
WEST VIRGINIA STATE UNIVERSITY
1891

**AEOI 0490 WSC2400000004**

# A&E Services - HVAC Renovations Projects for Multiple Locations

McKINLEY
ARCHITECTURE + ENGINEERING

**State of West Virginia**
**Agency Expression of Interest**
**Architect/Engr**

| | | | |
|---|---|---|---|
| **Proc Folder:** 1386887<br>**Doc Description:** A&E Services-WVSU HVAC Renovations Projects<br>**Proc Type:** Agency Contract - Fixed Amt | | | **Reason for Modification:** |
| **Date Issued** | **Solicitation Closes** | **Solicitation No** | **Version** |
| 2024-02-29 | 2024-03-26 14:30 | AEOI 0490 WSC2400000004 | 1 |

**BID RECEIVING LOCATION**

WEST VIRGINIA STATE UNIVERSITY
5000 FAIRLAWN AVENUE
FERRELL HALL RM 301
INSTITUTE WV 25112

**VENDOR**

**Vendor Customer Code:** *000000206862

**Vendor Name :** McKinley Architecture and Engineering

**Address :**

**Street :** 129 Summers Street - Suite 201

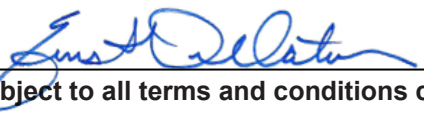
**City :** Charleston

**State :** West Virginia **Country :** USA **Zip :** 25301

**Principal Contact :** Ernest Dellatorre

**Vendor Contact Phone:** (304) 340-4267 **Extension:** 115

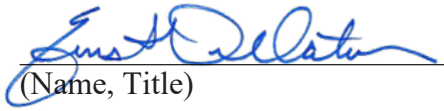
**FOR INFORMATION CONTACT THE BUYER**
Jerry D Rush
304-558-3397
jerry.rush@wvstateu.edu

**Vendor Signature X**  **FEIN#** 55-0696478 **DATE** March 22, 2024

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

## SIGNATURE/CERTIFICATION

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.



(Name, Title)

Ernest Dellatorre, Director of Business Development

(Printed Name and Title)

129 Summers Street - Suite 201, Charleston, West Virginia 25301

(Address)

(304) 830-5359 | (304) 233-4613

(Phone Number) / (Fax Number)

edellatorre@mckinleydelivers.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through e-mail, 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 Commission/Institution 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.

By signing below, I further certify that I understand the Commission/Institution is requiring the vendor to follow the provisions of WV State Code 5A-3-62 which automatically voids certain contract clauses that violate State law.

McKinley Architecture and Engineering

(Company)

(Authorized Signature) (Representative Name, Title)

Ernest Dellatorre, Director of Business Development

(Printed Name and Title of Authorized Representative)

March 22, 2024

(Date)

(304) 830-5359 | (304) 233-4613

(Phone Number) (Fax Number)

McKINLEY
ARCHITECTURE + ENGINEERING

March 22, 2024

Jerry Rush
Director of Purchasing
West Virginia State University
5000 Fairlawn Avenue
Ferrell Hall Room 301
Institute, WV 25112

Dear Mr. Rush and Members of the Selection Team,

McKinley Architecture and Engineering is pleased to provide West Virginia State University with our Expression of Interest for providing you with professional architectural and engineering design services and construction administration for HVAC replacements to be completed for Fleming Hall, Ferrell Hall, Wallace Hall, Drain-Jordan Library, and Cole Complex. As you review this submission, we emphasize the following strengths of McKinley with respect to your projects:

**McKinley Architecture and Engineering** has been providing design services since 1981. With offices in **Charleston,** Wheeling, and Martinsburg, WV, and Pittsburgh, PA, we support a professional staff of **over 50 employees** that includes **Architects, Engineers, Construction Contract Administrators,** a **Historic Preservationist, LEED Accredited Professionals**, and more.

We have completed a **multitude of HVAC assessments, renovations, replacements, upgrades, and/or repairs projects**. Over the years, our expertise has been called upon many times upgrading outdated machinery, scheduling for phased construction around occupied areas of the buildings, bringing the systems and load requirements up to compliance, and even evaluating and correcting errors in existing design (pipe sizing, piping material errors, control valving, etc).

We have also completed several HVAC replacements where we made the systems more **energy efficient**. We currently support clients on a number of significant HVAC projects that illustrate this ability. We are designing HVAC replacements for over a dozen **ESSERF projects** for 6 school districts across WV, so we know we can **handle multiple buildings simultaneously.**

**We love what we do, so we care about the results you get.** We are ready to begin **immediately** and can work to your schedule to get these projects designed and constructed, and will meet all your Goals and Objectives. Thank you for reviewing our submission and considering McKinley Architecture and Engineering for your five HVAC projects.

Sincerely,

Ernest Dellatorre
Director of Business Development
McKinley Architecture and Engineering
(304) 830-5359
edellatorre@mckinleydelivers.com

# Corporate Information

Founded in 1981, McKinley Architecture and Engineering is a multi-discipline full service A/E firm of over 50 employees offering comprehensive professional services in Architecture, Mechanical-Electrical-Plumbing Engineering, Project Management, LEED Design, Construction Contract Administration, and more. We have a broad range of skill and experience for projects involving governmental, higher education, PK-12 schools, sustainable and energy efficiency, municipal, historic preservation, commercial, sports and recreation, and industrial markets.

McKinley has made the 2020, 2021, 2022, and 2023 Inc. 5000 lists of the nation's fastest-growing private companies. We qualified for PSMJ's 2022 and 2023 Circle of Excellence as one of the top-performing Architecture and Engineering firms in the nation, and PSMJ's 2023 A/E/C Employer of Choice Award. We also made the Building Design + Construction's 2023 Giants 400 Report as a Top A/E Firm.

