



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

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 WV PURCHASING DIVISION

Proc Folder: 845807			Reason for Modification:
Doc Description: EOI- MCA South Facility Upgrades Design			
Proc Type: Central Purchase Order			
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BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: 206059
 Vendor Name: ZMM, Inc. (dba ZMM Architects and Engineers)
 Address :
 Street : 222 Lee Street, West
 City : Charleston
 State : WV Country: USA Zip: 25302
 Principal Contact : Adam R. Krason, Principal
 Vendor Contact Phone: 304-342-0159 Extension: 234

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

Vendor Signature X  FEIN# 55-0676608 DATE 3-10-2021

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

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: ZMM, Inc. (dba ZMM Architects and Engineers)

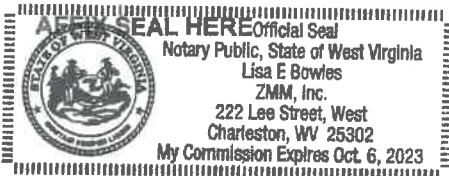
Authorized Signature: [Signature] Date: March 10, 2021

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 10th day of March, 2021.

My Commission expires 10-6, 2023



NOTARY PUBLIC [Signature]

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.

ARK ADAM KRASON, Principal
(Name, Title)
Adam R. Krason, AIA, LEED AP, Principal
(Printed Name and Title)
222 Lee Street, West, Charleston, WV 25302
(Address)
304-342-0159 304-345-8144
(Phone Number) / (Fax Number)
ark@zmm.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation 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 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 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.

ZMM, Inc. (dba ZMM Architects and Engineers)
(Company)

ARK ADAM R. KRASON, PRINCIPAL
(Authorized Signature) (Representative Name, Title)

Adam R. Krason, Principal
(Printed Name and Title of Authorized Representative)

3-10-2021
(Date)

304-342-0159 304-345-8144
(Phone Number) (Fax Number)



March 9, 2021

Mr. David Pauline, Senior Buyer
Department of Administration, Purchasing Division
2019 Washington Street, East - PO Box 50130
Charleston, West Virginia 25305-0130

Subject: MCA South Facility Upgrades Design Project (CEOI ADJ210000007)

Dear Mr. Pauline:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and our qualifications to provide professional architectural and engineering services for the MCA South Facility Upgrades Design project in Montgomery. ZMM Architects and Engineers recently assisted the West Virginia Army National Guard (WVARNG) with the first phase of improvements at the Mountaineer Challenge Academy - South (MCA - South), which involved the renovation of both Maclin Hall and the Tech Center at the former WVU Tech Campus in Montgomery to accommodate the expansion of the Mountaineer Challenge Academy. The Maclin Hall dormitory was renovated to include security and life-safety enhancements, while the Tech Center received more extensive renovations including a new roof and interior improvements, as well as a new HVAC system, ceilings, finishes, and LED lighting.

The first phase of improvements to Maclin Hall and the Tech Center was successfully implemented by ZMM, the WVARNG, the Challenge Academy, and MCS Construction. The project was completed in an extremely condensed timeframe (during a global pandemic) to allow for the first cohort of students/cadets to arrive in October of 2020. The quality of the design services provided is highlighted by the fact that there were only two (2) change orders that totaled less than 3.25% of the original contract – an extremely low number for a complex renovation project.

Established in 1959, ZMM is a West Virginia based, full-service A/E firm, and is noted for design excellence and client focus. ZMM's ability to provide comprehensive building design services has led to our firm becoming a trusted resource for complex renovation projects throughout the West Virginia. As a full-service design firm with a longstanding relationship serving the West Virginia Army National Guard (WVARNG), ZMM has the right combination of technical expertise and experience to help successfully deliver the project. Our portfolio includes:

- Experience completing the first phase of improvements to Maclin Hall and the Tech Center.
- Experience working with the WVARNG.
- Experience with complex renovation projects.
- Experience providing design services in Montgomery.

In addition to our previous work on MCA-South ZMM's experience providing design and construction phase services for the WVARNG includes the Joint Interagency Training and Education Center (JITEC) and ACP at Camp Dawson, the Jackson County AFRC, the Glen Jean AFRC, the Tackett Family Readiness Center, the Morgantown Readiness Center, and the Logan-Mingo Readiness Center. This experience also includes a variety of renovation projects for the WVARNG including the Construction and Facilities Management Office (CFMO), the Marshall County Readiness Center, and Camp Dawson Building 202, 245, 246, and 301 Renovation projects.

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Plaza One, Building E
Blacksburg, Virginia 24060
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www.zmm.com

Martinsburg
5550 Winchester Avenue
Berkeley Business Park, Suite 5
Martinsburg, West Virginia 25405
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In addition to our WWARNG renovation design experience, ZMM's has designed improvements to some of West Virginia's most prominent buildings including the Charleston Coliseum and Convention Center, the Culture Center, the Clay Center, and the State Capitol. Several of our renovation projects have been recognized with statewide and national design awards. *In fact, ZMM's commitment to design quality has been recognized by the American Institute of Architects West Virginia Chapter with twenty-four design awards since 2005 – an achievement that is unrivaled in West Virginia.*

Finally, as noted above, ZMM has extensive experience providing design and planning services at the former WVU Tech campus in Montgomery. This experience includes master planning services for BridgeValley, as well as providing design services to renovate the 77,000 SF Davis Hall into their main academic building in Montgomery. ZMM has also assisted West Virginia University with a project at the Engineering Classroom Building (ECB), and assisted KVC develop plans to improve an existing dormitory (Ratliff Hall). Most recently, ZMM completed an assessment of Orndorff Hall for the West Virginia Department of Agriculture.

Thank you for taking the time to review the attached expression of interest that includes information about our proposed approach for the MCA South Facility Upgrade Design Project, as well as ZMM's qualifications, and relevant project experience. Additionally, please visit our website at www.zmm.com to see the full range of renovation and education projects that we have designed. We appreciate your consideration for this important endeavor and look forward to continuing our work for the WWARNG and the Mountaineer Challenge Academy - South.

Respectfully submitted,
ZMM Architects and Engineers



Adam R. Krason, AIA, NCARB, LEED-AP
Principal



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Mountaineer Challenge Academy South – Facility Upgrades Design Project Approach, Management Plan, Quality Control Plan, Cost Control Plan

Background and Project Understanding

ZMM Architects and Engineers recently assisted the West Virginia Army National Guard (WVARG) with the first phase of improvements at the Mountaineer Challenge Academy – South (MCA – South), which involved the renovation of both Maclin Hall and the Tech Center at the old WVU Tech Campus in Montgomery to accommodate the expansion of the Mountaineer Challenge Academy. The Maclin Hall dormitory was renovated to include security enhancements to respond to the new user's needs. The Tech Center received more extensive renovations including a new roof. The lower level of the Tech Center was renovated to include two new classroom spaces, while the upper level will be completely renovated into new classroom and office space. This upper level now contains three computer classrooms and one standard classroom. A new HVAC system, ceilings, finishes, and LED lighting were also a part of this renovation.



The first phase of the project was successfully implemented by ZMM, the WVARG, the Challenge Academy, and MCS Construction. The project was completed in an extremely condensed timeframe to allow for the first cohort of students/cadets to arrive in October of 2020. The quality of the design services provided is highlighted by the fact that there were only three (2) change orders that totaled less than 3.25% of the original contract – an extremely low number for a complex renovation project.

The next phase of the project involves several distinct tasks. The first is the construction of a new maintenance building / work bay area to accommodate two (2) new boilers (domestic hot water and heating) for Maclin Hall. The existing boilers are located in the adjacent Conley Hall, which will be demolished as part of this project. In addition to the new boilers, Maclin Hall will also receive modifications to multiple toilet/shower rooms to address an ongoing water infiltration issue, as well as multiple security improvements. The final task will involve the design of additional toilet facilities on the lower level between the classroom space and the assembly area. Installation of the new plumbing will be simplified by the fact that this portion of the floor is elevated above a storage area that is accessible from the adjacent gathering space.



ZMM Architects and Engineers is uniquely qualified for this project because of our recent experience providing design services for the first phase of the MCA-South project as well as our experience

working with the West Virginia Army National Guard (at Camp Dawson) on the Mountaineer Challenge Academy Job Challenge Facility.

In addition to our previous Challenge Academy experience, ZMM has extensive experience providing design and planning services at the former WVU Tech campus in Montgomery. We provided Master Planning services to BridgeValley and helped to renovate the 77,000 SF Davis Hall into their main academic building in Montgomery. We have also assisted West Virginia with a project at the Engineering Classroom Building (ECB), and assisted KVC develop plans to improve an existing dormitory (Ratliff Hall). Finally, ZMM recently conducted an assessment of Orndorff Hall for the West Virginia Department of Agriculture.



The technical nature of the proposed renovation project(s) also demonstrates the need for a full-service design team with experience working with the West Virginia Army National Guard. ZMM has all of the technical professionals - including architects, engineers (civil, structural, mechanical, and electrical), and interior designers – needed to address every aspect of this project. If selected for this engagement, ZMM will staff the project with the architects and engineers that have previously worked successfully on a variety of educational projects as well as renovation projects for the WVARNG - including the first phase of the MCA-South project, the MCA-Jobs Challenge Facility, Camp Dawson Building 202, 301, 245 and 246 Improvements, the Marshall County Readiness Center, and the CFMO Expansion.

Mountaineer Challenge Academy South: Renovation Approach

Renovation projects require a unique approach, and ZMM has provided design services on renovation projects throughout West Virginia. The first phase in a successful renovation project involves conducting a thorough examination of the existing facilities. In this case, these services have already been completed by ZMM as part of the first phase of improvements. ZMM recommends completing additional assessment and planning efforts to help confirm the scope and budget for the improvements. Based upon our existing knowledge of the facilities ZMM would recommend investigating whether the new boilers for Maclin Hall can be located within the existing building. This would save the expense of constructing a new structure for this purpose.



Once the first phase is completed, ZMM will develop plans, specifications, and bidding documents for the proposed improvements. Drawings, specifications, and estimates will be submitted for review at 35% (as noted above), and again at 65%, 95%, and 100%. Our recent experience working with the WVARNG will ensure that all documents meet your requirements and standards – saving the WVARNG additional effort and expediting the design phase of the project. Once the documents have been approved, ZMM will assist with the bidding and construction phases of the project, including participation in a pre-bid meeting, developing any required addenda, responding to RFI's, reviewing submittals, and conducting and preparing minutes of construction progress meetings. Our efforts will continue through substantial and final completion inspections and include an eleven-month warranty walk through. *Our goal throughout this process will be to act as part of the WVARNG team, with the objective of ensuring the seamless delivery of your project.*

Mountaineer Challenge Academy South: Project Management Plan

ZMM Architects and Engineers proposes to provide services on the project with a team of design professionals that have worked together on a variety of educational facilities and WVARNG facilities throughout the state, including several projects in Montgomery. The team will be led by Adam Krason (Principal) and Nathan Spencer (Project Manager and Architect). Mr. Krason and Mr. Spencer have led ZMM's effort on ZMM's recent work for the WVARNG, including the MCA- South Renovations, MCA – Jobs Challenge Facility, Kenova Secure Area Renovation, the Camp Dawson Building 202, 301, 245, and 246 Renovation projects, the JITEC, the Camp Dawson ACP, the Marshall County Readiness Center, the Jackson County AFRC, the Morgantown Readiness Center, and the CFMO Expansion.



Other key team members will include:

Bob Doeffinger PE
James Lowry, PE
Steve Cook, PE
Ian Haddox
Mike White, PE
Mike Flowers
Mark Epling, AIA
Keith Gonzales
Amy Rhodes

Engineering Principal/Mechanical Engineer
Mechanical Engineer
Electrical Engineer
Electrical Designer
Structural Engineer
Plumbing Designer
Specifications Writer
Construction Administrator
Construction Administrative Assistant

ZMM's team has successfully collaborated on multiple projects for the WVARNG, and each team member is familiar with the standards, requirements, and processes that are utilized by the Guard.

ZMM Quality Control Plan

Quality control during the design phase begins with the selection of team members with experience working on projects that are similar to the current effort. In this case the ZMM team has recently helped to successfully implement the first phase of the MCA-South improvements. ZMM Architects and Engineers staff possesses the WVARNG renovation design experience to ensure the success of the project. Quality control during the design phase will occur through regular, documented, project meetings between the design team and the Guard. In addition to the regular design phase meetings more formal QA/QC will occur at the end of each design phase. A more detailed description of the design phase quality control plan is noted below:

1. **Selecting the Project Team**

ZMM's diverse staff ensures that each project team is made up of highly qualified members, each dedicated to the project's success. Project team members are selected based upon relevant experience, and ability to help achieve the client's vision.

2. **Identifying Project Requirements**

Project team members are fully integrated in each phase of the design process, ensuring a quality project from the commencement. The project requirements are included in a 'Basis of Design' that each member of the project team can access. The 'Basis of Design' helps guide important project decisions.

3. **Identifying Client Expectations**

Knowing and understanding our clients' expectations is our goal. This knowledge gives ZMM a baseline for exceeding expectations. We will commence the design effort with a planning session to help identify your vision for the project.

4. **Ongoing Project Reviews**

As part of the ongoing project reviews, we conduct quality assurance evaluations during each stage of the project:

Schematic Design Phase (35%)

Design Development Phase (65%)

Construction Documents Phase (95%)

Construction Administration Phase

ZMM has developed a series of QA/QC review documents that are completed during each phase, and include a programmatic review, technical review, and review of the project schedule and budget.

