.S. (Associate in Applied Science) Majoring in Building Construction-
1982

PROFESSIONAL CERTIFICATION:

Certified Welding Inspector - American Welding Society
Certified Compaction Technician - WV Department of Highways
Certified Concrete Technician - WV Department of Highways
Licensed Asbestos Inspector - WV License # A1000564
Licensed Lead Inspector - WV License # P1000013

YEARS OF EXPERIENCE:

26

PROFESSIONAL AFFILIATIONS

American Welding Society

PROFESSIONAL EXPERIENCE:

Mr. Francis has over 26 years of experience in the field of testing and inspection of construction materials. His experience includes inspection of shallow and deep foundation system (pipe piling, H-beam, timber piles, caissons, and auger-cast piling), soil compaction testing, concrete testing, concrete coring, structural steel inspection (bolt testing, weld inspection including ultrasonics, magnetic particle, dye penetrant, and visual inspection), boring inspector on various WVDOH projects, and various laboratory testing.

His responsibilities have included all phases of quality control on numerous large projects (airports, Army Corps of Engineers projects, prisons, schools, hospitals, commercial building, bridges, and roadways.

He has also worked for 15 years as manager of field laboratory services with over 19 employees.





Mineral County Commission

Facility Renovations and Additions

Description of Project:

The Mineral County Commission operates three primary buildings at the Courthouse Complex which are the Courthouse, the Judicial Annex, and Sheriff Building. Additional office space is provided via a second-story addition to the Sheriff Building with elevator access. The Courthouse gains a security checkpoint vestibule, egress stair, and elevator access to all three existing floors. The Judicial Annex improvements include the fitout of the existing second floor, an addition of a security checkpoint vestibule, egress stair, and elevator. The project includes fire alarm and sprinkler system installations for code compliance. The existing courthouse and annex structures are under the purview of the State Historic Preservation Office. Section 106 approvals were gained before construction began.

Construction Cost

\$8.5 Million

Project Size

40,000 SF Existing

10,500 SF New

Project Location

Keyser, WV

Construction Completion

Spring 2025

Contact

Luke McKinzie

County Coordinator

304-788-5921



WVANG Bridgeport FWAATS Restroom Renovations

Description of Project:

In Partnership with Miller Engineering, Montum Architecture helped prepare renovated floor plans for two locker / shower rooms and two restrooms. The goal was to renovate the spaces to meet ADA guidelines and improve efficiency and utilization of the areas. As well as, choose appropriate finishes that bring these spaces into the modern era. The flooring on the first floor was also replaced under this project. MEI designed renovations to the plumbing, lighting, fire alarm, fire protection, electrical, and VAC systems to accommodate the changes to the floor plans. The existing boiler was replaced with two, high efficient, modulating boilers. The owner was pleased with the chosen finishes and plans to use these as a standard going forward.

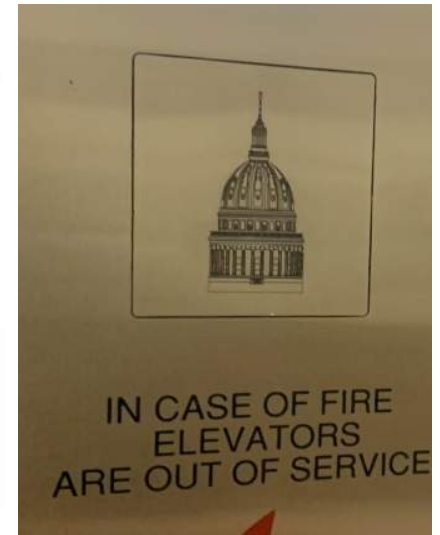
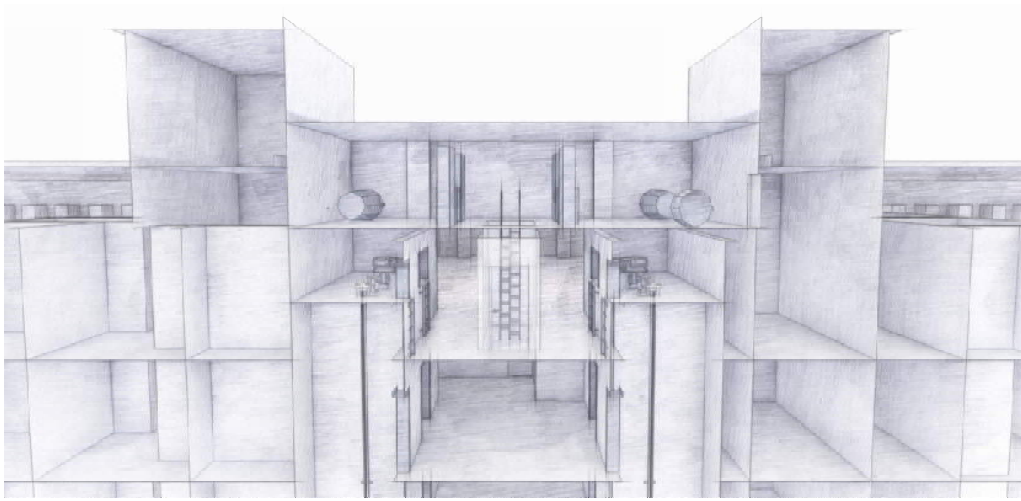
Construction Cost
\$1M