## Services

Architecture
Engineering
Arch./Eng. Design
Project Management
SAP (Safety) Evaluation
Interior Design
Learning Environment Planning
Educational Facility Planning
Sustainable Design
Historic Preservation
Construction Administration

## Associations

McKinley Architecture and Engineering is a member of the following organizations:

A4LE (formerly CEFPI), ACI International, AIA, ASCE, ASHRAE, ASPE, AWI, BOCA, NCARB, NFPA, WVEDC, and more


## Offices

**Wheeling**
1324 Chapline Street
Suite 400
Wheeling, WV 26003
(304) 233-0140

**Charleston**
129 Summers Street
Suite 201
Charleston, WV 25301
(304) 340-4267

**Martinsburg**
300 Foxcroft Avenue
Suite 306
Martinsburg, WV 25401
(681) 247-5618

**Wexford**
5000 Stonewood Drive
Suite 220
Wexford, PA 15090
(724) 719-6975


## Contact

Ernest Dellatorre
Director of Business Development
edellatorre@mckinleydelivers.com
(304) 830-5359

# Project Management

Our Project Managers are skilled professionals in the following areas:

Defining scope and the initial planning of a project are the foundation of a successful project. Project Managers collaborate with clients, principal architects, and design teams to understand project requirements. They are responsible for Scope Management. Throughout the project, they continuously assess and refine the scope, ensuring it remains aligned with the project's goals. They address any changes or deviations promptly with all stakeholders.

Project Managers create detailed financial plans, estimating costs for materials, labor, and other project elements. They track expenses, manage budgets, and allocate resources efficiently. Keeping the project within budget is critical and an ongoing focus of the Project Manager. Project Managers monitor expenses, negotiate contracts, and make informed decisions to avoid cost overruns.

They develop comprehensive project schedules, breaking down tasks and milestones. This involves coordinating with design teams, consultants, and contractors. Project Managers ensure that each phase progresses according to the timeline. They address delays promptly, adjusting schedules as needed.

Project Managers foster collaboration, resolve conflicts, and ensure everyone works cohesively. Architects collaborate with various consultants (structural engineers, MEP specialists, etc.). Project Managers facilitate effective communication between these experts, ensuring seamless integration of their contributions.

In summary, their multifaceted role combines creativity, leadership, and meticulous planning to transform architectural visions into reality.

# Engineering

McKinley Architecture and Engineering has provided engineering design and contract administration services for numerous clients as well as other design firms.

Our engineering staff has had special opportunities and experience related to various typical and atypical building types. Our engineering department has designed the first Chilled Beam HVAC System in West Virginia, a Variable Refrigerant Volume / Air-Cooled DX Multizone System with a cost reduction of 30% compared to existing mechanisms, and a building with all interior and exterior LED lighting which came in for the same cost as conventional lighting, just to name a few. We have a well rounded range of experiences and are not afraid to take on new challenges.

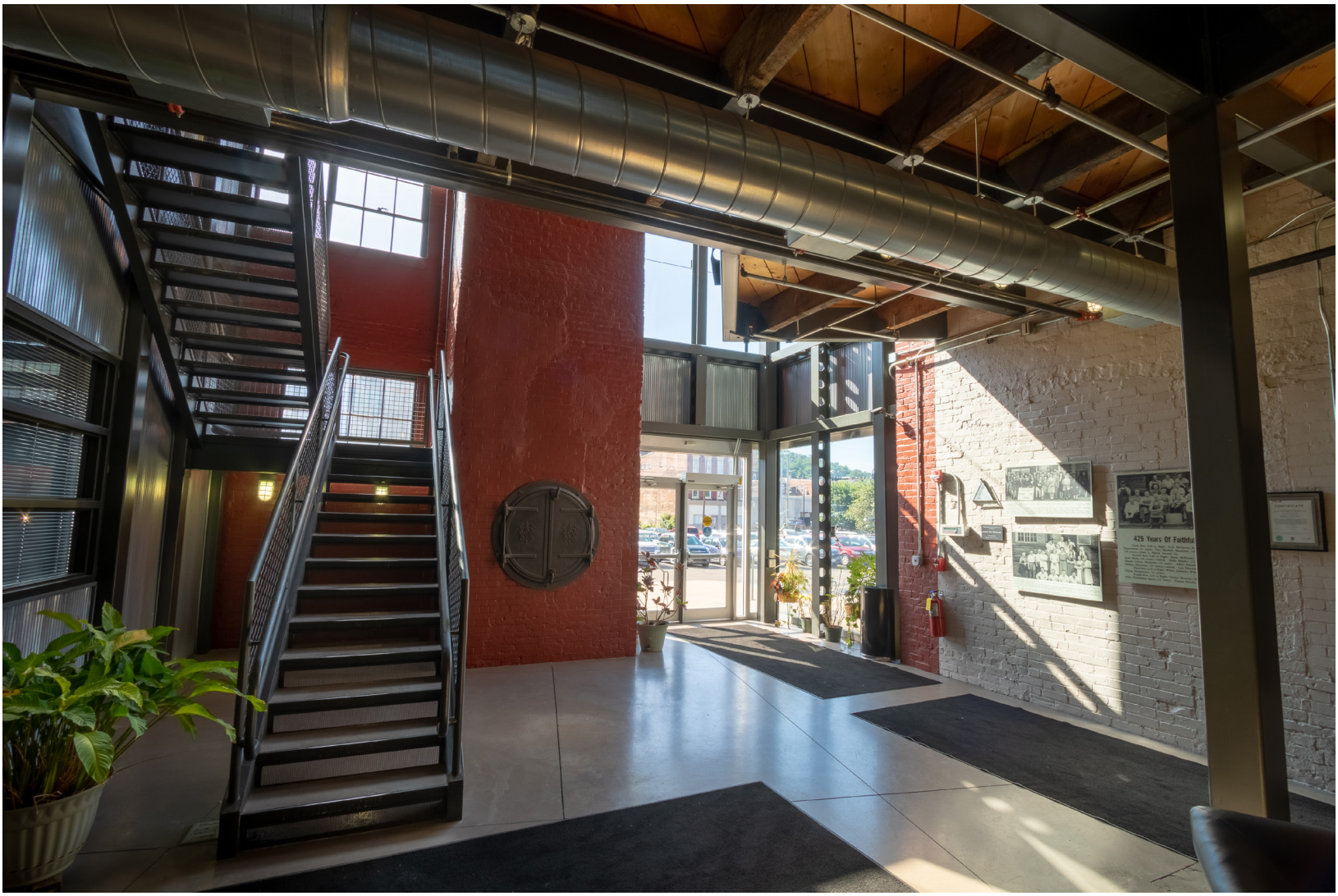
**Disciplines Available**

+ Mechanical Engineering
+ Electrical Engineering
+ Industrial Engineering
+ Plumbing Engineering
+ Fire Protection Engineering
+ Reverse Engineering

# Architecture

At McKinley Architecture and Engineering, we pride ourselves on being the best. Clients choose us for their design projects because they want to have the confidence that comes from working with an industry leader. They trust McKinley Architecture and Engineering to get projects done right, within budget and on schedule. That's because the firm's highly experienced, diversified staff is equipped with the latest technology and is on the job from start to finish.