5. **Post Project Review**

At the completion of every project, ZMM staff members participate in a learning session to gain insight useful for future projects.

6. **Staff Training, Assessment and Enhancement**

Ongoing staff development and training is very important to ZMM and providing increased opportunities for learning and advancement leads to improved employee performance and more successful projects for our clients.

ZMM Cost Control Plan

As part of our effort to ensure our ability to meet the WVARNG's budget, ZMM will rely on both historic bidding data as well as independent estimates to verify the project budget. For this project ZMM would utilize Win Strock to provide the independent estimate. ZMM and Mr. Strock have successfully collaborated on multiple projects, including:

- Camp Dawson Building 202, 245, 246, and 301 Improvements
- Marshall County Readiness Center
- Logan-Mingo Readiness Center
- Parkersburg Readiness Center
- Williamstown Elementary School
- Building 5, 6, & 7 Improvements
- Beech Fork Lodge
- West Virginia State Police Information Services Center
- Edgewood Elementary School
- West Virginia State Lottery Headquarters Renovation
- Brooks Manor Addition and Renovation
- WWRTP Building 740 Improvements



ZMM has a history of working to successfully projects under challenging budget and schedule constraints for the WVARNG. We commit to working with you to meet the budget and schedule for the Mountaineer Challenge Academy South Facility Upgrades Design project. ZMM understands the importance of the Mountaineer Challenge Academy program and will provide every resource necessary to support the program and ensure the continued success of the program in Montgomery.

ZMM History & Services



LOCATION:
222 Lee Street, West
Charleston, WV

CONTACT:
Phone 304.342.0159
Fax 304.345.8144
www.zmm.com



HISTORY

ZMM was founded in 1959 in Charleston, West Virginia by Ray Zando, Ken Martin, and Monty Milstead. Since the inception of the firm, ZMM has been dedicated to providing an integrated approach to building design for our clients. ZMM delivers this integrated approach by providing all building related design services, including architecture, engineering (civil, structural, mechanical, and electrical), interior design, and construction administration with our in-house team. Our integrated design approach makes ZMM unique among architecture/engineering firms, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.



Maintaining a diverse practice for over 60 years has provided ZMM with extensive experience in a variety of building types, including educational facilities, governmental facilities (military, justice, correctional), healthcare facilities, recreation facilities, commercial office space, light industrial facilities, and multi-unit residential buildings.

The original partners transferred ownership of the firm to Robert Doeffinger, PE and Steve Branner in 1986. Mr. Doeffinger and Mr. Branner helped guide and expand the firm to its present size of 35 people. Over the past 20 years David Ferguson, AIA, and Adam Krason, AIA, LEED-AP joined in ownership of the firm. In 2020, Randy Jones also joined in ownership of the firm when ZMM acquired Blacksburg-based OWPR Architects & Engineers to create a regional design firm that employs more than 50 highly-skilled professionals.

As ZMM looks to the future, we remain committed to the ideal of providing high-quality, client-focused design solutions that meet budget and schedule requirements. We listen, we respond promptly with innovative and efficient solutions, and we deliver quality projects and develop lasting relationships. You see us in **YOUR** community every day.



ZMM has been dedicated to the integrated approach to building design which is unique to architectural firms of our size. Our past successful experience demonstrates that providing multi-disciplined services within one organization results in a fully coordinated project. ZMM has the qualified professionals available to provide services throughout the duration of a project from the initial planning phases through post-occupancy evaluations and beyond.

Advantages of an integrated Design Approach:

- The Owner has a Single Point of Design Responsibility
- Improved Design Schedule
- Improved Coordination of Documents
- Improved Construction Phase Services
- Well Coordinated Documents Lead to Better Bids for the Owner

Additionally, ZMM is constantly working to improve the services we offer by addressing emerging and evolving trends that impact the design and construction market. ZMM has seven LEED accredited Professionals on staff to address the needs of our clients who are interested in designing buildings that meet the US Green Building Council's standards. This continues ZMM's active implementation of sustainable design principles on our projects.

SERVICES

Pre-Design

- Educational Facility Planning
- Programming
- Space Planning
- Feasibility Studies
- Existing Building Evaluation
- Site Evaluation and Analysis
- Master Planning
- Construction Cost Estimating

Post Design

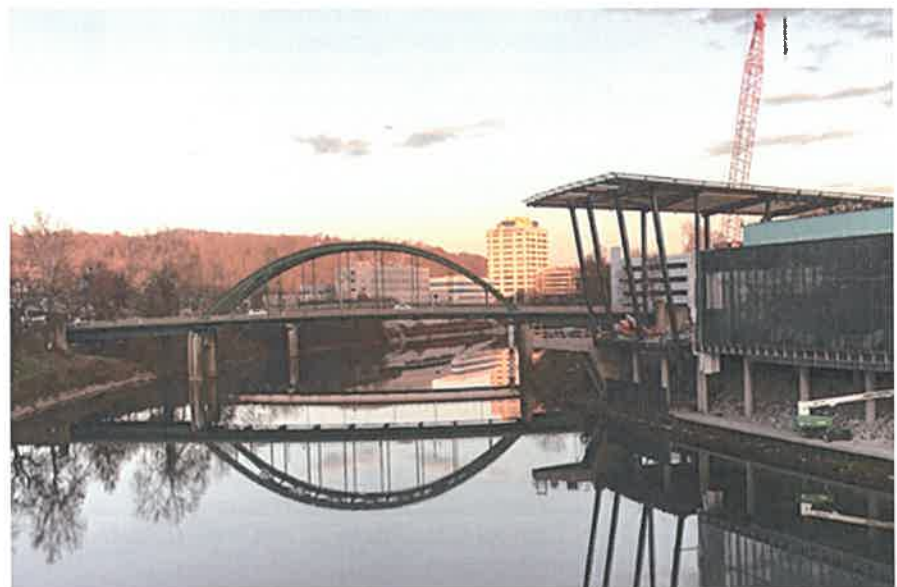
- Construction Administration
- Value Engineering
- Life Cycle Cost Analysis
- Post-Occupancy Evaluation

Design

- Architectural Design
- Sustainable Design
- Interior Design
- Lighting Design
- Landscape Architecture

Engineering

- Civil
- Mechanical
- Electrical
- Structural
- Net Zero Buildings
- Energy Consumption Analysis



Award Winning Design



2020

AIA West Virginia Chapter: Merit Award
Achievement in Architecture for New Construction
Mountain Valley Elementary School
Bluefield, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Ridgeview Elementary School
Crab Orchard, West Virginia

2019

AIA West Virginia Chapter: Honor Award
AIA West Virginia Chapter: Citation Award
AIA West Virginia Chapter: People's Choice Award
Charleston Coliseum & Convention Center
Charleston, West Virginia

2018

AIA West Virginia Chapter: Citation Award
Unbuilt Project
Charleston EDGE
Charleston, West Virginia

2017

AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Explorer Academy
Huntington, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Sustainability
Logan - Mingo Readiness Center
Holden, West Virginia

2016

AIA West Virginia Chapter: Merit Award
Achievement in Architecture in Interior Design
Christ Church United Methodist
Charleston, West Virginia



Award Winning Design



AIA West Virginia Chapter: Merit Award

Achievement in Architecture

Gauley River Elementary School
Craigsville, West Virginia



2015

AIA West Virginia Chapter: Honor Award

Achievement in Architecture in Sustainable Design

Edgewood Elementary School
Charleston, West Virginia



AIA West Virginia Chapter: Merit Award

Achievement in Architecture

Kenna PK-5 School
Kenna, West Virginia



2014

AIA West Virginia Chapter: Merit Award

Achievement in Architecture in Sustainable Design

Huntington East Middle School
Huntington, West Virginia



AIA West Virginia Chapter: Merit Award

Achievement in Architecture

Southern West Virginia Community & Technical College
Williamson, West Virginia



AIA West Virginia Chapter: Merit Award

Achievement in Architecture in Interiors/Graphics

Girl Scouts of Black Diamond Council
Charleston, West Virginia

2012

AIA West Virginia Chapter: Honor Award

Excellence in Architecture

West Virginia Housing Development Fund Building
Charleston, West Virginia

2011

AIA West Virginia Chapter: Honor Award

Excellence in Architecture in Historical Preservation

Southside Elementary/Huntington Middle School
Huntington, West Virginia

Adam R. Krason, AIA, LEED AP, ALEP



Role

Principal

Professional Registrations

Registered Architect (WV, OH, KY, VA, MD, NJ)

LEED Accredited Professional

Accredited Learning Environment Professional

NCARB (55,984)

Construction Specifications Institute (CSI)

Construction Documents Technician (CDT)

Mr. Krason has served in the capacity of Architect and Project Manager for a variety of projects at ZMM. This experience includes Military, Educational (K-12 and Higher Education), Office, Justice (Courthouses, Correctional, Justice Centers), and Multi-Unit Residential projects. Mr. Krason's responsibilities include programming, design, documentation, coordination of the architectural and engineering team, as well as construction administration. Mr. Krason began his career in 1998, working on a variety of educational, commercial office, and correctional projects throughout Ohio, West Virginia, and North Carolina.

Mr. Krason has been an advocate of sustainable design in West Virginia, participating in a variety of sustainable design seminars throughout the State, and serving on the West Virginia School Building Authority Green Schools Sub-Committee. Recently, Mr. Krason helped coordinate the "Making the Business Case for Sustainability" conference at the University of Charleston that included speakers from Armstrong Industries, American Electric Power, CB Richard Ellis, and Interface Raise. Mr. Krason also assisted Habitat for Humanity Kanawha and Putnam County develop a commercial recycling program to fill a void in the sustainable design infrastructure in West Virginia. Mr. Krason has noted that, "I became a LEED Accredited Professional because I believe that good design has value, and the ability to impact our daily lives. Sustainable design showcases the value of design through demonstrated improvements in the performance of the students and employees who occupy our buildings." In addition to his design and project management responsibilities, Mr. Krason serves on the Board of Directors and is responsible for business development at ZMM.

Project Experience

Charleston Coliseum & Convention Center, Charleston, WV

Mr. Krason served as principal-in-charge of the expansion and renovation to the Charleston Civic Center. The \$75M, 283,000 SF design-build project is being completed as a collaboration

Education

Bachelor of Architecture, The Catholic University of America, 1998

Bachelor of Civil Engineering, The Catholic University of America, 1997

Employment History

2007 - Present, Principal, ZMM

2007 - Present, Board of Directors, ZMM

2003 - Present, Architect, Project

Manager, ZMM

1998 - 2003, Architect, Project Manager, Charleston Area Architectural Firm

Civic Affiliations

- WV American Institute of Architects, President
- Habitat for Humanity Kanawha & Putnam County, Board of Directors 2011 - 2014
- WV Qualification Based Selections Council, President, 2012/2013
- Leadership WV 2010 - 2012
- Charleston Rotary
- West Side Main Street, Board of Directors 2008 - 2014
- City of Charleston Land Trust 2008 - 2014

with tvsdesign and BBL Carlton. Mr. Krason was responsible for the overall management of the design team, coordination with the client, and also has input critical project management decisions. The design commenced in the spring of 2015, and construction was complete in 2018.

Joint Interagency Training & Education Center (WVARNG), Kingwood, WV Mr. Krason was responsible for the preliminary programming, and participated in the schematic design of the 180,000 SF addition to the Regional Training Institute at Camp Dawson. Mr. Krason was also responsible for managing the production effort for the billeting (hotel) expansion, which increased the total billeting capacity at the JITEC to 600 rooms. This project received LEED Gold Certification.

Morgantown Readiness Center (WVARNG), Morgantown, WV

Mr. Krason was the project architect on the new Morgantown Readiness Center. This facility is a unique due to its location on an abandoned airport runway at the Morgantown Municipal Airport. The 54,000 SF Readiness Center occupies a 35-acre tract at the airport. This center supports traditional military functions including the 1-201st Field Artillery. A significant portion of the Morgantown Readiness Center supports the 249th Army Band. The Readiness Center contains a performance hall, pre-function spaces, as well as a variety of training and rehearsal areas.

Construction and Facilities Management Office Expansion (WVARNG), Charleston, WV

Mr. Krason was responsible for the programming, architectural design, and project management of the office expansion. The project included the renovation and addition to an existing pre-engineered metal building. The design, which was honored with a 2009 AIA Merit Award, focused the client's resources on a new entry and corridor that separated the existing office space from the addition.

State Office Building #5, 10th Floor Renovation (Office of Technology), Charleston, WV

Mr. Krason led an architectural and engineering team that completed a detailed assessment of State Office Buildings 5, 6, & 7. Once the assessment was complete, ZMM had the opportunity to implement the proposed improvements on the 10th Floor of State Office Building #5 for the Office of Technology. The renovations, aiming for LEED-CI Certification, re-oriented the layout by drawing all private offices into the building core, providing access to daylight and views for all employees. The design also utilized acoustical ceiling clouds and bulkheads to maximize the acoustical performance, while also increasing the volume of the space.

Bridgemont Community and Technical College - Davis Hall Renovation and Master Plan, Montgomery, WV

Mr. Krason led an architectural and engineering investigation into the condition of Davis Hall to help Bridgemont Community and Technical College to develop a scope for the current renovation project, as well as a plan to undertake deferred maintenance at the facility. The project scope included remediating several life safety deficiencies, as well as improvements to the building envelope.