Project Size
1,400SF Renovated

Project Location
Bridgeport, WV

Construction Completion
May 2023

Contact
Jim Skaggs
WV ANG
(304) 561-6550



West Virginia General Services Division Various Elevator Modernizations

Description of Project:

Miller Engineering, Richard Kennedy & Associates, and Montum Architecture partnered for the project. They were tasked with evaluating 31 current elevator systems and developed modernizations for each in a three-phase project method. Modernizing the machine rooms and bringing the systems into compliance with as few or no deviations as possible is a key aspect in the scope of service. To ensure that State decision-makers better understand the findings, the team created a full report including discussions, projections, suggestions, an executive summary, and an elevator system "primer". Phase I included seven elevators at the West Virginia Capitol Building, two at WV Building 7, and two at WV Building 25. Work at the Capitol Campus was reviewed and approved by the Capitol Building Commission, including historic restoration and complimentary aesthetics in the WV Capitol Building. Phases 1 & 2 are currently in construction.

Construction Cost
\$20M

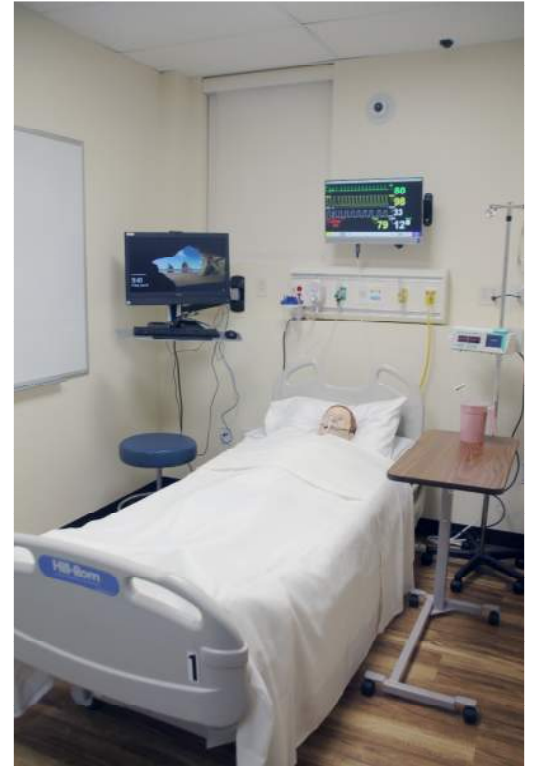
Project Size
N/A

Project Location
Charleston, WV

Construction Completion
In Construction

Contact
Pat O'Neill
Project Manager
WV General Services Division
112 California Ave
Charleston, WV
304-957-7133
Patrick.s.oneill@wv.gov

POTOMAC STATE COLLEGE BACHELORS IN SCIENCE OF NURSING RENOVATION



West Virginia University - Potomac State College received the former National Guard Armory in 2016. In addition to recreational facilities, the newly named J. Edward Kelley Center will house the 4-year WVU School of Nursing BSN program. The project converted former meeting spaces into demonstration nursing laboratories and lecture spaces. Office spaces were renovated. Electrical and HVAC systems were updated to meet the new needs.



COMPLETED: 2018

BUDGET: NOT DISCLOSED

SIZE: 3,900 SF RENOVATED

LOCATION: KEYSER, WV

CONTACT:
Mike Simpson
Director of Facilities
304-788-6886

Montum Architecture, LLC

37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com



Before



After

Aging and Family Services of Mineral County Keyser Senior Center

Description of Project:

Aging and Family Services of Mineral County contracted Montum Architecture to design a single-story addition and renovate the existing building, which was previously a Pizza Hut. The addition included a 39-foot expansion to the front of the building, housing the new kitchen, dining room, office, and accessible restrooms. The renovated space was converted into the pantry, overflow dining, and conference space. The building's exterior was updated with new windows and stone veneer to create a more inviting look.