Architectural design today is meeting of minds. At McKinley Architecture and Engineering, a talented range of professionals work together to deliver projects on time, on budget, and with a high degree of personal attention. We believe that design is an evolutionary process where client and architect learn from each other through frequent communication. Understanding budgets, schedules, goals and ideals, we pursue the optimum balance of these forces in the design of buildings.



# HVAC Commissioning

On staff, we have a **Qualified Commissioning Process Provider** who can provide independent commissioning services, not only on new facilities but also existing facilities.

This professional is **Tim E. Mizer, PE, RA, QCxP.** His **QCxP accreditation** was earned at the University of Wisconsin-Madison. He has been formally trained to fully understand how integrated HVAC systems function and how systems interface with others to run your building efficiently, and has a comprehensive knowledge of the full American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Commissioning Process. From this, we commission the project to ensure everything is working properly, and to teach the maintenance personnel how to use the machinery and gives them all the correct manuals.

**For existing buildings,** the commissioning provider can troubleshoot the existing systems to determine the fault of non-performing equipment or the reasons for uncomfortable spaces.

For new buildings and their systems, commissioning entails the review of the design plans, verifying the installations, and the oversight of the testing of the mechanical and electrical systems to ensure the owner is getting the type and quality of product expected.

# Sustainable "Green" Design

Buildings designed today will need to meet the demands of the future; McKinley Architecture and Engineering identifies the changes necessary in the design of today and to meet these demands. This approach helps to retain the buildings' long-term profitability and value, which achieves the buildings' **sustainability.**

McKinley approaches ecological design from a business perspective, offering **proactive** solutions to complex problems such as **indoor air quality**, **energy efficiency**, **resource depletion**, **water quality,** and much more.

With vast project experience in different business sectors, the McKinley Team can work alongside local designers to provide sustainable design and construction guidance. We also offer full architectural design services and guided design workshops on sustainable design issues.

**Our Philosophy** is to provide our clients with experienced leadership as well as state-of-the-art and **innovative** design expertise to accomplish the goals of your projects. **Function**, **economics** and **versatility**, in addition to the development of **strong aesthetic appeal**, are crucial elements in our design process.

We also believe that enhancement of the **physical environment** in which each individual **lives**, **learns**, and **works** should add significantly to the enjoyment of life. Our firm has dedicated our professional skills to attain these goals.

**For a few recent sustainable awards,** McKinley Architecture and Engineering was presented with the **2019 Governor's Award for Leadership in Buildings Energy Efficiency** at the Innovation & Entrepreneurship Day at the Capitol! We were recognized for our commitment to sustainability and energy efficiency in the design of multi-use facilities, office buildings, schools, and a wide variety of commercial, industrial, **government**, and historical structures.

Our designs have also won **West Virginia Department of Environmental Protection's Clean Energy Environmental Award**, **2 Black Bear Awards for the Highest Achievement** for the WV Sustainable Schools program, **2 U.S. Department of Education Green Ribbon Schools**, as well as a **Gold Medal Green Building Award** by Building of America, among others!

We also have a project that is **Collaborative for High Performance School (CHPS) Registered;** the United States' first green building rating program designed for schools.

Furthermore, we have designed 4 projects listed on the **U.S. Environmental Protection Agency's** ENERGY STAR program: **Building 55: West Virginia State Office Building in Logan**, Hilltop Elementary School, Cameron Middle/High School, and Johnson Elementary School. To receive an ENERGY STAR, you need to perform in the top 25% of the most energy efficient projects in the program. **Building 55: West Virginia State Office Building** is **one of the most energy efficient buildings in the State**, and is in the **Top 5%** of all Energy Star rated buildings in the Country!

# Leadership in Energy and Environmental Design

**LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™** developed by the U.S. Green Building Council (USGBC) is the nationally accepted standard for the design, construction, and operation of high performance green buildings (www.usgbc.org).

In January 2001, our firm was the **first organization in West Virginia to join the USGBC.** No other WV firm joined until nearly 2 years later!

We have several **LEED Accredited Professionals** on staff, along with our skilled architectural/engineering team, who will efficiently and cost effectively achieve certification under this standard or we can guide you through the process in order to develop sustainability goals specific to your project.

We have **LEED® Accredited Professionals**, including 4 who are **specialized in Building Design & Construction**:

- Peter T. Donnelly PE, **LEED AP**
- John R. Jefferis, **LEED AP**, CCM, MPM
- Kurt A. Scheer, PE, **LEED AP**
- Christina Schessler, AIA, **LEED AP BD+C**
- Jeffrey W. Wessel, AIA, **LEED AP BD+C**
- Thomas R. Worlledge, AIA, **LEED AP BD+C**, REFP

Our **LEED Certified Projects** are (LEED Rating System in parentheses):

- **Hilltop Elementary School** in Sherrard, WV (LEED for Schools 2.0)
  - The First LEED Certified School in the State of West Virginia!
- **Building 55: West Virginia State Office Complex** in Logan, WV (LEED NC 2.2)

All of our current **LEED Registered Projects** are (LEED Rating System in parentheses):

- Bellann in Oakhill, WV (LEED EB O&M)
- Cameron Middle/High School in Cameron, WV (LEED for Schools 2.0)
- SMART Office in Williamson, WV (LEED CI)

The LEED AP Specialty Logos signify advanced knowledge in green building practices and specialization in a particular field.

The LEED AP BD+C designation that Thom, Christina, and Jeff have achieved represents specialization in commercial design and construction.