Participated on the team that won the following awards and acknowledgements:

2020 WV AIA Merit Award Mountain Valley Elementary School, Green Valley, WV

2019 WV AIA Honor Award Charleston Coliseum & Convention Center, Charleston, WV

2018 WV AIA Citation Award Charleston EDGE, Charleston, WV

2017 WV AIA Merit Award Logan-Mingo Readiness Center, Holden, WV

2016 WV AIA Merit Award Christ Church United Methodist, Charleston, WV

2015 WV AIA Merit Award Edgewood Elementary School, Charleston, WV

2014 WV AIA Merit Award Girl Scouts of Black Diamond Council, Charleston, WV

2011 WV AIA Honor Award Joint Interagency Training and Education Center (JITEC), Kingwood, WV

2011 AIA Honor Award State Office Building #5, 10th Floor Renovation, Charleston, WV

2009 AIA Merit Award WVARNG Construction and Facilities Management Office, Charleston, WV

Nathan Spencer, AIA



Role

Project Architect/Project Manager

Professional Registrations

Registered Architect (WV)

Mr. Spencer is responsible for coordinating the efforts of the design team in preparing thorough and clear design documents. He has experience in all phases of design working on a wide range of building types including; military, educational, office, justice, and residential.

He has worked on several projects that are currently pursuing LEED certification. In addition to production, Mr. Spencer, is also experienced in 3d modeling. He has worked on several preliminary concept study models as well as high quality renderings and 3d models later in the design process. Mr. Spencer is also experienced in high quality physical models.

Mr. Spencer began his career in architecture with ZMM in 2003, working as a summer intern. After graduating in 2003, he began working at ZMM full time.

Project Experience

Logan-Mingo Readiness Center, Holden, WV

Mr. Spencer was the architect on the new Logan-Mingo Readiness Center. The exterior aesthetic of the facility was driven by the location within an industrial park on a reclaimed surface mined site. The building layout was developed by working closely with the end-users to determine the appropriate configuration of building spaces to maximize the efficiency of the operations, and to respond to the unique missions of the 150th Armored Reconnaissance Squadron and the 156th Military Police (LNO) Detachment. Clear separation of "public" and "private" areas within the facility, unique office configurations related to training requirements, and the addition of State Funded additional spaces.

Jackson County AFRC, Millwood, WV

Mr. Spencer participated in the schematic design of the 76,000 SF Reserve Center in Jackson County, West Virginia. Mr. Spencer was also responsible for coordinating the production effort for the project. Mr. Spencer also produced several 3D models throughout the design process. The project is aiming for LEED Silver Certification.

Education

Bachelor of Architecture, University of Tennessee, 2007

Employment History

2009 - Present, Architect, ZMM
2007 - 2009, Intern Architect, ZMM
2003 - 2007, Summer Intern, ZMM

Civic Affiliations

- American Institute of Architects, Member

Joint Interagency Education and Training Center (WVARNG), Kingwood, WV

Mr. Spencer participated in the schematic design of the 180,000 SF addition to the Regional Training Institute at Camp Dawson. Mr. Spencer was also responsible for coordinating the production effort for the billeting (hotel) expansion, which increased the total billeting capacity at the JITEC to 600 rooms. This project received LEED Gold Certification.

Morgantown Readiness Center, Morgantown, WV

Mr. Spencer was a member of the production team for the 58,000 SF project, which housed the Army Band and associated performance spaces. Mr. Spencer also produced several 3d models throughout the design process. He also participated on all production work through all phases. The project is aiming for LEED Silver Certification.

Charleston Coliseum & Convention Center, Charleston, WV

Mr. Spencer served as project architect on the expansion and renovation to the Charleston Civic Center. The \$75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction was completed in 2018.

Tucker County Courthouse Annex, Parsons, WV

Mr. Spencer was the project architect for the Courthouse Annex renovation project. The Annex is a 4-story 21,000 Square Foot building that is adjacent to the Tucker County Courthouse. The annex will house spaces for the Circuit Court, Circuit Clerk, Family Court, Magistrate Court, Prosecuting Attorney, County Commission, County Clerk, Community Corrections, and Probation Office.

Judge Black Courthouse Annex, Parkersburg, WV

Mr. Spencer assisted with the design and programming of the adaptive reuse of a former commercial space and movie theaters into a modern courthouse annex. The Judge Black Annex included two independent circulation paths – a secure entry and lobby for access to the Family Court and Prosecuting Attorney, and public access to the Assessor and Sheriff's Tax Department. The facility also houses several large public meeting rooms.

Cabell County Bus Transportation Complex, Huntington, WV Mr. Spencer was the project Architect on the Cabell County Transportation Complex is located on the site of the old Cox Landing Junior High School. Challenges on the project involved retrofitting the old school and site to accommodate the new use. The rear portion of the school was demolished to make room for the new maintenance portion of the building. The remaining front section of the school was renovated to include office space, storage areas, and a new staff development room. The new maintenance area includes a high-bay metal building with 14 back to back work-bays, three of which have hydraulic bus lifts. A hand wash bay and a state of the art automatic wash bay were also included in the project. Extensive sitework was also involved in the retrofit project including a fueling station, bus parking, a sediment pond, and an extensive rework of the existing site utilities.

Highland Hospital, Charleston, WV

Mr. Spencer was the project architect on Highland Psychiatric Hospital. Mr. Spencer was responsible for coordinating the production effort for the 60,000+ SF mental health facility. Mr. Spencer also produced several 3-D models throughout the design process. This project consisted of 87,300 SF, \$26M addition to Highland Hospital in Charleston. The addition included: administrative offices, training spaces, 165 patient beds, nurses stations, an out-patient treatment department, pharmacy, laundry, and building service spaces. A pedestrian bridge will connect the new facility to the existing hospital.

Edgewood Elementary School, Charleston, WV Mr. Spencer participated on the design team that developed the new Kanawha County Elementary School on Charleston's West Side. The school was designed as a 21st Century Learning Environment, with a focus on integrating technology into the delivery of the curriculum. Instructional areas will be located off of an open 'exploratorium' that is being designed to function like a children's museum, providing a variety of learning opportunities, and flexible educational spaces. The school integrates sustainable design principles to serve as a teaching tool for the students. A dental and health clinic is also on site for all enrolled students in the Kanawha County School District.

Robert Doeffinger, PE



Role

Engineering Principal

Professional Registrations

Professional Engineer (WV, VA, PA, OH, TN, KY, NY, NH, ME, NC, SC, FL, NJ, GA)

As ZMM's Principal Engineer, Mr. Doeffinger is in charge of the engineering disciplines, it is his responsibility to ensure that the mechanical and electrical engineering components of ZMM's design are coordinated and integrated into the final product.

After graduate school in Architectural Engineering, Mr. Doeffinger joined ZMM. He has over 35 years design experience in mechanical and electrical systems for buildings. He has a broad range of engineering experience in education, industrial and manufacturing facilities, large retail, correctional and jails, office buildings, and military facilities.

Mr. Doeffinger is responsible for new design and retrofit of chilled water systems for all building types including large regional shopping malls. He is involved daily with the firm's selection of appropriate systems for all building types and performs life-cycle cost analysis and energy studies.

Mr. Doeffinger is a member of the American Society of Heating, Ventilation and Air-Conditioning Engineers. He is the current national Chairman of the Technical Committee on Heating and Air-Conditioning Load Calculation. He is involved in writing the National Standard on the Method of Calculation, which will shape the nature of the future building energy use for the nation.

Project Experience

Charleston Coliseum & Convention Center, Charleston, WV

Mr. Doeffinger was the mechanical project engineer on the expansion and renovation to the Charleston Civic Center project. The \$75M, 283,000 SF design-build project was a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction was completed in October 2018. The mechanical design is expected to reduce the energy requirements defined by ASHRAE 90.1-2013 by an estimated 25% and extensive water savings will be shown. The project includes a new chilled and hot water central plant with extensive replacement and upgrades to the facilities existing mechanical systems. Multiple phases of construction will allow the Civic Center to remain operational throughout the construction progress.

Education

Master of Science Architectural Engineering, Pennsylvania State University, 1976

Bachelor of Science Mechanical Engineering, West Virginia University, 1973

Employment History

2005 - Present, President, ZMM
1976 - 2005, Vice President and Engineering Principal, ZMM

Civic Affiliations

- ASHRAE – Member of the Technical Committee Load Calculations Data and Procedures for 15 years, serving as chairman. Presently Chairman of the Research Subcommittee
- Advisory Board for the Department of Electrical Engineering Technology, Bridgemont Community and Technical College
- City of Pt. Pleasant, WV – 2nd Ward Councilman for 20 years

State Office Buildings #5, 10th Floor Charleston, WV Mr. Doeffinger was the Project Engineer for this renovation project. The renovation of the tenth floor of State Office Building #5 on the State of West Virginia Capitol Campus was recently completed for the Office of Technology. The renovation was designed to meet the United States Green Building Council's LEED for Commercial Interiors standard. The renovations also include a low profile cable management system which maximizes the flexibility of the space. To commence the project, ZMM conducted a detailed investigation of State Office Buildings 5, 6, & 7, which included recommendations for improvement of the facilities. The renovation of the 10th floor of Building #5 was the first major interior renovation project that responded to the recommendations.

West Virginia Capitol Complex - Buildings #5, 6, & 7, Charleston, WV Mr. Doeffinger was the Project Engineer for the in-depth analysis of Buildings #5, 6, & 7 at the State Capitol Campus. The study included the preparation of as-built plans, as well as an analysis of all building systems, including: Life Safety; Vertical Transportation; Mechanical; Electrical; Data; Façade; Structure; and Roofing. The analysis also included a study related to potential hazardous materials in the facility.

West Virginia Regional Jails, Mr. Doeffinger was the Project Engineer on ten West Virginia Regional Jails. In 2009 he was responsible for the HVAC renovation on four regional jails, including the replacement of rooftop HVAC units and Building Automation Systems.

West Virginia Army National Guard, Joint Interagency Training & Education Center, Camp Dawson, WV Mr. Doeffinger was responsible for the mechanical engineering design of the 600 room billeting expansion to the Regional Training Institute at Camp Dawson. The project is served by a 4 - pipe hot and chilled water system with an energy recovery ventilation system. This project received LEED Gold Certification.

West Virginia Research, Education, and Technology – Building 704, South Charleston WV Mr. Doeffinger is the engineering principal-in-charge of preparing a life safety analysis of the building as well as design services to improve the exterior façade of Building 704 at the WV Research, Education, and Technology Park. Building 704 had previously been utilized as a campus maintenance facility by Union Carbide and DOW Chemical. Bridgemont began utilizing the facilities for instruction in the Spring of 2011.

West Virginia Regional Technology Park (WV RTP) - Building 740, South Charleston WV Mr. Doeffinger is the engineering principal-in-charge of the new Steam Plant for Building 740. This project involves designing and constructing the Interim Steam Heating System throughout Building 740.

Bridgemont (BridgeValley) Community and Technical College Davis Hall Renovation, Montgomery, WV Mr. Doeffinger led an architectural and engineering investigation into the condition of Davis Hall to help Bridgemont Community and Technical College to develop a scope for the current renovation project, as well as a plan to undertake deferred maintenance at the facility. The project scope included remedying several life safety deficiencies, as well as improvements to the building envelope.

NGK Oxygen Sensor and Spark Plug Plant, Sissonville, WV Mr. Doeffinger was in charge of engineering design of the 250,000 SF NGK facility. The most recent 130,000 SF expansion moved NGK's spark plug production for the west coast to West Virginia. For both the oxygen sensor plant and spark plug plant Mr. Doeffinger designed a cycle water system for the manufacturing equipment.

The Plaza at King of Prussia, Pittsburgh, PA One of the largest retail centers in the east. Mr. Doeffinger has performed engineering services for the past 20 years. The project consists of a 5,000 -ton chilled water plant and 1,500,000 cfm variable volume system for tenants and constant volume air system for common areas and an engineered smoke control system. The most recent project is a 2011, 100,000 square foot expansion of tenant spaces, a renovation of the food court, and a 1,250-ton chiller addition to the central chilled water plant.



Role
Mechanical Engineer

Professional Registrations
Professional Engineer (WV, PA, OH, MD)

Mr. Lowry is a registered Professional Engineer with design experience in:

- **Industrial**
Bayer Material Science, West Virginia Higher Education Policy Commission, Kuraray America, Armstrong Flooring, Covestro Laboratories.
- **Educational**
Renovations, evaluations and additions at Marshall University, West Virginia University Institute of Technology, Mercer County Schools and various other Schools and Universities statewide.
- **Commercial**
West Virginia Capitol Complex, West Virginia Parkways Authority
- **Health Care**
Renovations, evaluations and additions at Cabell Huntington Hospital, Charleston Area Medical Center, Charleston Surgical Center, West Virginia Department of Health & Human Resources, Huntington VA Hospital and other various healthcare facilities statewide.

Project Experience

WV Army National Guard, Kenova Secured Area

Mr. Lowry was the Mechanical Project Engineer on the renovations of existing facility for the inclusion of a new sand alone secured area with the existing facility. Project conformed to all additional federal/military requirements for secured areas.

WV Army National Guard, Camp Dawson Secured Area

Mr. Lowry was the Mechanical Project Engineer on the renovations of existing facility for the inclusion of a new sand alone secured area with the existing facility. Project conformed to all secured area with the existing facility.

Mountain State Oral Sugary, Charleston, WV

Mr. Lowry was the Mechanical Project Engineer currently working with the developing contractor BBL Carlton renovations to the existing facility. The existing Office space will be

Education

BS, Mechanical Engineering, West Virginia University Institute of Technology, Montgomery, WV, 2004

Employment History

April 2018 - Present, Mechanical Engineer, ZMM
2015 - 2018, Mechanical Engineer, Pickering Associates

Civic Affiliations

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), President of West Virginia State Chapter

converted to new patient care areas. We evaluated the applicable mechanical and plumbing codes and developed the plumbing construction drawings in conjunction with the Owner and BBL.