Construction Cost

\$961,000

Project Size

2,000 SF Renovated

2,000 SF Addition

Project Location

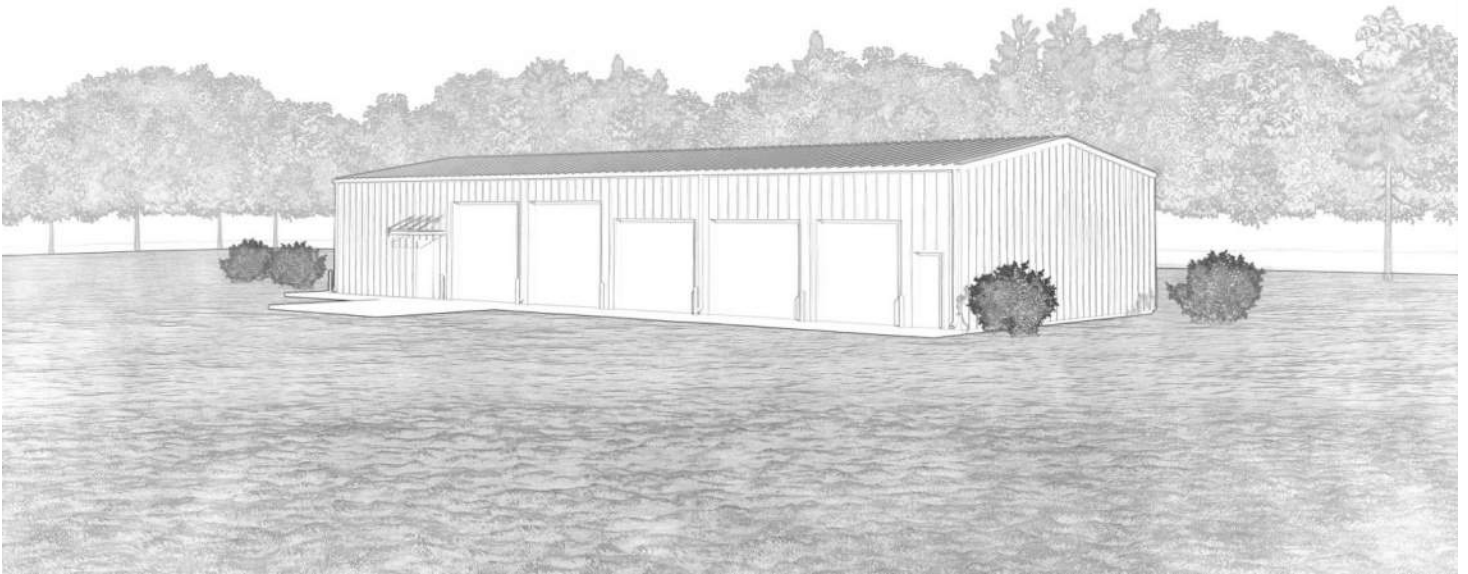
Keyser, WV

Construction Completion

August 2022

Contact

Scott Mallery
875 S Mineral St
Keyser, WV 26726
(304) 788-5467



Plum Orchard Wildlife Management Area Maintenance Building

Description of Project:

West Virginia Division of Natural Resources contracted Montum Architecture to design a versatile building to support the efficient operations and upkeep of the wildlife management areas. This facility will serve as a hub for storing equipment, providing office space, accommodating overnight stays, and offering basic amenities for staff. Of the 3,700 sf building is 2,100 SF is unheated bay space while 690 SF is heated bay space. Miller Engineering was sub-consulted on the project and designed the MEP drawings. Arrow Engineering was sub-consulted and designed the structural drawings, which included the metal building design, foundation, and concrete slab design to withstand the storage equipment loads.