**Thomas R. Worlledge, AIA, LEED AP BD+C, REFP has been a member of the USGBC since 2001; he was the first LEED Accredited Professional in the state of West Virginia! As a professional trainer for the Sustainable Building Industries Council, he teaches other design professionals in the art of High Performance School design. He is also a Founder & Chairman of the Board for the US Green Building Council's West Virginia Chapter.**

**Christina Schessler, AIA, LEED AP BD+C has been a member of the USGBC since 2009. In 2012 she received her Masters in Historic Preservation, so not only can she incorporate LEED "Green" aspects into new buildings; she can even incorporate energy efficient design into renovation/ preservation projects. Twenty percent of a building's energy consumption is embodied in the existing physical structure itself!**



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# Construction Contract Administration & On-Site Representation

**Construction Contract Administrator Involved from the Beginning of the Design Phase**

**Observe the Construction Progress**

**Liaison between the Owner, Contractor, and Architects/Engineers**

**Responsible for All Construction Progress Meetings and Minutes**

**Monitor the Construction Schedule**

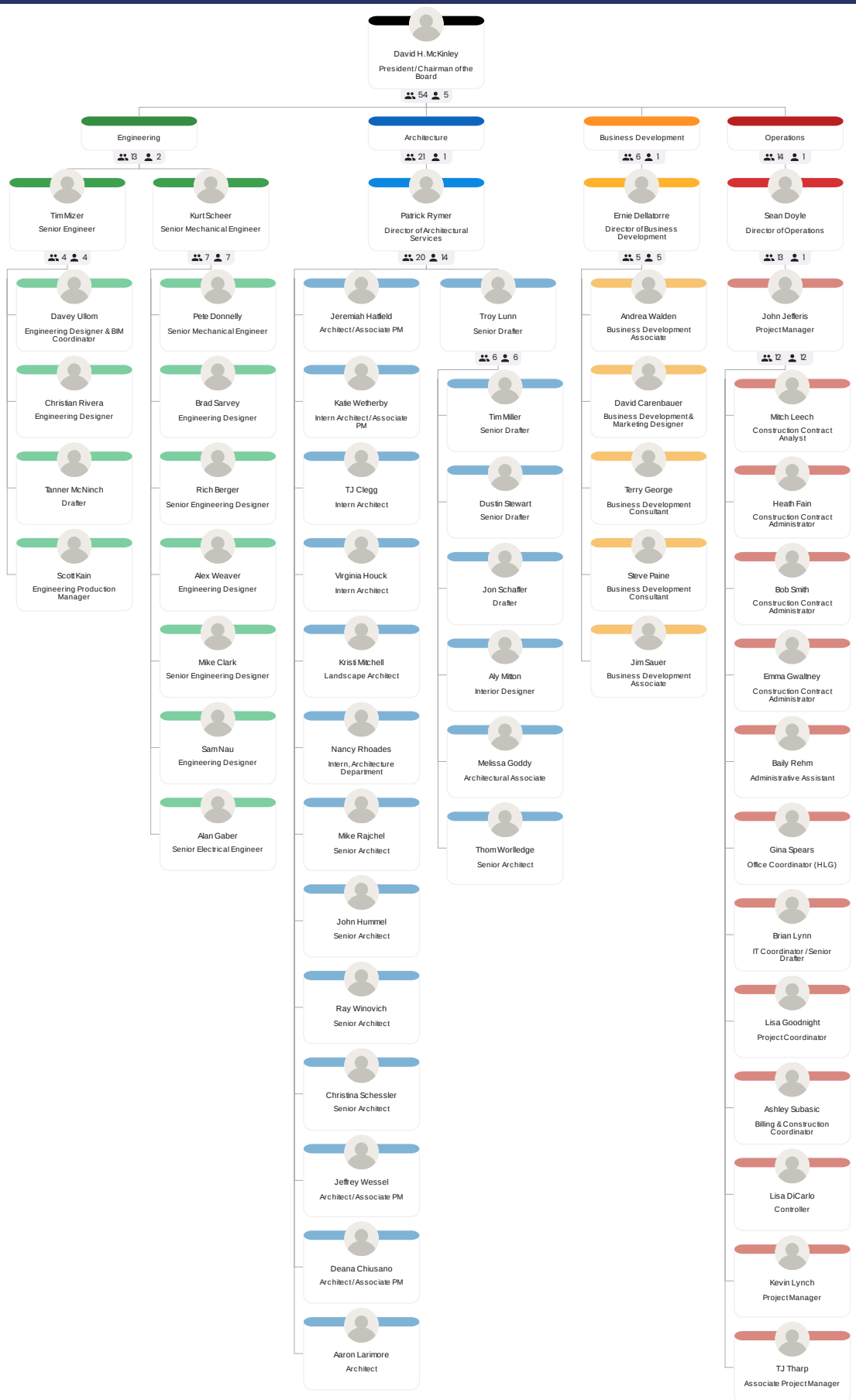
**Ensure that the Contractor is Following the Construction Documents**

**Verify Pay Application and Change Orders**

**Typically On-Site Once Every Two Weeks**
**(Provide Additional On-Site Representation if Requested)**


Our **Construction Contract Administrators (CA)** have an extra responsibility than what most firms' Construction Administrators have; our CAs are a part of the design process from **Day 1** (they are not thrown into the project only when construction starts; they are here from the beginning), so they know the ins-and-outs of the project. Our CAs have an important role as being the **liaison between the Owner, Contractor, and Architect.** The primary objective of the Construction Contract Administration services is to ensure completion of work the way the client wants it - **as scheduled and as budgeted.** Our CAs evaluate the quality of the work to verify that it meets the level required by clients; in addition, they monitor the contractor's progress to ensure that they are following the Construction Documents. They observe the construction progress, are responsible for all construction meetings and minutes, and they verify pay application and change orders. The Construction Contract Administrator is typically on-site once every two weeks, but we can provide additional on-site representation if requested.