Wood County Technical and Career Center , Parkersburg, WV

Mr. Lowry was the Mechanical Project Engineer for this project. This project consists of renovations to 80% of the existing facility and an addition of 8 classrooms, one welding shop, multipurpose room and administration areas. The renovations included conversion of admin space to classroom space, conversion of classroom space to pro-start kitchen space, conversions of existing welding shop to new broadcasting shop. Renovations to collision repair, auto mechanics and construction shops to bring them up to current codes and standards. Design of new HVAC system for all renovated areas, including specialized exhaust for the welding, painting, construction and pro-start kitchen areas. Design of new HVAC systems for the addition classrooms, multipurpose area and admin areas.

Project Experience with other firms

Cabell-Huntington Hospital, Huntington, WV

Mr. Lowry was responsible for the evaluation and design of the existing facility chilled water distributions systems, design of a new 4600-ton chilled water plant, Development of phased construction plan to construct the new plant and distributions piping for tie-into the existing systems to minimize down time on the existing chilled water systems.

Armstrong Flooring, Beverly, WV

Mr. Lowry was responsible for the evaluation and design of the existing and the connection to existing mechanical systems to serve a new addition to the manufacturing facility. The new addition will consist of storing flooring product, loading docks, and admin area. The new area was designed to be heated via the existing steam systems and provided with humidification to protect the product. The work was designed in a manner to allow for phase of the construction without interruption to the facilities operations.

**Role**

Electrical Engineer

Professional Registrations

Professional Engineer (WV)

Mr. Cook started his career in 1972 as a designer for an engineering firm in Charleston, West Virginia. He is a Professional Engineer registered in West Virginia and has designed and engineered multiple projects throughout the state.

Mr. Cook has had a full range of engineering design experience including: Plumbing, HVAC, Electrical, Fire Protection and Site Utilities. He has worked on Jails, K-12 Schools, Armories, Hospitals, Office Buildings, Churches, and a variety of other building types.

Other responsibilities include, Serving as a liaison between clients and utility companies, designs of sanitary and gas site utilities, review of plumbing, sprinkler systems, fire pumps and water pumps as well the equipment selection - air handling units, pumps, and boilers, site visits, observation reports and punch lists.

Project Experience

West Virginia Regional Jails: Mr. Cook was responsible for electrical design on 10 Regional Jails. The design included lighting, power distribution, emergency power systems, fire alarm and security. In 2009 he was project manager for HVAC renovation on four regional jails. This project included replacement of rooftop HVAC units and Building Automation Systems. Mr. Cook has also been responsible for site utility upgrades including sewer augers and on-site sewage treatment plants and lift stations.

Jackson County Armed Forces Reserve Center, Millwood, WV

Because of the variety of space types and occupancy patterns, Mr. Cook designed multiple roof mounted air handling units, to take advantage of unoccupied scheduling to save energy. The main shower /toilet area is served by a 100% outside air unit with a plate type heat exchanger for energy conservation. The large Drill Hall, which also serves the community with space for up to 2000 people, is served by two rooftop units. One will run during Drill weekends, the second will run only during public events. There are two high efficiency scroll type chillers with primary/secondary pumps to meet part

Education

Master of Arts in English and Humanity
Marshall University Graduate School,
2004

Bachelor of Arts in English and
Humanity, West Virginia University,
1972

Employment History

1989 - Present, Senior Mechanical
Engineer, ZMM

Present, Board of Directors, ZMM

1976 -1989, Project Manager, WV Firm

1972 -1976, Designer, WV Firm

Civic Associations

- American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Member

load conditions. The boilers are 95% efficient stainless steel condensing type with variable speed pumps.

Lincoln County High School, Hamlin, WV

Mr. Cook was responsible for HVAC design on this project, which included a 500 ton chilled water system with primary and secondary pumping. The chillers had a heat recovery feature which was used for reheat on VAV air systems. The gas boilers were condensing type with 95% efficiency and variable speed pumps. The school also had vocational shops for which he designed welding fume exhaust and dust collection systems. In addition to this, Mr. Cook was responsible for site utilities including coordination of a water line river crossing and an aerial sewer suspended from the bridge serving the school, which eliminated the requirement for a lift station.

Hacker Valley PK-8 School, Hacker Valley, WV

This project, located in rural Webster County adjacent to a trout stream, was built on a small site where municipal water and sewer were not available. Mr. Cook was responsible for designing a new Water treatment System for the existing domestic well, and a variable speed booster pump to deliver water to the school building. An onsite sewage treatment plant with outflow was not acceptable because of the trout stream, so he designed a "Green" peat bed underground injection system for the school's sewage disposal. The school also required fire protection, and Mr. Cook designed a 64,000 gallon storage tank with a diesel fire pump for distribution. He was also responsible for HVAC design.

Ian Haddox



Role

Electrical Designer

Mr. Haddox is an engineering graduate with design experience in Power, Lighting (Site, General and Theatrical), Fire Alarm, Security and Nurse Call systems. He has assisted in the design of several projects that include K-12 Schools, Higher Education Facilities, Hospitals and Civic Complexes. Ian began his career with an electrical contractor, his former experiences include project controlling, scheduling and estimating large industrial and commercial projects. His demonstrated skill sets in construction, construction management, engineering and 3D BIM design have placed Ian in the unique position of having the ability to design projects based on tangible experiences.

Project Experience

Government

WWARNG – Poca Warehouse Renovations
GSD – Capitol Guard House
Wood County Courthouse

Higher Education

Southern WV CTC – Logan Campus Fire Alarm
Southern WV CTC – Williamson Fire Alarm
Southern WV CTC – Williamson Toilet Renovations
Roane-Jackson Tech Center Renovations
Roane-Jackson Tech Center HVAC Equipment Replacement
Cabell Co. CTE – Cosmetology Lab

Stone and Thomas Building – BridgeValley CTC, Charleston, WV

The Bridge Valley CTC – Stone and Thomas project is a full renovation of the existing five story Stone and Thomas Building in downtown Charleston, WV. The building was built in the late 1940's and was utilized as a shopping center for many years. It has been unoccupied since 1997 and the interior has been partially demolished. This project is currently in the design stages and is unique in the fact that there are some historical preservation aspects that need to be considered while still delivering all of today's technologies. Mr. Haddox is tasked with designing the fire alarm, security, A/V and networking systems of this new state of the art higher education facility.

CAMC Memorial - 6th Floor Front Fit-Out, Charleston, WV

Mr. Haddox is the electrical designer on the fit-out of the existing sixth floor of CAMC Memorial Hospital. The nearly 38,000 SF design-build project is in collaboration with BBL

Education

Bachelor of Science, Electrical Engineering, West Virginia University, 2009

Employment History

2018 - Present, Electrical Designer, ZMM
2018, Engineering Scheduler, Jacobs
2010 - 2018; Project Controller, Enerfab

Carlton and currently in the construction phase. The project includes adding 48 critical care patient rooms, multiple offices, nurse stations, staff, waiting and storage areas. He is responsible for the complete design of lighting, power, nurse call, security and fire alarm systems for all spaces.

Oak Hill High School Renovations, Oak Hill, WV

Mr. Haddox was the electrical designer for the Oak Hill High School Renovations, which included an electrical service upgrade, renovations to a few existing classrooms, renovations to the existing auditorium and the addition of a new Life Skills space. The electrical service upgrades included a new 1600A switchboard, back feeding the existing gear and re-routing the service entrance cables from the existing utility transformer. The auditorium saw upgrades to their house lighting, stage light fixtures and controls, a new sound booth with new sound equipment and integration of the existing video projection system. The new Life Skills space is designed to be utilized as a second gymnasium complete with scoreboards, backboard winches and independent sound system.

Putnam County Schools – Security Camera Upgrades, Putnam County, WV

Mr. Haddox assisted in the design of twenty-two Putnam County School facilities security camera upgrades. Design Development included camera placement and selection based on a criterion of Detection, Observation, Recognition or Identification. Each facilities security camera system was to be integrated in a way that with the appropriate credentials, an individual could obtain access to any facility camera system to observe or obtain recorded events from the onsite storage device.

Southern WV CTC Logan and Williamson Campus – Fire Alarm Upgrades

Mr. Haddox was responsible for the Fire Alarm design of two Southern WV CTC buildings. Building 'A' on the Logan campus is two stories with many classrooms and a large auditorium. The Williamson Campus Main Building is a five story building with multiple classrooms, labs and kitchen. To keep the buildings operable and safe during construction, the project was designed in two phases. Phase one is the installation of the new fire alarm system for each building that meets all local and state fire code requirements. Phase two is turning the building over to the new fire alarm system and removal of the existing fire alarm system.

Clay Center – Sculpture Garden, Charleston, WV

Mr. Haddox designed the site lighting and power requirements for this project. The lighting design included lighting controls, pathway bollard, water feature, and fabric structure lighting with provisions for lighting future sculpture locations. The lighting controls design gives the owner multiple options in dimming and color changing features during their events.

Project Experience with other firms

During Mr. Haddox's career he has been a project controller for multiple large scale electrical construction projects that include: a new 500,000 SF Paint Shop building at the Toyota Manufacturing Plant in Georgetown, KY, a Flue Gas Desulfurization project at the Northern Indiana Power Service Company's Michigan City Power Plant in Michigan City, Indiana and a Dry Fly Ash Conversion project at the AEP Mitchell Plant near Moundsville, WV. He was responsible for estimating project costs, developing and maintaining the project schedule, tracking commodity & field performances and forecasting. Ian worked closely with project management and plant engineers to interpret construction documents and coordinate work to field employees. In addition to these projects he was the lead estimator on several Arc Flash Mitigation projects at AEP plants all over the country and on many small TransCanada (formerly Columbia Pipeline Group) compressor station projects around the state of West Virginia.

Michael J. White, PE



Role

Structural Engineer

Professional Registrations

Professional Engineer (WV, KY, IN, TN, OH, SC)

Mr. White has more than 10 years of Civil/Structural design and engineering experience. Project experience includes new construction and renovation work involving the design and analysis of reinforced concrete, wood, structural steel, masonry and cold formed steel.

Project Experience

New River Primary, Oak Hill, WV
Oak Hill Middle School, Oak Hill, WV
Bluefield Primary School, Bluefield, WV
Williamstown Elementary School, Williamstown, WV
Wood County Technical Center, Parkersburg, WV
Milton PK School, Milton, WV
Midland Trail High School, Hico, WV
CAMC Teays Clinic, Teays Valley, WV
Appalachian Regional Hospitals – DA Tank, Beckley, WV
Appalachian Regional Hospitals Pharmacy, Beckley, WV
Rainelle Medical Center, Rainelle, WV
Valley Health, Milton, WV
Valley Health, Huntington, WV
Mountain State Oral and Facial Surgery, Charleston, WV
Valley Park Community Center, Hurricane, WV
WVDNR Forks of Coal, Alum, WV
Marshall County Readiness Center, Moundsville, WV

Other Jobs from Past Employers:

WVU Parkersburg Center for Early Learning - Parkersburg, WV
WVU Parkersburg Applied Technology Center - Parkersburg, WV
Marsh Fork Elementary School - Naoma, WV
BridgeValley Advanced Technology Center - South Charleston, WV
New River Community and Technical College Headquarters Building - Beaver, WV
Lewisburg Elementary School - Lewisburg, WV
Rainelle Elementary School - Rainelle, WV
Boone County Honors Academy Addition - Madison, WV
Monongalia County Justice Center - Morgantown, WV
Lewis Co. Judicial Annex - Weston, WV
Charleston Correctional Work Release Center - Charleston, WV
Stevens Correctional Facility - Welch, WV

Education

B.S., Civil Engineering, West Virginia University Institute of Technology, Montgomery, WV, 2006

Employment History

2016 - Present, Structural Engineer, ZMM
2016, Civil/Structural Lead, Jacobs Engineering Group
2013 - 2016, Structural Engineer, Chapman Technical Group
2010 - 2013, Structural Engineer/Project Manager, Moment Engineers
2007 - 2010, Structural Engineer/Project Manager, Advantage Group Engineers, Inc. (Cincinnati, OH)

Mike Flowers



Role

Plumbing Designer/Mechanical Technician

Mr. Flowers is responsible for the design of Plumbing systems, ensuring that the systems are designed to meet the needs of the owner and utilize the latest plumbing technologies to provide the most energy efficient design possible. Mr. Flowers has participated on several LEED registered projects; one of his key contributions to these projects is selecting plumbing fixtures and accessories in his design that require less utility consumption, so significant utility savings are passed on to the owner and the environment as well.

Mr. Flowers has had extensive experience in the field of construction where he frequently visits ZMM's current projects under construction and thoroughly checks the contractors work to ensure compliance with project specifications and construction documents.

Project Experience

Mr. Flowers has a broad range of experience and knowledge in Plumbing and HVAC systems design. His experience includes K-12 Schools, Higher Education Facilities, Military Facilities, Office Buildings, and Juvenile and Adult Correctional Facilities.

- Morgantown Readiness Center
- Logan-Mingo Readiness Center
- Huntington East Middle School
- Southern WV Community & Technical College
- Lincoln County High School
- Camp Dawson:
Mountaineer Challenge Academy
Buildings 202, 246, 301, and the Mail Facility

Jackson County Armed Forces Reserve Center

(WVARNG): Mr. Flowers was responsible for the plumbing design on this project that utilized plumbing fixtures that reduced the total annual water usage by 30% as compared to using standard plumbing fixtures.