Project Size
3,700 SF

Project Location
Scarbro, WV

Project Status
Ready For Bid

Contact
Edward L Raines
DNR Project Manager
304-558-2764
edward.l.raines@wv.gov

Project Experience: MEP

Cacapon Lodge Addition & Renovation

Services Provided:

- Electrical
- Plumbing
- HVAC
- Fire Alarm
- Fire Protection
- Pool

Estimated Budget: \$26M

Facility Area: 113,000 sq ft

Owner: WV Department of Natural Resources



Miller Engineering teamed with Paradigm Architecture to design the addition to the lodge at Cacapon State Park. The addition includes approximately 80 guest rooms, new kitchen and dining areas, a spa, indoor pool, and support spaces. The boiler system was replaced with new efficient modulating boilers and a chiller was added.

New chilled and hot water piping was installed to allow for simultaneous heating and cooling of the lodge. The electric service was upgraded with a new main electric room in the addition with distribution panels throughout. All lighting was replaced with efficient LED fixtures. The fire protection system was upgraded and extended to the new addition.

Project Contact:

*Bradley S. Leslie, PE, Assistant Chief
WVDNR State Parks Section
(304) 558-2764 ext. 51826*

Descriptions of Past Projects Completed – Code Evaluation

Tri-State Airport

Services Provided:

- Code Compliance Evaluation

Estimated Budget: N/A
Facility Area: 20,000 ft²



Project Contact:
Ed Tucker, AIA
Edward Tucker Architects
(304) 697-4990

Miller Engineering was contacted by the client's architect with a request to perform a National Electrical Code compliance evaluation of the Terminal Building at Huntington's Tri-State Airport. The request was due to a recent kitchen fire which the West Virginia State Fire Marshall's Office believed likely had its root cause in the kitchen electrical wiring. The terminal had been constructed in phases over many years and the concern was that no one had looked at the "entire picture" related to work by successive contractors over many years. MEI was retained to perform this evaluation, and conducted a thorough facility evaluation in short order on short notice. While the evaluation was principally focused on electrical systems, plumbing and HVAC systems deficiencies were also noted as a courtesy. MEI coordinated its findings with the owner and WV State Fire Marshall, including a recommended course of action to correct code issues and concerns.

Descriptions of Past Projects Completed – New Construction

WVANG Challenge Academy Maclin Hall MAU Replacement

Montgomery, WV

Services Provided:

- Mechanical
- Electrical
- General Trades

Construction Cost: \$496K

Owner: WVANG



MEI was tasked with replacing two failing make-up air (MAU) units at Maclin Hall. The units provide ventilation air for the facility. The MAU replacement involved installing new rooftop mounting curbs and replacement on rooftop mounted ductwork. New exhaust fans were installed on the roof and tied to the existing exhaust / relief air systems. New electrical feeds were installed to the new MAUs and fans. Montum Architecture assisted with the addition of rooftop railing to improve worker safety and the replacement of roof hatches and access ladders. The project was completed in January 2024 with no disruption to Challenge Academy operations.

Project Contact:

Jim Skaggs

WVANG

(304) 561-6550

Descriptions of Past Projects Completed – Fire Protection

Camp Dawson FMS4 Fire Protection

Kingwood, WV

Services Provided:

- Fire Protection

Budget: \$130K

Facility Area: 7,400 sq ft

Owner: WVARNG



FMS4 is a vehicle and equipment repair facility located on the Camp Dawson Army National Guard base located near Kingwood, WV. The 7,400 square foot facility includes 4,800 square feet of high bay service area, with the remaining area dedicated to office space, storage, and locker rooms. The facility contains bulk storage of oil and other equipment fluids, requiring fire protection. MEI was tasked with designing a fire protection system which would provide adequate coverage of FMS4 and meet applicable codes. Through research of NFPA 30 and NFPA 13, MEI was able to determine the size of the service and coverage requirements. MEI determined that by providing separation of the bulk storage from the rest of the facility, the fire protection service requirements could be reduced, eliminating a water service upgrade by the utility. Montum Architecture was brought on board to provide architectural support in regards to the separation of the bulk storage room and for the construction of the sprinkler room. The project was successfully completed in December 2019, one month ahead of schedule.

Project Contact:

Jim Skaggs

WV ARNG

(304) 561-6550

BRIDGEPORT FIRE DEPARTMENT

BRIDGEPORT, WV

PROJECT TYPE:

Municipal / Residential

PROJECT SUMMARY

This project showcased Arrow's ability to blend functionality, resilience, and visual impact through the structural design of a new fire department facility in Bridgeport, West Virginia. Designed to meet the demanding operational needs of first responders, the facility was engineered using a robust combination of masonry bearing walls, cast-in-place concrete slabs, and a meticulously designed steel framing system. Together, these components provided a durable structural solution capable of withstanding both the test of time and the rigors of emergency services operations.