# Organizational Chart

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# Design Team Flow Chart

## Project Manager / Point of Contact

**TJ Tharp, CSM**

## Engineering Team

**Tim E. Mizer, PE, RA, QCxP**
*Director of Engineering Services / Architectural Engineer / Architect / Qualified Commissioning Process Provider*

**Kurt A. Scheer, PE, LEED AP**
*Senior Mechanical Engineer / LEED Accredited Professional*

**Peter T. Donnelly, PE, LEED AP**
*Mechanical Engineer / LEED Accredited Professional*

**Alan M. Gaber, PE**
*Senior Electrical Engineer*

**Scott D. Kain**
*Engineering Production Manager / Senior Plumbing Engineering Designer*

**Michael J. Clark Sr.**
*Senior Electrical Engineering Designer*

**Richard G. Berger**
*Senior Mechanical Engineering Designer*

**David A. Ullom**
*BIM Coordinator / Fire Protection Engineering Designer*

**Bradley J. Sarvey**
*Mechanical Engineering Designer*

## Architectural Team

**Thomas R. Worlledge, AIA, LEED AP BD+C, REFP**
*Charleston Office Manager / Senior Architect / LEED Accredited Professional specializing in Building Design & Construction*

## Construction Contract Administration

**Heath L. Fain**

** McKinley Architecture and Engineering is willing to dedicate more professionals if they are needed, including more Architects, Engineers, Designers, LEED Accredited Professionals, CAs, etc.*

# TJ Tharp, CSM

## Associate Project Manager

### EDUCATION:

University of Phoenix
B.S. Business Administration –
Certified in Project Management - 2023

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Certified Project Manager in the LEAN Process

Certified ScrumMaster

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Associate Project Manager
Wheeling, WV (2023 to present)

PCS&build
Construction Project Manager
St. Clairsville, OH (2021-2023)

Lombardi Development
Construction Project Manager
Follansbee, WV (2021)

Property Maintenance Services Inc
Director of Operations
Bridgeport, OH (2017-2021)

Bedway Development Corporation
Director of Operations
Morristown, OH (2015-2017)

### MILITARY SERVICE AND AWARDS:

United States Marine Corps 2004-2008

Honorable Discharge

Purple Heart Recipient

Meritorious promotions, Letters of commendation, Letters of recognition, Overseas deployment to Iraq, Combat Veteran, Global War on Terrorism Award, Good Conduct Award, Navy and Marine Corps Commendation Medal

### SUMMARY OF EXPERIENCE:

Mr. Tharp is an associate project manager with many years of experience in managing large-scale construction projects. He has a proven track record directing project-wide operations administering multi-million dollar budgets, negotiating contracts, controlling expenses, and boosting efficiency and productivity. TJ will be responsible for the coordination and the completion of your project on time, within budget, and within scope. He will ensure instruments of service are meeting contractual requirements and he is key in managing client relationships and expectations.

### NOTABLE PROFESSIONAL EXPERIENCES:

Clay County Schools - Clay Elementary School HVAC renovation

Mason County Schools - County-Wide Safety/Security Entrances

Ohio County Schools - Wheeling Middle renovations

Steubenville City Schools - Several Projects County-Wide

Wayne County Schools - Buffalo School additions and renovations

Wayne County Schools - Wayne Elementary classroom additions

Wayne County Schools - Wayne High Vo-Ag Metal Building

Wood County Schools - North Parkersburg Elementary School

Wood County Schools - Lubeck Elementary School

Wood County Schools - New Vienna Elementary School

Wyoming County Schools - Baileysville ES/MS Upgrades

Wyoming County Schools - Career & Technical Center Multipurpose Building

Wyoming County Schools - Mullens PK-8 School

Ohio Valley Regional Transportation Authority - OVRTA roofing & exterior rehabilitation

Fort Henry Building - Fourth Floor office build-out and renovations

Friends of Wheeling - 722-724 Main Street renovations

Vineyard Children's Center & Cafe build-out and renovations

City of Glen Dale - Glen Dale Pool

Jefferson County Commission - McCollough Children's Home

Voto Sales

# Tim E. Mizer, PE, RA, QCxP

## Architectural Engineer / Architect / HVAC Commissioning Provider

## Director of Engineering Services

### EDUCATION:

Kansas State University
B.S. Architectural Engineering - 1983

University of Cincinnati
Architecture

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

**Registered Engineering in:**
Ohio
West Virginia

**Registered Architect in:**
Ohio

**Qualified Commissioning Process Provider**

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Director of Engineering Services
Architect / Engineer / Commissioning
Wheeling, WV (1995 to present)

M.C.C. Engineering
Director of Design
Columbus, Ohio (1988-1995)

Schooley Caldwell and Associates
Electrical & Mechanical Design
Columbus, Ohio (1986-1988)

Mizer Design
Free Lance Architectural Engineering Design
Columbus, Ohio (1985-1986)

Envirotek, Inc.
Drafting and Electrical & Mechanical Design
Raleigh, NC (1984-1985)

### SUMMARY OF EXPERIENCE:

A very talented and unique professional who is registered **both** in **engineering** and **architecture** which has provided him with a total understanding of the engineering components and the process necessary for integrating architectural design and building systems. Furthermore, as a **Qualified Commissioning Process Provider**, he has been **formally trained to fully understand how integrated HVAC systems function and how systems interface with others to run your building efficiently. He understands that the HVAC system's performance can reduce operating and maintenance costs, improve the comfort of a building's occupants, and extend the life of equipment.** He joined McKinley Architecture and Engineering in 1995, and has over 40 years of experience. As the **Director of Engineering Services**, Mr. Mizer's presence is a key to the design procedures required to coordinate the functionality of the engineering systems into the aesthetics of a building space.

### NOTABLE PROFESSIONAL EXPERIENCES:

West Virginia University - Colson Hall renovations, State Fire Training Academy, University Police Building renovations

West Virginia University's Institute of Technology - Conley Hall renovations, Maclin Hall Dormitory renovations

Fairmont State University / Pierpont Community & Technical College / Braxton County HS - Braxton County Center renovations/addition

Glenville State College - R.F. Kidd Library renovations

Southern WV Community and Technical College - Williamson Campus renovations, Wyoming Campus renovations

West Liberty University - College Union Building / Dining Hall renovations, Bonar Hall Dormitory renovations, Snack Bar renovations

West Virginia Northern Community College - B. & O. Building renovations, Board Room renovations, Education Center renovations, Hazel-Atlas Building renovations

Washington & Jefferson College - Old Main renovations

Wheeling University - Erma Ora Byrd Center for Educational Technologies / NASA's Classroom of the Future R&D Center