His design also incorporated 98% efficient water heating technology that dramatically reduced the total utility consumption for water heating.

Education

Associate in Mechanical Drafting and Design; 1990, Ben Franklin Career and Technical Center

Associate in Electronics Technology; 1987, Putnam Career and Technical Center

Associate of Science; 1988, West Virginia State University

Completed Dale Carnegie course in Effective Communications and Human Relations and Skills for Success

Employment History

2001 - Present, Mechanical and Electrical Technician, ZMM

1998 - 2001, Mechanical and Electrical Designer/Manager of CAD Services, ZDS, Inc.

1991 - 1998, Mechanical and Electrical Technician, ZMM

Civic Affiliations

- American Society of Plumbing Engineers (ASPE), Member Since 2009

Keith L. Gonzales



Role

Construction Administrator

Mr. Gonzales describes his role with ZMM as Construction Administrator as an exciting and challenging opportunity with new experiences every day. From varying jobsite conditions to the differing professionals, he works with daily, Mr. Gonzales approaches construction administration with over 40 years' experience in the construction industry and the desire to help provide the best outcomes possible for each project.

Mr. Gonzales prior to coming on board with ZMM oversaw the CAD/BIM coordination and design of major projects in the Columbus area. Facebook Data Center, OSU Wexner Cancer Hospital, OSU NDRT Student Housing Project to just name a few. Mr. Gonzales oversaw the 3D BIM modeling and coordination of these projects. He was responsible for ensuring that all trades were coordinated in model space therefore allowing trades to go to fabrication/installation once model was "Clash Free".

Mr. Gonzales project variety includes Educational (K-12 and University), Commercial, Military, Office, Justice (Courthouses, Justice Centers), Healthcare (Health Departments), Roof replacement projects.

Project Experience

Hurricane High School Addition, Hurricane, WV
Charleston Coliseum & Convention Center, Charleston, WV
Boone County Roof Replacement Project, Boone, WV
Nicholas County Roof Replacement Project, Summersville, WV
Summers County High School HVAC Upgrade, Summersville, WV
Summers County Bus Garage Renovations, Summersville, WV
WWSOM Greenspace Renovation Project, Lewisburg, WV
Calhoun County Pleasant Hill Elementary HVAC Equipment Replacement Project
Wood County Bell Tower Roof Addition, Parkersburg, WV
CAMC Chiller Replacement, Charleston, WV
Christ Church United Methodist, Charleston, WV
Girl Scouts of Black diamond Council, Charleston, WV
WVDNR Claudia Workman Fish and Wildlife Education Center, Alum Creek, WV

Education

Associate Degree Mechanical Engineering, Pittsburgh Technical Institute 1978

Employment History

2018 - Present, Construction Administrator, ZMM

Joint Interagency Training & Education Center

WVARNG



LOCATION:
Kingwood, WV

SIZE:
285,000 SF

COMPLETION:
2013

COST:
\$78.4M

OWNER:
Todd Reynolds
Deputy Branch Chief
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446

AWARD:
2011 AIA Honor Award
West Virginia Chapter
Excellence in Architecture



ZMM Architects and Engineers, in association with AECOM, provided architectural and engineering design services for the Joint Interagency Training and Education Center (JITEC), an Army National Guard campus-style facility for training and operational mission support. Sited on 30 acres at the northern end of Camp Dawson between the Cheat River and the foot of Brier Mountain, this 283,000-SF project included the design of a new operations building; expansion of the billeting facility; renovation of the training facility; creation of a new base entry checkpoint and visitor center; and design for walkway connectors between all the facilities.

The project began with a review of the existing base master plan, followed by a revision of the master plan concept. JITEC is a training and educational facility – the vision behind the site design and updated master plan is that of a college campus atmosphere. The clients goal was to create a campus environment that integrates existing buildings with new ones, which was accomplished by using compatible, yet distinct building materials.

The new facilities are designed to meet all anti-terrorism/force protection criteria and are slated for LEED-NC Gold Certification from the U.S. Green Building Council. The new 82,000-SF operations building is prominently sited as the main focal point upon entering Camp Dawson through the secure access control point and visitor's center, also designed by AECOM. The building's exterior complements its West Virginia setting. The entire building front, composed of glass and pre-cast concrete walls, is open and inviting with glazing that reflects the surrounding trees and hills.



Joint Interagency Training & Education Center



Security requirements for the command center influenced the design of the attached, copper-clad “black box” that is an homage to the native rock stratification seen throughout the state.

The building consists of four distinct areas: the Joint Operations Center; a suite of secure training rooms; base headquarters and JITEC administrative offices; and a 6,000 SF server and telecommunications room.

Entry to the Joint Operations Center (JOC) is provided by a secure mantrap adjacent to a dedicated security office. Built to SCIF standards, the JOC contains a state of the art command center housing 48 permanent work stations in a theater-style configuration facing a large video wall, flanked by conference rooms and offices for both officers and support staff. Within the JOC is a secure area consisting of workstations, offices, and two divisible conference rooms with secure video conferencing capabilities. The secure area construction dictates a windowless environment, requiring proper lighting and creative use of materials to create an agreeable work atmosphere.

The 180,000-SF billeting (hotel) expansion more than triples the facility size and increases the total capacity from 189 guest rooms to 600 guest rooms and suites. Designed to relate to the existing architecture with similar scale, materials, textures, and massing, the addition also brings in new elements, such as iconic glazed building corner elements, to integrate the design of the new operations building. A new dedicated lobby with terrazzo tile flooring leads to a monumental stair with terrazzo treads, open risers, and a glass/stainless steel railing for access to the open lounge areas on the second and third floors.

The lobby's design provides a hotel atmosphere, underscored by the new Liberty Lounge, an upscale bar and restaurant area, with wood finishes salvaged from the gymnasium floor in the existing headquarters building. The new six “executive suites”, are designed to the full amenities of corporate hotels.

Morgantown Readiness Center

WVARNG



LOCATION:
Morgantown, WV

SIZE:
54,000 SF

COMPLETION:
2013

COST:
\$18.5M

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446



The Morgantown Readiness Center is a unique military facility for several reasons. While the Readiness Center supports traditional military functions including the 1-201st Field Artillery, a significant portion of the Morgantown Readiness Center supports the 249th Army Band. To support the band, the Readiness Center contains a performance hall, pre-function spaces, as well as a variety of training and rehearsal areas.

To efficiently create the stage and performance area the design team utilized a variety of dual function spaces. The stage is actually a large rehearsal space with an adjacent elevated recording area. Two large operable partitions are used – one to separate the rehearsal area from the remainder of the stage and the auditorium – while the other separates the auditorium from the Drill Hall. This configuration allowed the design team to maximize the West Virginia Army National Guard's investment by utilizing federally authorized space to also function as a large performance area. Acoustically, this challenge was met by creating a Drill Hall with an irregular shape that was contained within a rectilinear sloped barrel arch form. The geometry was complimented by acoustically engineered interior surfaces and finishes to create a vibrant and rich auditorium.

The facility is also unique due to its location on an abandoned airport runway at the Morgantown Municipal Airport. The 54,000 SF Readiness Center occupies a 35 acre tract at the airport. Additionally, the Readiness Center is located approximately twenty (20) miles from Camp Dawson, a large State and Federal training campus. As troops will often be travelling to Camp Dawson through the Morgantown Readiness Center, the facility needed to function as a 'gateway.'

Morgantown Readiness Center

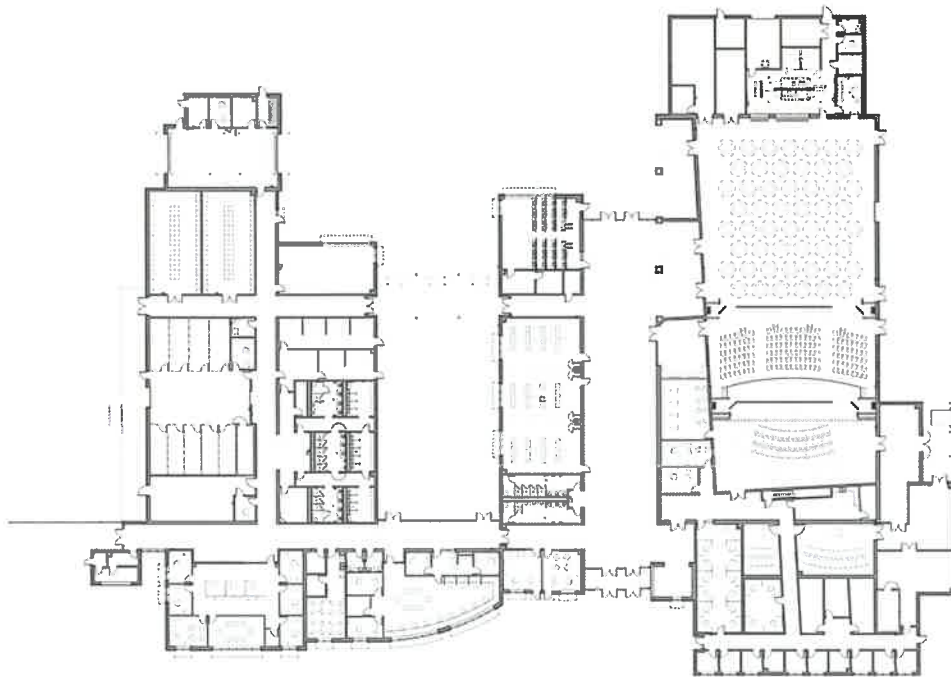
WVARNG



The creation of a 'gateway' facility was accomplished through exterior material choices (compatible with Camp Dawson), as well as the decision to utilize a tower-like feature to mark entry – a very prominent feature of the Regional Training Institute (RTI) at Camp Dawson. Where the RTI utilized a large cylindrical mass, the tower at the Morgantown Readiness Center respects the context of the former runway by reflecting the aesthetic of an airport control tower.

The Morgantown Readiness Center is also a sustainable building, and is in the process of pursuing LEED Certification from the USGBC. The 'U' shaped layout of the facility improves access to daylighting and views, while also limiting public access to the Guard's administrative and storage areas. Additional sustainable features include a reflective roof, the use of regional materials, and efficient lighting and HVAC systems.

While many features are addressed in the design of the Morgantown Readiness Center, the final result is a harmonious composition that reflects both its function and the environment, while deferring to its location on an abandoned runway.



Jackson County Armed Forces Reserve Center

WVARNG



LOCATION:
Millwood, WV

SIZE:
75,000 SF

COST:
\$20M

COMPLETION:
Fall 2011

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446



The new facility houses both the West Virginia Army National Guard (WVARNG) and the United States Army Reserves (USAR). The primary user for the WVARNG will be DET 1 821st Engineering Company, who will be supported by a FSC of the 1092nd. USAR occupants will include PLT AMMO 261 OD and PLT 1 (Postal) and PLT 6 (Postal) of the 44th Personnel Company. The facility also includes an expanded Drill Hall that can serve as a convention and meeting space, which is being funded by the Jackson County Commission, additional federal appropriations, and the State of West Virginia National Guard.

The relationship between the structures became crucial to the site layout. The new facility is centered on the existing house, increasing the exposure of the facility from Route 2 - the major route of vehicular travel that parallels the Ohio River. Once the aesthetic of the building was established, the massing of the new facility was defined by breaking-down the facility into smaller mass elements that more closely reflected the Georgian Style, and that of many Army posts, such as Fort Meyer in Northern Virginia. The larger programmatic elements such as the Drill Hall and the storage areas employ an aesthetic that more closely implies their function.

The layout of the facility includes a main entry with the USAR and WVARNG Recruiting, Family Support, and Administrative areas located on separate sides (USAR to the left, WVARNG to the right). A transverse wing on the left houses all functions that have the potential for public use, such as the Drill Hall and the Educational component, while all primary military spaces developed along a similar perpendicular wing on the right. This allows for separate entries to be developed for public functions, while the remainder of the facility can be secured. The layout also creates a large central courtyard or parade field that would be located at lower grade to define the edge facing the river. This edge is defined by a canopy that connects storage and locker areas to the expanded Drill Hall.



Logan-Mingo Readiness Center

WVARNG



LOCATION:
Holden, WV

SIZE:
54,000 SF

COMPLETION:
2015

COST:
\$12M

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446

AWARD:
2017 AIA Merit Award,
West Virginia Chapter,
*Achievement in Architecture
in Sustainable Design*



The design of the Logan-Mingo Readiness center was developed by examining both the program and building site, and developing strategies to design a facility that is functional, responds to site, security, and aesthetic parameters, while requiring minimal maintenance.

The building layout was developed by working closely with the end-users to determine the appropriate configuration of building spaces to maximize the efficiency of the operations, and to respond to the unique missions of the 150th Armored Reconnaissance Squadron and the 156th Military Police (LNO) Detachment. Clear separation of "public" and "private" areas within the facility, unique office configurations related to training requirements, and the addition of State Funded additional spaces.

The exterior (and in many cases the interior) aesthetic of the facility was driven by the location of the Readiness Center within an industrial park on a reclaimed surface mined site. The decision led to the use of reinforced cast-in-place retaining walls that became both a functional and visual focus. Similar pre-cast walls are used to anchor the facility at the Distance Learning Center, while a cast-in-place retaining wall serves as a part of the Anti-Terrorism/Force Protection design.



Glen Jean Armed Forces Reserve Center

WVARNG



LOCATION:
Glen Jean, WV

SIZE:
110,000 SF

COST:
\$17M

COMPLETION:
2004

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446



The Glen Jean Armed Forces Center contains three distinct military functions: a facility for routine maintenance of over-the-road and tracked military vehicles, an armory housing four West Virginia National Guard units, and the Southern West Virginia Military Entrance Processing Station, where new recruits officially enter the military system.