A standout feature of this project was the incorporation of exposed structural steel roof trusses. These trusses were not only engineered to deliver the necessary roof support and load transfer but were also designed with visual expression in mind. Finished in a striking firehouse red, they created a bold architectural statement that complements the utilitarian materials throughout the building. By leaving these trusses exposed, the design celebrates the strength and precision of the structure itself—bringing engineering into the spotlight as a visible and integral design element.

From concept through construction, our team collaborated closely with architects and contractors to ensure seamless integration of aesthetics and performance. The result is a civic facility that is as structurally sound as it is visually iconic—serving both the community's emergency response needs and the city's architectural landscape.



SPENCER MIDDLE SCHOOL

SPENCER, WV

PROJECT TYPE:
Primary Education

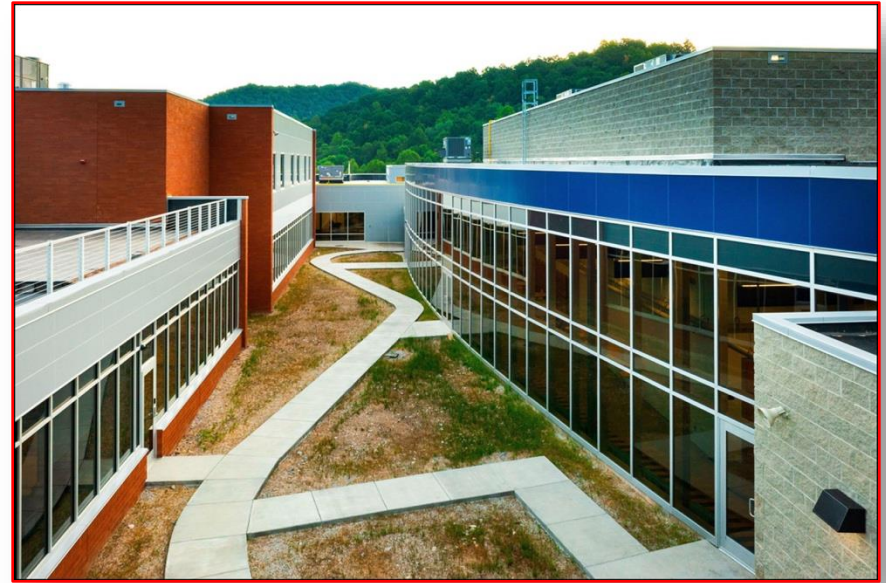
PROJECT SUMMARY

The expansion of Roane County High School in Spencer, West Virginia, presented a unique and complex set of structural challenges—driven largely by the site's uneven topography and existing fill conditions. Our firm was engaged to deliver a structural solution that not only integrated seamlessly with the existing campus but also ensured long-term stability, safety, and performance in a geotechnically sensitive environment.

The site's natural hillside contours, combined with years of accumulated fill material, required an innovative approach to the foundation system. After extensive geotechnical evaluation and subsurface testing, our team designed a deep foundation system anchored directly into bedrock. This solution provided the necessary support for the new addition, effectively mitigating the risk of settlement and ensuring consistent performance despite the variability in soil conditions.

The structural system of the building addition included durable masonry walls, chosen to match the architectural language of the existing school while also providing long-term resilience. Beyond their functional value, the masonry elements contributed to visual continuity across the campus, reinforcing the expansion's role as a natural extension of the original facility.

Collaboration with geotechnical engineers played a critical role throughout the project. Our teams worked in tandem to develop a cost-effective, structurally sound foundation strategy that addressed the site's sloped terrain and heterogeneous subsurface conditions. The result was a successful expansion that met the school district's growing needs while upholding the highest standards of structural integrity and design coordination.



SHARPE HOSPITAL HVAC RENOVATIONS

WESTON, WV

PROJECT TYPE: Medical

PROJECT SUMMARY

The comprehensive renovation of the HVAC systems at the William R. Sharpe Jr. Hospital required a series of intricate structural upgrades to accommodate modern mechanical infrastructure within an existing facility. Our firm was tasked with delivering structural design solutions that supported the integration of new equipment while maintaining the functionality and safety of a continuously operating healthcare environment.

This project included the structural design and analysis of various critical components, such as framing systems for extensive piping enclosures, new fuel tank foundations, generator pads, and reinforced concrete foundations for cooling towers. Each element was carefully engineered to accommodate the significant loads and operational demands associated with updated mechanical systems.