Boone County Schools - County-Wide Projects

Brooke County Schools - County-Wide Projects

Grant County Schools - County-Wide Projects

Hancock County Schools - County-Wide Projects

Ohio County Schools - County-Wide Projects

Wood County Schools - County-Wide Projects

# Kurt A. Scheer, PE, LEED AP

## Senior Mechanical Engineer / LEED Accredited Professional

### EDUCATION:

Penn State University
B.S. Architectural Engineering - 2001

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

**Registered Engineering in:**
Pennsylvania
West Virginia

**Member:**
US Green Building Council

**ASHRAE**

**ASPE**

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Senior Mechanical Engineer
Wexford, PA (2020 to present)

Allen & Shariff Corporation
Senior Mechanical Engineer
Pittsburgh, PA (2018-2020)

BDA Engineering, Inc.
Senior Mechanical Engineer
Homestead, PA (2006-2018)

Allen & Shariff Corporation
Mechanical Engineer
Pittsburgh, PA (2004-2006)

LLI Technologies, Inc.
Mechanical Engineer
Pittsburgh, PA (2001-2004)

### SUMMARY OF EXPERIENCE:

Mr. Scheer is a **Mechanical Engineer** with 20 years of experience in the Architectural Engineering industry with a focus on mechanical systems design. In addition, Kurt has overseen electrical, plumbing, and fire protection engineering for all his projects for 15 years. Market sectors such as hospitality, higher education, and commercial office are areas where he has significant experience. Additionally, Mr. Scheer has experience with **LEED Certified** projects and energy modeling, and he will design an energy efficient HVAC system that will meet all of your goals and objectives.

### NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

California University – Herron Hall Renovation*

Edinboro University - Crawford Hall Boiler Replacement*

Grove City University – New Student Housing*

Point Park University – Frontier Hall Renovations*

University of Pittsburgh – Amos Hall Renovation*

University of Pittsburgh – Public Safety Building*

University of Pittsburgh – William Pitt Student Union Renovations*

University of Pittsburgh (Greensburg) – Frank A. Cassell Hall*

Westminster College – Student Housing*

Cabell County Schools - Milton Elementary

Fayette County Schools - new Meadow Bridge PK-12 School & School Based Health Clinic

Fayette County Schools - Oak Hill High Gym renovations

Fayette County Schools - Institute of Technology renovations

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Harrison County Schools - new Lost Creek Elementary School

Wirt County Schools - ESSERF Projects

** previous work experience with a firm other than McKinley Architecture and Engineering*

# Peter T. Donnelly, PE, LEED AP

## Mechanical Engineer / LEED Accredited Professional

### EDUCATION:

State University of New York
A.A.S. Air Conditioning Technology - 1980

Rochester Institute of Technology
B.S. Energy Engineering - 1985

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

**Registered Engineering in:**
Pennsylvania

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Mechanical Engineer
Wexford, PA (2023 to present)

Stantec
Principal
Butler, PA (1987-2023)

### SUMMARY OF EXPERIENCE:

Mr. Donnelly is a senior level **Mechanical Engineer** with more than 42 years of experience in a wide range of energy-related research, design, and management projects. Building evaluations, facility audits, and space utilization studies make up a significant portion of Pete's workload, in addition to the design of HVAC, fire protection, and plumbing systems. He is well-versed in the use of computer simulation programs for energy analyses, including the TRACE 700 hourly simulation program. His project experience covers a wide range of building types, from schools and laboratories to healthcare facilities. Pete's strong communication skills facilitate excellent working relationships with team members and consultants. Furthermore, he is a **LEED Accredited Professional** and can design energy efficient features into your project.

### NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - School of Health Sciences

West Liberty University - Elbin Library HVAC renovations

Cabell County Schools - Milton Elementary School

Hampshire County Schools - new Central Elementary School

Hancock County Schools - Weir High School gym additions

Harrison County Schools - Liberty/Lincoln High School HVAC

Harrison County Schools - South Harrison School Complex HVAC

Tyler County Schools - Tyler Consolidated renovations/additions

Tyler County Schools - Headhouse

Wetzel County Schools - Bus Maintenance Facility

Wood County Schools - Madison Elementary School addition

Wyoming County Schools - Career & Technical Center Multipurpose Building

Cadiz Fire Department

City of Steubenville - Municipal Building renovations

GOES chiller study and recommendations

Weirton Senior Center HVAC renovation

# Alan M. Gaber, PE

## Senior Electrical Engineer

### EDUCATION:

Ohio Northern University
B.S. Electrical Engineering
with a Computer Science Option - 1986

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

**Registered Engineer in:**
Ohio
Pennsylvania

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Electrical Engineer
Wexford, PA (2022 to present)

Stantec Architecture
Electrical Engineer
Butler, PA (2018-2022)

Penn-Ohio Electrical Contractors
Electrical Engineer
Masury, OH (2013-2018)

HHSDR Architects & Engineers
Electrical Engineer
Sharon, PA (1995-2013)

Sturgeon Engineering, Inc.
Engineer-in-Training
Grove City, PA (1987-1995)

United Engineers & Constructors
Engineer-in-Training
Philadelphia, PA (1986-1987)

### SUMMARY OF EXPERIENCE:

Mr. Gaber is an **Electrical Engineer**, who for over 36 years, has a broad range of electrical and professional experiences designing building systems. He has experience working collaboratively with others to research and identify the clients' needs, and successfully meeting those needs. Alan takes pride in providing designs that are concise, efficient and within the client's budget. Each phase of his career has exposed him to different aspects of electrical design for the building construction industry, from utility company commercial service design, to commercial, industrial & institutional building design, and electrical construction management. Mr. Gaber's experiences also include K-12 & post secondary education, municipal/civic, personal care/senior living, and other sectors of business. His electrical design qualifications include lighting, power distribution, emergency/standby power, onsite generators, telephone/sound/communications, data communications, master clock/program, audio/video, fire alarms, security alarms, video surveillance, electric access, and more.

### NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - School of Health Sciences study

West Virginia University - Agricultural Sciences Building animal science lab renovations*

West Virginia University - School of Dentistry Health Sciences Center Building renovation*

Carnegie Mellon University - Hamerschlag Hall labs renovations*

Carnegie Mellon University - Mellon Institute labs renovations*

Harrisburg University - High Rise University Building*

Penn State University - Ritenour Building science lab renovation*

Yale University - Yale Science Building science lab renovation and an autopsy lab*

Cabell County Schools - Milton Elementary

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Hancock County Schools - Weir High Gym additions

Fayette County Schools - new Meadow Bridge PK-12 School

Fayette County Schools - Institute of Technology renovations

** previous work experience with a firm other than McKinley Architecture and Engineering*

# Scott D. Kain

## Engineering Production Manager / Senior Plumbing Designer

### EDUCATION:

Technology Education College /
Ohio State University
Associates in Mechanical Design - 1996

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Engineering Production Manager
Engineering Designer
Wheeling, WV (2001 to present)

HAWA Inc.
Mechanical Designer
Columbus, OH (1998-2001)

Autotool Inc.
Engineer
Columbus, OH (1995-1998)

### SUMMARY OF EXPERIENCE:

Mr. Kain, our **Engineering Production Manager**, is an accomplished engineering designer who has performed in all the engineering trades we provide; specializing in electrical, plumbing, and fire protection. He has been utilized for various McKinley projects that needed additional mechanical, structural, and architectural manpower. In addition, Mr. Kain has also provided 3D renderings, to aid in business development, during his long tenure at McKinley Architecture and Engineering.

### NOTABLE PROFESSIONAL EXPERIENCES:

**West Virginia State University - Gus R. Douglass Economic Development Center (DigiSo) renovations/repurpose**

Fairmont State University - "University Terrace" College Student Housing Apartments Complex

Glenville State College - R.F. Kidd Library renovations

Glenville State University - School of Health Sciences study

Washington & Jefferson College - Multiple Projects

West Liberty University - College Union renovations

West Liberty University - Dining Hall renovations

WV Northern Community College - B. & O. Building renovations

WV Northern Community College - Education Center renovations

West Virginia University - Colson Hall renovations

West Virginia University - ADA Assessment and Transition Plan

West Virginia University - State Fire Training Academy

West Virginia University - Stalnaker Hall roof replacement

West Virginia University - University Police Building renovations

WVU Institute of Technology - Maclin Hall renovations

WVU-Reynolds School of Nursing

Wheeling University - Sports Complex Master Planning

Building 55: WV State Office Complex in Logan (LEED Certified)

Building 34: WV State Office Complex in Weirton

West Virginia Health & Human Resources Wheeling Office renovations

WVDRS Wheeling District's new office space fit-out

The Towers Building renovations

Belmont County Commission - Courts & Offices build-outs

Fort Henry Building renovations

# Michael J. Clark Sr.

## Senior Electrical Engineering Designer

### EDUCATION:

Eastern Gateway Community College
A-ATS Electro-Mechanical Engineering - 2012

Jefferson Community College
A-ATS Electrical Trade Technology - 2003

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Certified in SMAW Weld Process & Basic Welding and Applications 2002

West Virginia Journeyman License

Ohio Fire Alarm License

OSHA 30 Certified

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Electrical Engineering Designer
Wheeling, WV (2012 to 2018, 2020 to present)

Arcelor Mittal
Maintenance Technician Electrician
Weirton, WV (2012)

M.J. Electric
Journeyman Electrician
Iron Mountain, MI (2010-2012)

Erb Electric Company
Journeyman Electrician
Bridgeport, OH (2009-2010)

Bechtel Group Inc.
Journeyman Electrician
Glendale, AZ (2009)

Cattrell Companies, Inc
Journeyman Electrician
Toronto, OH (1998-2009)

### SUMMARY OF EXPERIENCE:

Mr. Clark is an Electrical Engineering Designer and a Certified Journeyman Electrician with over 25 years of industrial, commercial and residential experience. He is knowledgeable in all areas of the national electrical code and excels in analyzing and solving problems with various electrical controls and systems. Mr. Clark brings a cross-trained background to our projects, being skilled in both the design and the construction ends which gives him a unique ability to understand all aspects of a project. He is also adept in performing electrical and mechanical installations, maintenance and repairs in plant facilities. Furthermore, he is seasoned as an Electrical Foreman and Superintendent on both commercial and industrial job sites. His key skills include Electrical Systems & Controls, Installations & Maintenance, Electromechanical Repairs, Blueprints & Schematics, Generators & Transformers, Switches & Circuit Breakers, Electrical Code, Safety & QA, Wiring Diagrams, Troubleshooting, Testing Instruments, Motors & Conduit, CAD-2D/3D, Welding, & Residential construction. Mike has designed for similar renovation projects, and your project might need his design for electrical system improvements, powering of all new mechanical equipment, electrical distribution, updated controls, switch gears, energy efficiency, upgrades to power feeds, access control, safety & security alarm systems, and more

### NOTABLE PROFESSIONAL EXPERIENCES:

Fairmont State University - "University Terrace" College Student Housing Apartments Complex

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

Washington & Jefferson College - Multiple Projects

West Liberty University - West Family Stadium / Russek Field lighting

West Liberty University - new Soccer & Track Stadium / West Family Athletic Complex

WV Northern Community College - Campus-Wide parking lots

Franciscan University OP#1 Multi-tenant Retail Building

Franciscan University OP#2 Office / Retail Building

United States Postal Service - open-end IDIQ / multiple projects

Holiday Inn Express Hotels - on-call contract / multiple projects

Building 55: WV State Office Complex in Logan (LEED Certified)

Brooke County Schools - new Brooke Middle School

Fayette County Schools - new Meadow Bridge PK-12 School

# Richard G. Berger

## Senior Mechanical Engineering Designer

### EDUCATION:

CCAC of Allegheny County
Concentration: HVAC

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Pennsylvania Sheet Metal Journeyman License

Volunteer Fireman (retired)

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Senior Engineering Designer
Wexford, PA (2020 to present)

CJL Engineering
Lead HVAC Senior Mechanical Designer
Moon Township, PA (2019-2020)

Lovorn Engineering
Lead HVAC Senior Mechanical Designer
Blawnox, PA (2013-2019)

Stantec Corporation (formerly Burt Hill)
Lead HVAC Mechanical Designer
Butler, PA (1997-2013)

Peter F. Loftus division of Eichleay Engineers
Lead HVAC Mechanical Designer
Pittsburgh, PA (1989-1997)

SSM Industries, Inc.
Sheet Metal Professional Licensed Journeyman
Pittsburgh, PA (1979-1989)

### SUMMARY OF EXPERIENCE:

Mr. Berger is a mechanical engineering professional with over 35 years of experience in HVAC design. His skills include Revit, AutoCadd, Microstation CADD, HVAC duct work and piping design, HVAC calculations, project management, and HVAC and piping field experience. Rich is a Professional Sheet Metal Journeyman license Sheet Metal Workers Local 12. Have designed for healthcare, K-12 schools, universities, high rise commercial, lab renovations and hotels. He will help in the mechanical assessment for the initial facility visits to fully determine the scope of work, as well as designing, specifications, equipment selection using various manufacturer's selection software, heating/cooling loads, shop drawing submittals, and more.