The brick exterior walls are highlighted with limestone and metal trim accents. A large assembly hall, plus classroom and training space, enhance the ability of the armory building to provide training for military personnel to provide space for community functions.



Construction & Facilities Management Office Expansion

WVARNG



LOCATION:
Charleston, WV

SIZE:
19,935 SF

COST:
\$3.5M

COMPLETION:
2008

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

AWARD:
2009 AIA Merit Award,
West Virginia Chapter,
Achievement in Architecture



The Construction and Facilities Management Office (CFMO) Expansion project brings all of the operations of the CFMO together under one roof. The branches that occupy this facility include: Director of Engineering, Environmental, Planning and Programming, Facility Operations & Maintenance, Business Management, Resource Management, and Design and Construction. This new facility is located slightly to the front, and adjacent to the existing facility, lending prominence to the new construction, and providing a new aesthetic to the entire complex.



This transitional space was designed to connect the two structures, while maintaining a connection to the outside through use of natural light, direct visual connections to the exterior, large volumes, irregular geometries, and the use of natural materials.

The entry design was coordinated with the Recruiting and Retention building to create an outdoor courtyard, along with new sidewalks, stairs and signage. The entry roof is sloped to provide a greater massing, while a lower canopy provides scale and protection from the elements. Large gathering and work spaces were located on the north elevation to take advantage of large expanses of glazing located to capture indirect light and views of Coonskin Park.



Robert C. Byrd - Regional Training Institute

WVARNG



LOCATION:
Kingwood, WV

SIZE:
148,000 SF

COMPLETION:
2002

COST:
\$21M

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446



The Robert C. Byrd Regional Training Institute at Camp Dawson is a 148,000 SF facility designed to provide training, dormitory, dining, and recreational facilities for the West Virginia Army National Guard. The facility, which includes 183 private dormitory rooms in addition to a wide range of training spaces is designed to accommodate a variety of both military and civilian training functions.

The goal of the owner was to provide a campus within a building, with clear circulation and for various uses. ZMM accomplished this objective by employing a large cylindrical mass that marks the main entry where guests can coordinate both their housing and educational needs.

Additionally, the housing wing is joined to the recreational and educational components with a large gathering/transitional space that often serves as an informal meeting area. Due to the success of the project, and growing use of the facilities, ZMM is currently assisting the West Virginia Army National Guard with training and dormitory expansions.

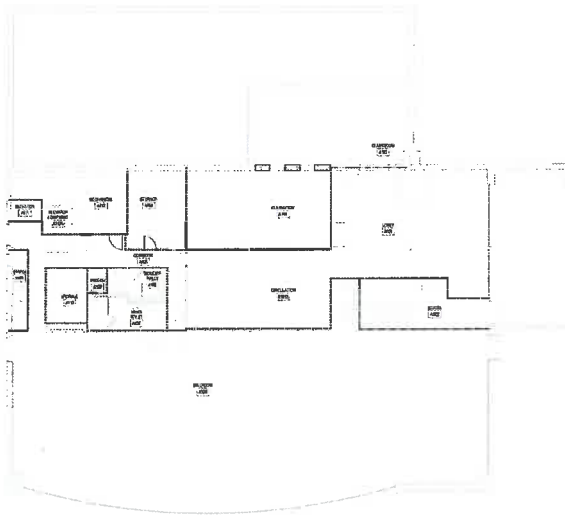


Additional WVARNG Projects

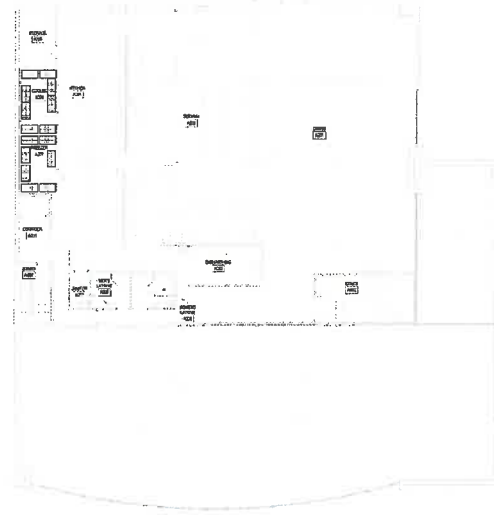


Mountaineer Challenge Academy - South Montgomery, WV

MCA – South involves the renovation of both Maclin Hall and the Tech Center at the old WVU Tech Campus in Montgomery to accommodate the expansion of the Mountaineer Challenge Academy. The Maclin Hall dormitory will be renovated to include a new security system to reflect the new user's needs. The Tech Center will receive more extensive renovations including a new roof. The lower level of the Tech Center will be renovated to have two new classroom spaces. The upper level will be completely renovated into new classroom and office space. This floor will have three computer classrooms and one standard classroom. A new HVAC system, ceilings, finishes, and LED lighting are all a part of this renovation.



2007 MCA South - Tech Center - First Floor



2007 MCA South - Tech Center - Second Floor

Camp Dawson Mail Room Kingwood, WV

The Mail Room at Camp Dawson is a new 2,400 SF facility located at the entrance to Camp Dawson. The facility houses both the mail facility and the ID Center which serves all of the buildings on the campus. As part of this project, the exterior lighting along the perimeter fence will also be upgraded to meet current anti-terrorism/force protection guidelines. A new cable barrier and chain link fence will be installed around the facility to isolate it from the other buildings on campus.

Camp Dawson STF - Building 'B' Kingwood, WV

The STF Building 'B' at Camp Dawson is a new 7,250 SF facility designed in close collaboration with the Camp Dawson Special Forces unit to satisfy several of their current needs. The facility has a large storage room, a small training area, multiple interview rooms, and a multi-functional work room. The structure of the building will be a pre-engineered metal building.



Charleston Coliseum & Convention Center (2015) – Replace entire MEP infrastructure three 1,000 ton chillers and cooling towers, three 8,000 mbh gas condensing boilers, approximately ten VAV AHU's, approximately 10 large single zone VAV AHU's.

Charleston Kanawha Health Department (2015) – Replace entire mechanical system to include air cooled chiller, gas fired make-up unit and zone fan coils with electric reheat, approximately 45,000 SF new DDC controls.

United Bank Building – Cooling Tower Replacement (2010) – Two 400 ton centrifugal chillers, rebuild two large VAV AHU's, installed free cooling plate frame heat exchangers (2015).

Kanawha County Public Library (2015) – Replaced two gas-fired boilers with new gas condensing boilers .

Building 5 Capital Complex (2008) – Replaced 10th floor office space air condition, replaced perimeter induction units with new steam chilled water air handling units, distributed VAV terminal units with modification to architectural fit out approximately 22,000 Sf. Installed new sprinkler service entrance for Buildings 5, 6, and 7.

Capitol Complex Building 5, 7th, 8th, & 9th Floors – Rebuild perimeter induction system and interior multi-zone distribution in addition to total architectural fit up, approximately 70,000 SF.

Capitol Complex Building 6, 3rd, 4th, & 5th Floors - Rebuild perimeter induction system and interior multi-zone distribution in addition to total architectural fit up, approximately 70,000 SF.

WV Lottery Headquarters Building (2014 - 2015) – Installed 40,000 SF of new variable refrigerant system, new make-up air system, comprehensive architectural services.

WV State Capitol Cafeteria – Installation of large catering and service kitchen, included steam make-up air system, 3 Class 1 kitchen hoods, Class 2 kitchen hoods, all plumbing system, sprinkler system including sprinkler service entrance for entire Capitol Buildings, comprehensive architectural services.

HVAC Renovation Experience



Old Kanawha Valley Bank Building (2003) - New cooling chiller.
(2015) - New cooling tower.

City Center East (2008) Chiller Replacement.

Tenant Fit-Up Numerous Office Buildings Charleston – BB&T Building, City Center East, United National Bank Building, Hunting National Bank Building to include VAV distribution, electrical and architectural services.

Additional HVAC Projects:

- Huntington Herald Dispatch - HVAC Study
- Walker Machinery Main Office Renovation - HVAC
- Walker Diamond Office - HVAC
- Walker Machinery - HVAC Renovations
- State of WV – Governor’s Mansion Corrective HVAC Study
- Camp Dawson Regional Training Institute - HVAC
- Central Regional Jail – HVAC and Roof Replacement
- King of Prussia, PA – HVAC Design (Multiple Projects)
- Kanawha Valley Senior Services - HVAC
- Tolsia High School - HVAC Renovations
- Cabell County Schools – (Multiple HVAC Projects)
- Cabell County Career & Technical Center - HVAC Replacement
- Cabell County Incubator School - HVAC
- Harrisville Elementary School - HVAC
- Ritchie County HS/MS - Cooling Tower Replacement
- Spring Hill Elementary School - HVAC
- Roane-Jackson Career & Technical Center
- Salt Rock Elementary School - HVAC Renovation
- Wayne County Schools – New HVAC System Projects
- Greenbrier County Schools – New HVAC System Projects
- Huntington High School
- Cabell-Midland High School



Charleston Coliseum & Convention Center



LOCATION:
Charleston, WV

SIZE:
283,000 SF

COMPLETION:
2018

COST:
\$75M

CONTACT:
David Molgaard
City Manager (former)
200 Civic Center Drive
Charleston, WV 25301
304.389.2011 (cell)

AWARDS:
2019 AIA Honor Award
West Virginia Chapter

2019 AIA Citation Award
West Virginia Chapter

2019 AIA People's Choice
West Virginia Chapter



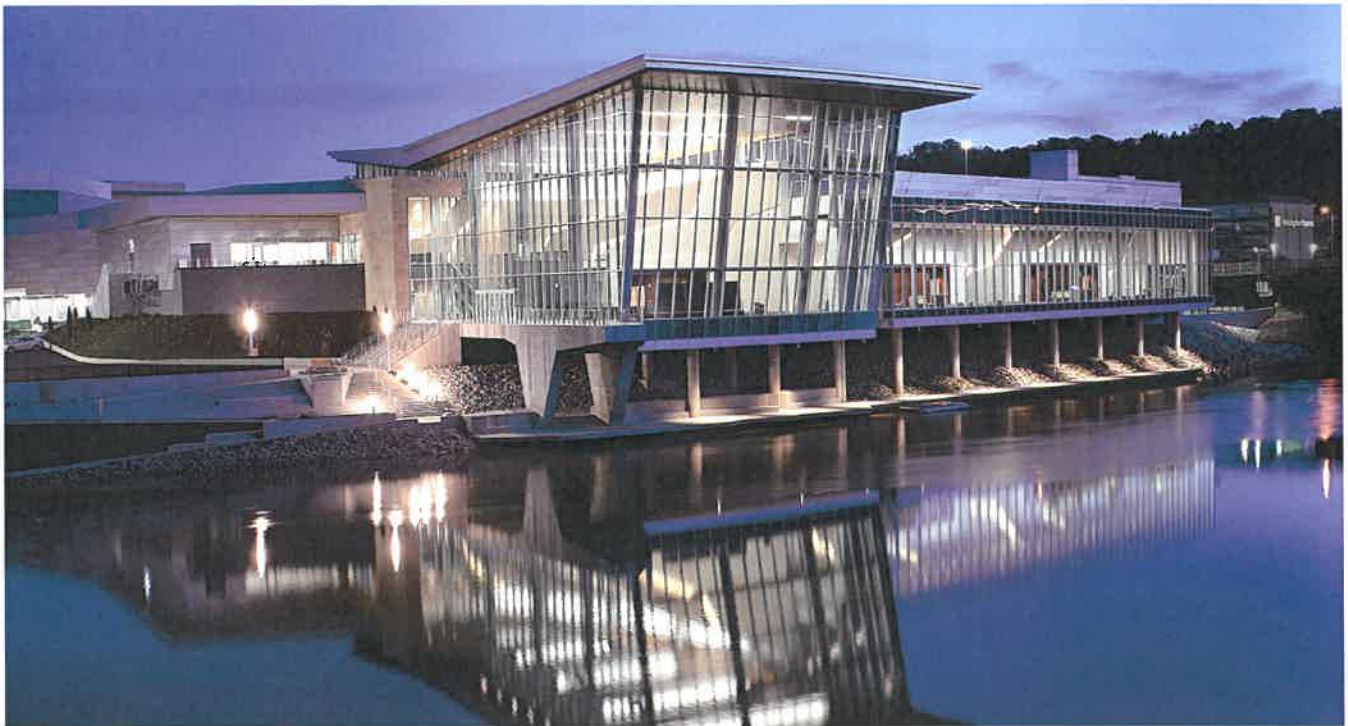
The Charleston Coliseum & Convention Center (formerly named Charleston Civic Center) Expansion and Renovation is a transformational project for both the city of Charleston and West Virginia. Our team was influenced by the strong authentic character of Charleston to remake the Charleston Civic Center into a more efficient, more sustainable, more dynamic and a more iconic best-in-class destination.

The design of the expansion and renovation of the Charleston Coliseum & Convention Center is inspired by the story of West Virginia. Defined by a rugged landscape, the early history of the state was dominated by extractive industries -- salt, coal, timber, trapping. This set the local character. With a foundation rich in resources, manufacturing added value to the raw materials with crafts like glass making and industries like chemicals and energy. This attracted a rich diversity of immigrants and a culture of craftsmanship that set the urban character. The economy is shifting from industry and service to information and technology. Again, the landscape and industry that shaped the region gives Charleston real advantages to exploit. The Creative Class, critical for the information and technology age, can live and work anywhere - what they want is access to the outdoors; real places with real character; and continuous education and entertainment.