Through a combination of strategic design, site-specific analysis, and cross-discipline collaboration, our firm played a pivotal role in modernizing the facility's infrastructure. The result was a structurally sound foundation for a fully upgraded HVAC system—delivering improved performance, reliability, and energy efficiency for one of the region's key healthcare institutions.



WHEELING B&O PASSENGER TERMINAL

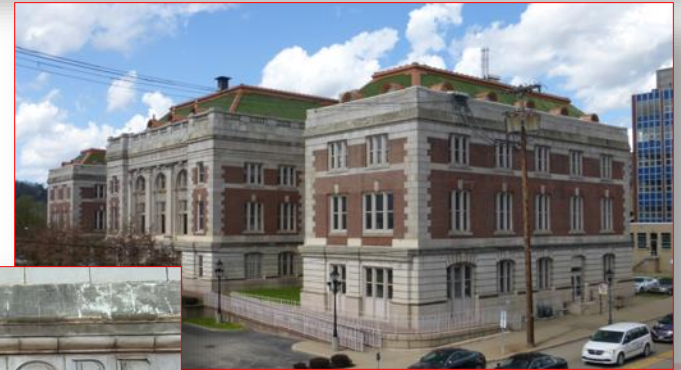
WHEELING, WV

PROJECT TYPE: Historic Preservation

PROJECT SUMMARY

This structure was designed in 1906 and constructed in 1908 for the Baltimore and Ohio Railroad, to serve as the new Passenger Terminal. It is on the National Register of Historic Places.

Our comprehensive assessment and restoration design of the building's historic façade was utilized to scope totality of potential work. Detailed documentation and close-up inspections were completed, forming the basis for a robust set of repair documents. The restoration scope included options for reinstating key architectural features, such as a replica of the original entrance canopy and the full reconstruction of the removed cornice, both of which are critical to preserving the building's historic character and street presence.



MAIN CAPITOL BUILDING

CHARLESTON, WV

PROJECT TYPE: Historic Preservation

PROJECT SUMMARY

This project focused on the comprehensive investigation and restoration of the Main Capitol Building's exterior envelope, including the parapet, balustrade, and dome—an iconic structure listed on the National Register of Historic Places. The work began with a detailed exploratory investigation to identify the source of movement and cracking in the limestone panels and to assess ongoing water infiltration affecting upper floor ceilings.

The team strategically removed limestone and brick at select locations to document structural conditions and evaluate the extent of deterioration. This investigation revealed significant displacement, cracking, and efflorescence—symptoms of long-term moisture intrusion. Once the sources of damage were confirmed, a detailed scope of repairs and budget estimates were developed, followed by the preparation of construction documents to guide restoration efforts.

The project extended to the Capitol dome and lantern level, where structural steel showed evidence of deterioration. Probing and testing were performed to assess the extent of damage, leading to the repair and reinforcement of structural steel members. Once structural work was complete, the dome was regilded and restored to its original Cass Gilbert-designed color scheme.

Hidden deterioration was also uncovered at the concrete railing level, revealed only after sheet metal was removed. Repairs were undertaken, and a specialized coating system was applied to protect the historic copper sheet metal, whose original lead coating had degraded over time. The final restoration showcased the dome's original architectural detailing and craftsmanship.

This project was honored with the AIA New York State Merit Award in 2006, recognizing the firm's commitment to technical excellence, historic preservation, and architectural integrity.



ROBINSON GRAND THEATRE

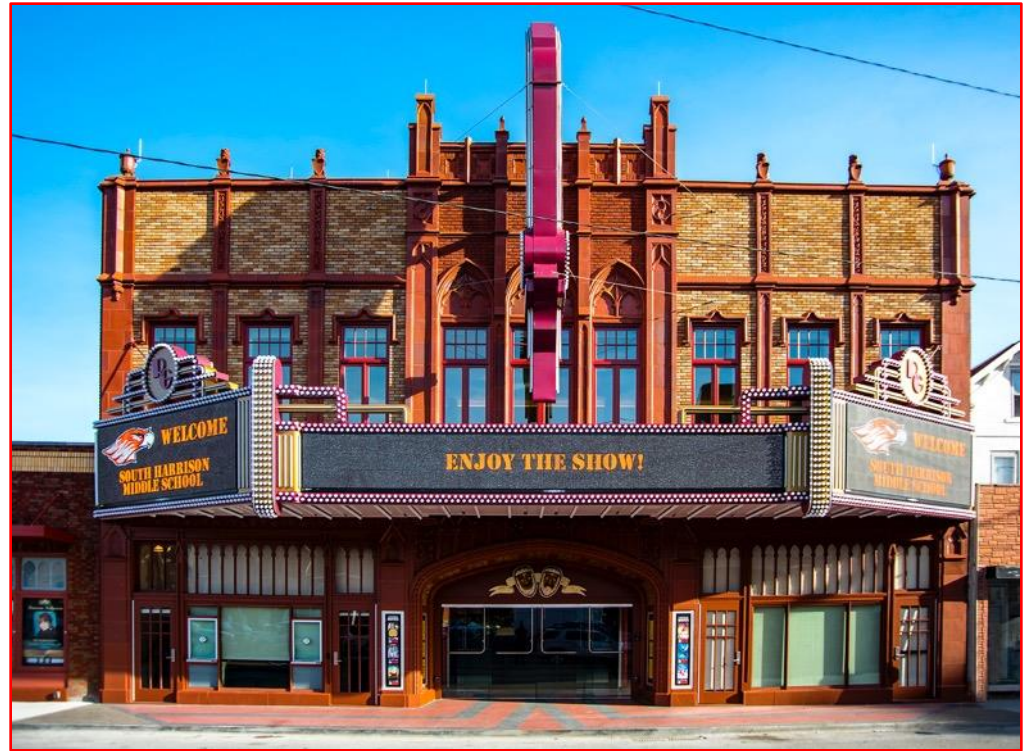
CLARKSBURG, WV

PROJECT TYPE: Historic Preservation

PROJECT SUMMARY

Originally constructed in the early 1900s and partially rebuilt in 1939 following a devastating fire, this historic performance venue underwent a significant restoration and expansion effort. The project preserved the surviving front portion of the building while the rear auditorium and stagehouse—lost in the fire—were reconstructed. Listed on the National Register of Historic Places, the structure required sensitive interventions to meet modern standards while retaining its historic character.

To bring the building up to code, new framing and structural reinforcement were installed beneath the second-floor ballroom. The design also introduced a two-story side addition, incorporating dressing rooms for performers on the first floor and flexible conference space on the second. Additional structural modifications were made to improve accessibility and provide compliant egress, ensuring the building remains a vibrant and functional cultural asset for future generations.





A GPRS Case Study

GPRS ENSURES SAFE EXCAVATION OF LEAKING UTILITY LINE



HIGHLIGHTS

THE BOTTOM LINE

GPRS provided accurate data on the utilities inside a buried pipe that had been used as a utility tunnel at a power substation to assist with the repair of an unknown leaking utility.

TASK

Locate all utilities in and around a buried concrete or asbestos pipe, and investigate a possible void near these lines, to assist with the safe repair of a leaking utility.

PROBLEM

- A petroleum and natural gas electrical power station had a suspected leaking utility line that they believed was also causing a void
- The leaking utility was encased in a concrete or asbestos pipe, which also contained several other utilities that had all been buried for over 40 years
- There was no way to access this utility pipe, which sits under a newer steel building on the property

SOLUTION

- GPRS deployed ground penetrating radar and electromagnetic locating to map the utilities in and around the buried pipe
- The Project Manager also identified the likely location of the leaking utility, which aligned with data the client acquired with a thermal imaging gun
- GPRS went beyond the original project scope and located expansion joints along the buried utility tunnel
- In addition to marking out located utilities with spray paint on the asphalt, the data was uploaded into SiteMap®

BENEFITS

- The client was able to avoid destructive and potentially dangerous exploratory potholing to find the leaking utility line
- The accurate, actionable data obtained by GPRS will expedite the repair process by ensuring they only need to dig once
- All stakeholders have 24/7, secure access to this field-verified data thanks to SiteMap®, which is available via computer, tablet, or smartphone



A GPRS Case Study

GPRS ENSURES SAFE SOIL BORING IN PENNSYLVANIA



HIGHLIGHTS

THE BOTTOM LINE

GPRS deployed multiple forms of subsurface investigation technology to mitigate the risk of utility strikes during a soil boring project.

LOCATION

Mercer, Pennsylvania

TASK

Locate and map utilities to clear the planned locations of 19 soil borings.