Our design starts with an organizational concept inspired by this history. The Kanawha River is the social organizing link throughout the region, with settlement zones developing on whatever flatland the river provided --creating nodes of activities among the hills and valleys.



Charleston Coliseum & Convention Center



The renovated facility is a building that emerges from this iconic landscape, with the architecture and topography working together. The Coliseum & Convention Center also has distinct active nodes to celebrate each activity; arena, convention, and banquet, and these nodes are connected like the hills and cut rock faces that are seen throughout the state as people work to connect to each other through the landscape.

The first critical design objective was to create separate entries and identities for the arena and convention center. This allows for simultaneous events and clarity of use. For the convention center to thrive, it needs a real ballroom assembly space. Located overlooking the Elk River, the new ballroom pre-function space is the most dramatic feature of the center. Together, the three glass enclosed nodes --arena lobby, convention lobby, ballroom --define a unique Charleston event campus. As described above, the spaces that connect these nodes are inspired by the hills and cut rock faces that connect the towns along the Kanawha River. With the building emerging from the landscape and expressed as cut rock walls, the connecting areas are designed to be expressive and economical backdrops to the glass boxed nodes.

While the expansion transforms the southeast to the middle of the northern zone of the site, the existing building mass still dominates a portion of the northern and eastern campus. The dominant expression along these existing facades is the landscaped berms. As we imagined the new building expression emerging from the landscape, a strategy developed to transform these berms to reflect, at the pedestrian level, the overall design theme. Above the level of the berms, the new concourse level windows will open up the facade and provide a much needed break in the massing. The upper part of the arena was painted in two tones to match the new building, playing off the different faces. The north, south, east and west faces painted a lighter shade; and the northeast, southeast, southwest and northwest faces a darker shade. Dramatic exterior color-changing lighting on the northeast, southeast, southwest and northwest faces transform the look and feel of the center into a fun and festive landmark.

Intuit Prosperity Hub



LOCATION:
Bluefield, WV

SIZE:
44,000 SF

COST:
\$4.4M

COMPLETION:
2020

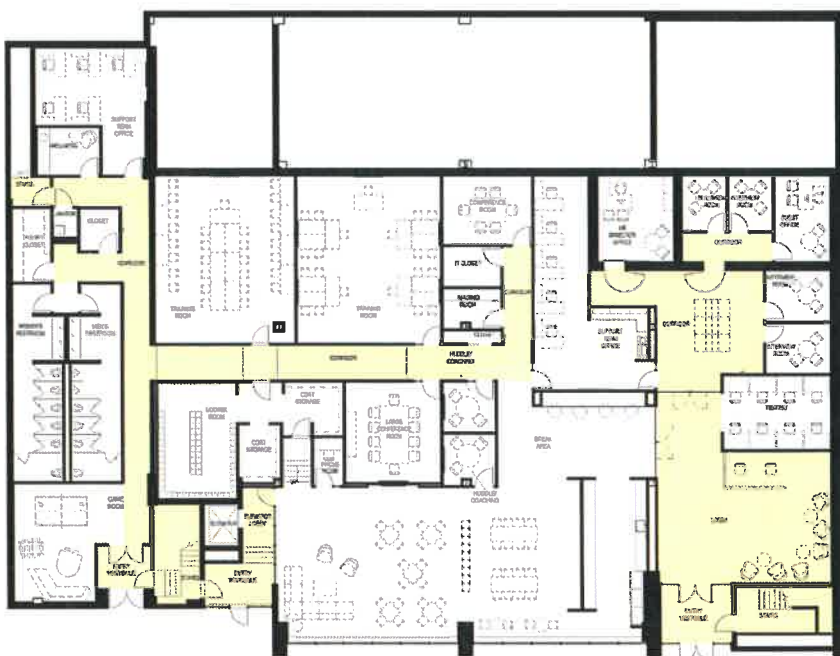
CONTACT:
Robert Cone, Leader
Project Management
Organization

ZMM Architects & Engineers worked in collaboration with CBRE, Gensler, the City of Bluefield, and Pray Construction to assist Intuit with the development of its next "Prosperity Hub," which is located in Bluefield, WV. The company plans to create 300 jobs and locate them in downtown Bluefield in the former First National Bank building, located at 500 Federal Street. The former First National Bank of Bluefield Building (currently Summit Community Bank), was constructed in 1970. The building, located in the Bluefield Downtown Commercial Historic District, is comprised of two connecting structures and a parking garage. The two-story modern building with marble, aluminum, and glass veneer is situated on a sloping lot, allowing access to a parking deck on the upper level.

CBRE is responsible for project management, while Intuit's national architectural partner, Gensler, is responsible for programming and for creating a schematic design for the tenant fit-up portion of the project. ZMM was responsible for all core and shell architectural and engineering work, as well as the fit-up portion of the project from design development through completion. ZMM's effort on the project commenced by conducting a detailed facilities assessment to assist CBRE and Intuit with the scope and budget development process. The purpose of the assessment was to determine the condition of the major building systems, and to identify both immediate and long-term enhancements required to fully improve the building.



Intuit Prosperity Hub



First Floor Plan



Second Floor Plan

Wood County Technical Center



LOCATION:
Parkersburg, WV

COST:
\$10.4M

SIZE:
28,500 SF Addition

CONTACT:
Will Hosaflook, Superintendent
1210 13th Street
Parkersburg, WV 26101
304.420.9663



This project consisted of a 2-story 28,500 SF addition and renovation to the existing single-story 31,000 SF facility. The new addition includes one-story and two-story areas that were constructed to the south end of the existing building which relocated the building's main entrance and added a new bus loop and parking lot. The addition showcases the new entry lobby and a 3,500 SF Commons space that was designed as a flexible space to be used for multiple classroom settings, large group events and other public / community functions. The existing facility was dated and located adjacent to the existing Parkersburg South High School. One of the Owner's project goals were to enhance the educational spaces for the center's programs and provide a separate identity for the technical center differentiating it for the high school as the center serves all high schools in the Wood County.

The Licensed Practical Nursing program was relocated to the addition from another facility as well as the adult education programs. The existing welding shop was undersized and did not meet the academic and instructional needs so a new 4,000 SF was constructed in the addition. The new two-story area, administrative office area, and the new Welding Lab were constructed with a brick veneer façade. The new stair towers and entrance were clad in metal wall panels. The office suite areas were constructed with gypsum board partitions providing flexibility for future expansion or reconfigurations. The existing building renovations included general space reconfiguration to accommodate an Options Classroom, ProStart Catering Kitchen and Classroom, and a Therapeutic Lab / Classroom. Exterior windows and insulated panels were replaced along with exterior doors and door hardware.



Stone & Thomas Buildout for BridgeValley CTC



LOCATION:
Charleston, WV

SIZE:
128,000 SF

COMPLETION:
TBD

COST:
Est. \$26M

CONTACT:
Dr. Eunice Bellinger
President
BridgeValley CTC
2001 Union Carbide Drive
South Charleston, WV
304.205.6600

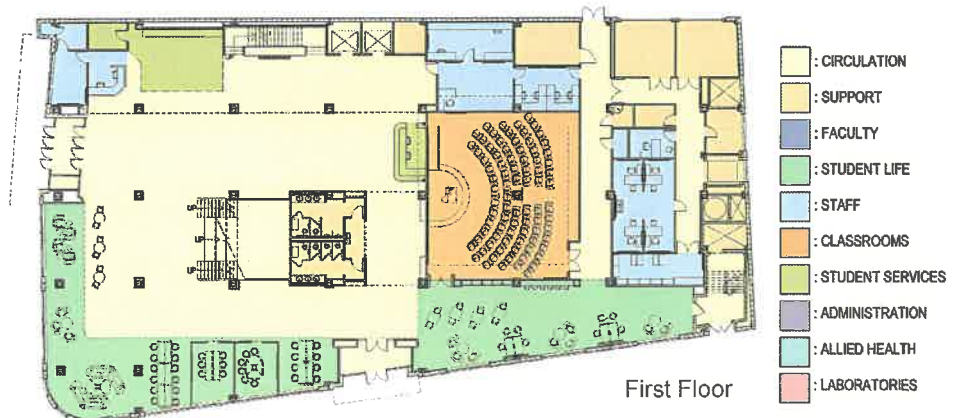


BridgeValley Community & Technical College plans to renovate the existing Stone & Thomas Building in downtown Charleston and relocate the headquarters to this location. The urban location will allow BridgeValley to become a vital community member in Charleston by increasing exposure for area business which can lead to fostering additional business partnerships. The move will further promote BridgeValley's goal to provide access to quality education and is in alignment with the College's core values to fulfill their mission.

The Stone & Thomas building is listed as a contributing building in the Downtown Charleston Historic District and consists of a 5-story building with a full basement and mezzanine level. The building originally designed as a department store, consists of an open-floor plan and large 2-story open main floor with a mezzanine overlooking the space.

ZMM in association with historic preservation consultant, Michael Gioulis, is currently assisting in the design and development of BridgeValley's new headquarters. BridgeValley's headquarters will consist of new classrooms, laboratories, allied health/nursing education spaces, faculty offices, administrative offices, and student life spaces. As part of the building renovation, the existing building has several contributing elements that will be restored in efforts to obtain the historic tax credits. The exterior of the building will be maintained in its current configuration except for adding windows and mechanical louvers on the alley elevations that are not visible to Lee and Dickinson Streets. The street elevations will be restored including the glass framed entrances, marble clad facades and the iconic building signage. New elements and improvements will complement and not mimic the historic features. These elements will be contemporary but compatible.

Existing Photos



Stone & Thomas Buildout for BridgeValley CTC



Aerial View

The proposed renovations include creating a large student union and student life spaces on the basement level. The street level (first floor) will contain student life spaces, digital learning commons, large classroom for 100 people, and a new lecture stair to access the mezzanine level. The mezzanine will contain student services spaces that include a 'One Stop' for registration, admissions, financial aid, tutoring and testing center. The second and third floors contain classrooms, administration office and faculty offices.

The fourth floor is comprised of Allied Health programs including Nursing, Digital Medical Sonography, Emergency Medical Technician, and Medical Laboratory Technician. The main focal point of this floor contains a simulated hospital floor for an enhanced education experience. The fifth floor contains multi-function laboratory spaces for Biology, Micro-Biology and Anatomy & Physiology.

BridgeValley Community & Technical College

Davis Hall Renovation



LOCATION:
Montgomery, WV

SIZE:
77,215 SF

COMPLETION:
Summer 2012

COST:
\$4M

CONTACT:
Dr. Jo Harris, Former President
619 2nd Avenue
Montgomery, WV 25136
304.741.4116 (cell)



ZMM was selected by Bridgemont Community and Technical College and the West Virginia Community and Technical College System to provide professional architectural and engineering design services for the Renovation of Davis Hall in Montgomery. Davis Hall is a 77,215 SF classroom and laboratory facility that was constructed in 1970 for WVU-Tech. The exterior of the facility consists of architectural pre-cast concrete panels and a curtain wall system. The interior includes an open two story atrium, a large auditorium, and five levels of office and classroom space that is constructed of demountable partitions.

Prior to commencing the design effort, ZMM completed a thorough assessment of the facility. The assessment revealed significant life safety concerns that had not been previously identified, including the use of non-plenum rated plastic insulated wiring throughout the return air plenums, mechanical units located above ceilings in exit stairs, and a lack of adequate fresh air for building occupants. As part of this initial assessment, ZMM assisted in developing a scope of work for the current project, as well as a long range plan for future improvements to Davis Hall.

The scope of the current project includes life safety upgrades (replace non-plenum rated wiring, new fire alarm system), improvements to the building envelope (curtain wall replacement and re-roofing), hazardous material abatement, mechanical improvements (boiler and chiller replacement, outdoor air ventilation system replacement), and interior improvements (replace ceilings and lighting, upgrade furnishings).

BridgeValley Community & Technical College

Master Plan



LOCATION:
Montgomery, WV

COST:
So. Charleston Campus
\$11.25M Est.

Montgomery Campus
\$12.8M Est.

CONTACT:
Dr. Jo Harris, Former President
619 2nd Avenue
Montgomery, WV 25136
304.741.4116 cell

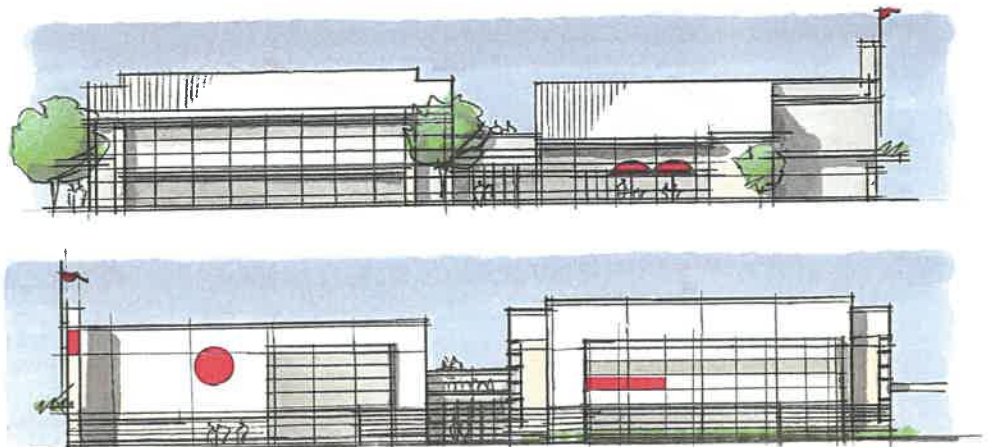
KEY INDIVIDUALS:
Adam Krason, Architect/
Educational Planner and the
support of ZMM team members

CONSULTANTS:
Bullock Smith & Partners



ZMM provided services to prepare a master plan for the Montgomery and South Charleston Campuses for Bridgemont Community and Technical College. The master plan is in response to the West Virginia Higher Education Policy Commission's standard process for a comprehensive assessment of facilities needs, costs, and priorities. This enables the HEPC to provide future funding to Bridgemont based on justified standards tied to legislative funding agendas. The final plan shall be appropriate to Bridgemont's size, mission, and enrollment and to the fiscal constraints within which it operates.