PROBLEM

- The client needed to take soil borings at 19 locations across 130 acres of wooded, hilly environment as part of their construction planning
- They needed to know there were no buried utilities near these locations – striking one could derail the project's schedule and budget, cause service interruptions to nearby residents, and endanger workers
- The dense undergrowth and uneven terrain made locating utilities in the area exceptionally challenging

SOLUTION

- GPRS deployed two Project Managers who used electromagnetic (EM) locating in conjunction with their GPR scanners to verify the location of utilities around the soil boring locations
- The Project Managers completed their work in five hours on site
- The accurate, field-verified data GPRS collected was uploaded into SiteMap® (patent pending), GPRS' infrastructure mapping software application

BENEFITS

- The client had the accurate infrastructure data they needed to conduct their soil borings safely and without risk of subsurface damage
- GPRS' ability to rapidly deploy two Project Managers to the project ensured the client could stay on time, on budget, and safe
- Located & mapped utility data available generally within minutes of job completion thanks to SiteMap



A GPRS Case Study

NATIONWIDE RETAILER PARTNERS WITH GPRS FOR EXISTING CONDITION SEWER ASSESSMENT



HIGHLIGHTS

THE BOTTOM LINE

GPRS was able to help the client visualize their entire sewer infrastructure on over 700 locations, nationwide. On this project in particular, our customer needed to find a non-destructive and unobtrusive way to get details on their sewer system. They needed this to address several issues they were having with water infiltration to their store that was causing electrical damage in their facilities basement.

INDUSTRY

Retail

SERVICE

Video Pipe Inspection, Utility Locating, Concrete Scanning, 3D Photogrammetry

LOCATION

Missouri

PROJECT APPLICATION

This nationwide retail customer needed to accurately assess the storm and sewer systems of over 700 of their store locations across the United States. A nationwide cctv sewer inspection provider was necessary for consistency and final reports. GPRS performed utility locating, video pipe inspection, 3D Photogrammetry to create a comprehensive map and 2D CAD drawing of the facilities sewer system. This aided in engineers properly being able to assess the property and manage their underground infrastructure.

TASK

Locate, assess, and map the existing conditions of the sewer and storm lines within the building and around the property of a national retail companies' property, in the state of Missouri.

PROBLEM

- The client reported signs of water infiltration, including within the basement level of their store
- Electrical components within the store were being damaged from the intrusion of water from an unknown source
- Client needed a non-intrusive way to get information on their entire sewer/storm system on site, for their engineers to assess next steps in remediation

SOLUTION

- GPRS located, mapped, and assessed the existing conditions of the property's internal and external sewer/storm lines utilizing multiple forms of technology, providing necessary information to the engineering team
- The client was also able to identify and easily view all external sewer/storm line details including the existing conditions of the pipes inspected, in a NASSCO-certified Report
- 99.8+% accurate field verified GPS-enabled CAD utility sitemaps in PDF, KMZ, and .SHP file formats were provided via SiteMap®, GPRS' cloud based infrastructure visualization software, so the client had a single source of truth for their project results.

BENEFITS

- Client was able to find a non-intrusive way to get details on possible solutions for the issues they were currently facing at this store.
- Easy and accurate reports saved them time and money, and the potential need to have plumbers come out to the store multiple times to address the same issues.
- GPRS provides complimentary digital and NASSCO-certified video reporting, including depths where available, and can export your sewer data into a wide variety of drawings, maps, and models that provide seamless communication and collaboration on any project.





Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder: 1732668

Doc Description: Camp Dawson Building 202 Renovation

Reason for Modification:

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2025-07-28	2025-08-11 13:30	CEOI 0603 ADJ2600000002	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: VS0000013207

Vendor Name : Montum Architecture, LLC

Address : 55

Street : ER Path

City : Keyser

State : West Virginia

Country : USA

Zip : 26726

Principal Contact : Thomas Pritts, AIA

Vendor Contact Phone: 304-276-7151

Extension:

FOR INFORMATION CONTACT THE BUYER

David H Pauline
304-558-0067
david.h.pauline@wv.gov

**Vendor
Signature X**

FEIN# 82-1385831

DATE August 11, 2025

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

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Thomas Pritts, Member

(Address) 55 ER Path, Keyser, WV 26726

(Phone Number) / (Fax Number) 304-276-7151

(email address) tom@montumarch.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Montum Architecture, LLC

(Company) 

(Signature of Authorized Representative)

Thomas Pritts, Member

(Printed Name and Title of Authorized Representative) (Date)

304-276-7151

(Phone Number) (Fax Number)

tom@montumarch.com

(Email Address)