The master plan includes assessments of existing facility conditions on the Montgomery Campus and South Charleston Campus, including deferred maintenance, building code issues, and energy efficiency. An analysis was included identifies current and future space needs, parking requirements, current land use and future property acquisition, infrastructure development, sustainability, landscaping, and pedestrian circulation. The plan will also include project budgeting and a multi-year capital improvement plan. An assessment of the impact of projected enrollment and demographic changes on facilities will be provided along with a delineation of how the campuses will interact and support each other and improve efficiency.



Nicholas County High School/Summersville Middle School/ Nicholas County Career Technical Center



LOCATION:
Summersville, WV

SIZE:
\$350,000 SF

COMPETITION:
TBD

CONTACT:
Dr. Donna Burge-Tetrick
Superintendent
Nicholas County Schools
400 Old Main Drive
Summersville, WV 26651

Nicholas County Schools is currently designing a middle/high/tech center school facility around Career Academy's. Each Academy will have all educational classroom supporting spaces surrounding the lab/demonstration space. Each academy space will be designed with the flexibility to change the spaces as academy programs change. The two-story facility will be approximately 350,000 square feet. It will host a competition swimming pool and a recreation pool area, three gymnasiums, auditorium, two dining areas and all support spaces that will make this facility state of the art.

The academy's will surround a center courtyard that will play host to support areas for all academies. A sky bridge will connect the cafeterias to the Career and Technical spaces and overlook the courtyard area. The school will be surrounded by athletic fields. Football Stadium with a track and Practice Field, Softball and Baseball Stadiums, ROTC Obstacle Course, Lineman's Course, along with all the supporting facility buildings that enhance the athletic fields.

Potential Career Academies are as follows:

High School Areas

- Gaming / Esports
- Business
- Engineering
- Arts/Journalism
- Broadcasting
- Hospitality
- Tourism
- J ROTC
- Social Services/Health Occupations
- Cosmetology
- Pet Grooming

Career Technical Education Areas

- Auto Collision
- Welding
- Automotive Technology
- Power Equipment
- Landscaping
- Construction
- Tiny Home Construction

Middle School Areas

- Gaming / Esports
- Academy of Careers
- Sixth Grade Academy
- Seventh Grade Academy
- Eighth Grade Academy

KVC Ratliff Hall Renovation

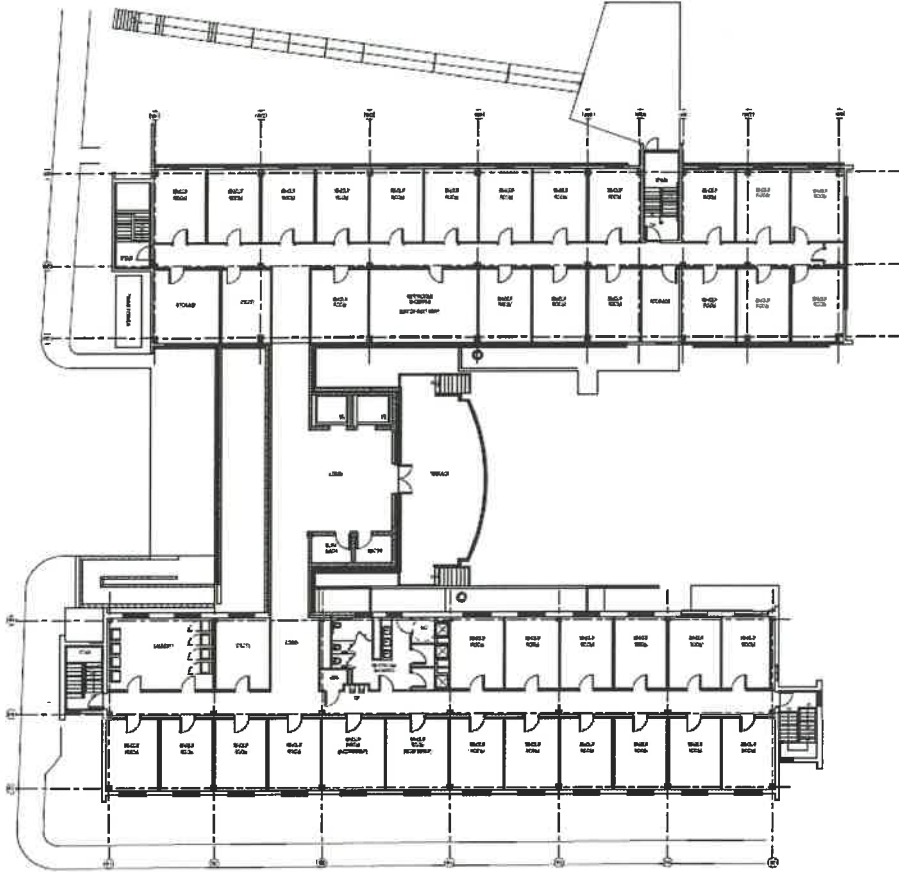


LOCATION:
Montgomery, WV

SIZE:
Ground 6,109 SF
First 13,256 SF
Second 13,256 SF
Third 13,256 SF
TOTAL 45,877SF



CONTACT:
Thomas S. Bailey
Former Executive VP
for Strategic Initiatives
KVC HEALTH SYSTEMS, INC.
304.542.4698



State Office Buildings 5,6, & 7



LOCATION:
Charleston, WV

COMPLETION:
On-Going

CONTACT:
Greg Melton
Director of General
Services
Capitol Complex Building
Building 1, Room MB-60
1900 Kanawha Blvd., E.
Charleston, WV 25305
304.558.2317



More than forty (40) years ago, ZMM (as Zando, Martin, and Milstead) designed the original State Office Buildings 5, 6, & 7. Over the last several years, ZMM has been assisting the State of West Virginia General Services with various improvements to the buildings. These improvements have ranged from substantial renovations to maintenance and repair type projects, and include:

Roof Replacement

ZMM assisted the General Services Division with a roof replacement for all three buildings. The roof replacement utilized a white EPDM roofing material, with consideration being given to sustainability. The existing ballast, roof membrane, and rigid insulation were also salvaged as part of the roof replacement project. Several unused mechanical penthouses, antennas, and other abandoned equipment was also removed.

Electrical Courtyard Improvements

ZMM assisted the General Services Division with a project to expand the electrical courtyard adjacent to Building 7, and simultaneously improve the electrical service entry to buildings 5, 6, & 7. This project required both historical (matching the existing granite panels), as well as very technical electrical engineering design considerations.

Door and Window Replacement

ZMM has assisted with two separate projects, one to replace the windows in Buildings 5 & 6, and the second the replace the doors at the entries to Buildings 5, 6, & 7. These projects included building envelope and security considerations. The projects were designed and staged to minimize disturbance to the buildings occupants.

State Office Buildings 5,6, & 7

Major Renovations

ZMM provided design services for the renovation of the 10th Floor of Building 5 for the Office of Technology - a project that was recognized with a design award from the West Virginia Chapter of the American Institute of Architects. The project focused on demonstrating the potential that exists in State Office Buildings 5 & 6 if the floors are renovated in a more contemporary manner that moves the open office spaces to the perimeter, and pulls the offices adjacent to the building core. The project also involved close coordination with the State Fire Marshal, the introduction of a new sprinkler service and fire pump into the building, demolition, construction management, and hazardous material abatement. The project was delivered considerably under the anticipated project budget. ZMM has also assisted on renovations to the 8th Floor of Building 6 for the Department of Education and the 2nd, 3rd & 4th Floors of Building 6 for the Department of Education and Division of Personnel. Work on the 8th Floor of Building 6 is the only additional renovation constructed to date. ZMM has recently been released to provide design services for Floor 7, 8 & 9 of Building 5 and the 7th Floor of Building 6.



Caulk Replacement

ZMM provided design services to remove and replace all of the caulk located between the limestone and precast panels on the exterior of Buildings 5, 6, & 7. The project also included cleaning of the building's exterior along with some repair work. The project was coordinated with the Capitol Building Commission, although to date, the construction for this improvement has not commenced.

Valve Replacement

ZMM assisted with a valve replacement project to isolate mechanical risers in Building 5 & 6. This technically intensive mechanical project will give the General Services Division greater control over the system, and will help isolate various risers in the event of significant system failures in the future.

Wood County Justice Center Renovation



LOCATION:
Parkersburg, WV

SIZE:
32,000 SF

COST:
\$5M

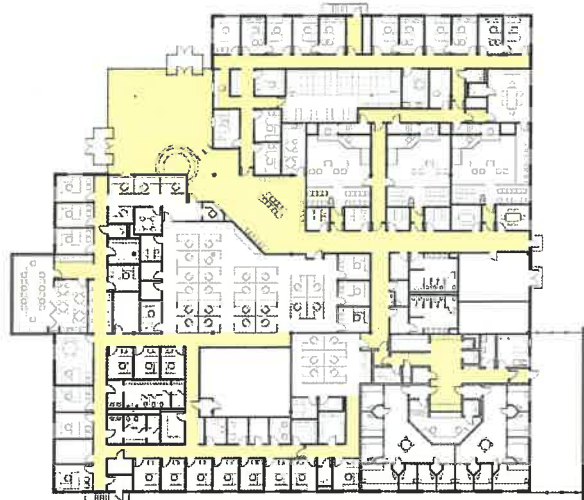
COMPLETION:
2011

CONTACT:
Mr. Blair Couch
Commissioner
No. 1 Court Square
Suite 205
Parkersburg WV 26101
304.424.1984
dbc@woodcountywv.com



This project was an extensive renovation of a 15 year old, 32,000 square foot, single story office building located in downtown Parkersburg, West Virginia. The building was purchased by the Wood County commission with the purpose of bringing together 3 government functions that had outgrown the 3 separate buildings that they occupied.

The renovated building consists of offices and 3 Courtrooms for the County's Magistrate Court system, public service windows for document pick-up and payment of fines, offices for the Sheriff's Department and Home Confinement and a 12-hour Inmate Holding Center.



Due to the building's new use, the interior was completely demolished leaving only the shell. The building's main entrance was relocated and redesigned to provide a new, more prominent identity to the building and to align with the new parking area created by the demolition of the adjacent existing magistrate court building. The old HVAC system was removed and replaced with a more energy efficient system and new, energy efficient lighting was installed. The project was designed around the U.S. Green Building Council's New Construction and Major Renovation Guidelines and is LEED Silver Certified.

Smith Hall - Marshall University

HVAC & Interior Improvements



LOCATION:
Huntington, WV

SIZE:
22,000 SF

COMPLETION:
2017

COST:
\$921,568.33

OWNER:
Randy Vaughn
Project Manager
Marshall University
1625 3rd Avenue
Huntington, WV 25755
304.696.6415



Smith Hall is located on 3rd Avenue on Marshall University's main campus in downtown Huntington, WV. The 22,000 SF project was a renovation to upgrade the architectural interior finishes and acoustical quality of the music practice and performance areas.

Originally constructed in the 1960s, Smith Music Hall was a product of institutionalized design that hit the right notes in its time, but failed to attain the environment necessary for the advances in musical instruction and performance. ZMM worked closely with Marshall University professors to determine the correct acoustics to meet the accreditation needs for the college. Being an extension of the Fine Arts Department, the Owner also felt that it was necessary to address the overall aesthetics for a creative mind and inspire the students. Taking inspiration from the Thundering Herd, the building was transformed with a mature palette and pops of green selected by the renovation committee.

Interior improvements included replacement of ceilings in all corridors and areas that were affected by the HVAC replacement. In addition to new ceilings, existing ceilings in the practice rooms received a sound blanket barrier and acoustical coating to improve the performance of the space when being used for individual practice sessions. Paint, carpet and acoustical wall treatments were also installed in practice rooms, classrooms, and offices.

Mechanical system improvements were also implemented at Smith Hall to humidify the 1st, 2nd and 3rd floors of offices and music practice rooms, and to correct other issues being experienced by the aging HVAC system. The existing HVAC system consisted of a dual duct system with pneumatic control for the distribution terminal units, and the existing air handling unit had been retrofitted a few years prior with a fan wall and 500 kw electric hot deck. The system was a high energy user and did not provide proper conditioning.

ZMM converted the system to VAV by removing the hot deck ductwork and terminal units and installing VAV terminal units with SCR electric reheat. Removing the hot deck electric heater with a much smaller electric coil in the reheat position, provided enough reserve electrical capacity to power the VAV terminal reheat.

Smith Hall - Marshall University

HVAC & Interior Improvements

In addition, ZMM retained the fan wall and existing chilled water coil and installed all new DDC controls. The dehumidification was provided by a gas fired humidifier to maintain stable humidity through the heating season. The building's mechanical system is operating satisfactorily in its first heating season.

Smith Music Hall's combination of HVAC, acoustical, and interior improvements highlights ZMM Architects and Engineers ability to provide multi-discipline design services on complex renovation projects



References

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