### NOTABLE PROFESSIONAL EXPERIENCES:

West Liberty University - Elbin Library HVAC renovations

Fayette County Schools - new Meadow Bridge PK-12 School & School Based Health Clinic

Fayette County Schools - Oak Hill High gym renovations

Fayette County Schools - Valley PreK-8 renovations

Fayette County Schools - Institute of Technology renovations

Hampshire County Schools - Capon Bridge E.S. gym addition

Hancock County Schools - Weir High mechanical upgrades

Harrison County Schools - Gore Elementary School build-out

Ohio County Schools - Wheeling Middle renovations

Steubenville City School District - Steubenville High School commons renovations

Wetzel County Schools - Paden City E.S. Multipurpose addition

Wetzel County Schools - Short Line School HVAC

Wirt County Schools - County-Wide ESSERF Projects

City of Moundsville - Municipal/Public Safety Building

Tyler County Commission - Judicial Annex Building

Brooke County Judicial Center Courthouse

Main Street Bank - Toronto

Summit Building renovations

Williamson Hospital mechanical renovations

YWCA Renovations

# David A. Ullom

## BIM Coordinator / Mechanical Engineering Designer

### EDUCATION:

Fairmont State University
B.S. Mechanical Engineering Technology - 2011

Pierpont Community and Technical College
Associates Degree in Applied Sciences:
Drafting and Design - 2011

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
BIM Coordinator
Engineering Designer
Wheeling, WV (2019 to present)

Kennametal Inc.
Sales Engineer (2016-2019)
Applications Engineer (2012-2016)
Latrobe, PA

Marion County Assessors Office
Map Developer
Fairmont, WV (2010-2012)

### SUMMARY OF EXPERIENCE:

Mr. Ullom, our BIM Coordinator, is a results-driven individual who prioritizes safety, cost-effective solutions, and exceeding customer expectations. He is proficient in Autocad, Inventor, and Revit software. David also has experience as a Sales Engineer, Applications Engineer, and Map Developer, which provides an unique understanding for problem solving. Mr. Ullom will assist in the evaluation and designs of all of the mechanical systems (and possibly plumbing and fire suppression systems) in your facility.

### NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

Mid-Ohio Valley Technical Institute (MOVTI) renovations

Cabell County Schools - Milton Elementary

Fayette County Schools - Institute of Technology renovation

Fayette County Schools - new Meadow Bridge K-12 project

Fayette County Schools - Valley PreK-8 renovations

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Harrison County Schools – Lost Creek Elementary renovations

Harrison County Schools – Gore Elementary build-out

Ohio County Schools - Bridge Street Middle renovations

Ohio County Schools - Elm Grove Elementary renovations

Ohio County Schools - Middle Creek Elementary renovations

Ohio County Schools - Triadelphia Middle addition

Ohio County Schools - Warwood School renovations

Ohio County Schools - Wheeling Middle renovations

Ohio County Schools - Wheeling Park High renovations

Ohio County Schools - Woodsdale Elementary renovations

Steubenville City School District - Steubenville High renovations

Summers County Schools - HS/MS addition & renovations

# Bradley J. Sarvey

## Mechanical Engineering Designer

### EDUCATION:

Youngstown State University
B.S.A.S. Mechanical Engineering Technology - 2021

Butler Community College
A.A.S. Engineering Technology with CADD - 2019

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Engineering Designer
Wexford, PA (2021 to present)

Allen + Shariff Corp
Mechanical Engineering Designer
Pittsburgh, PA (2020-2021)

JCM Associates, Inc.
Mechanical Engineering Designer
Upper Marlboro, MD (2019-2020)

Butler County Prison
Corrections Officer
Processing Officer
Acting Sergeant
Butler, PA (2009-2019)

### SUMMARY OF EXPERIENCE:

Mr. Sarvey is a goal-driven, self-directed professional with experience in Mechanical Design for educational, commercial, and residential projects. He is skilled in Revit, AutoCAD, Navisworks, Trane Trace, PTC Mathcad, and more.

### NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - School of Health Sciences study

Cabell County Schools - Milton Elementary

Fayette County Schools - Midland Trail High Gym renovations

Fayette County Schools - Oak Hill High School Gym renovations

Hampshire County Schools - new Central Elementary

Hampshire County Schools - new North Elementary

Hampshire County Schools - new West Elementary

Hancock County Schools - Weir High gymnasium additions

Harrison County Schools - South Harrison Complex HVAC

Marshall County Schools - Central Elementary ESSERF

Summers County Schools - Hinton Elementary cafeteria

Summers County Schools - Talcott Gym Renovation

Wayne County Schools - Tolsia High School Gym

Wayne County Schools - Vinson Middle HVAC

Wayne County Schools - Wayne Elementary HVAC

Wayne County Schools - Wayne High HVAC

Wayne County Schools - Wayne Middle HVAC

Wetzel County Schools - Paden City Elementary Multipurpose addition

Wheeling YWCA renovations

NOAA 3rd Floor renovations

# Thomas R. Worlledge, AIA, LEED AP BD+C, REFP

## Senior Architect / Specialized LEED Accredited Professional

## Charleston Office Manager

### EDUCATION:

Virginia Polytechnic Institute & State University
Master of Architecture - 1992

Fairmont State College, School of Technology
B.S. Architectural Eng. Tech. - 1983

### PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

**Registered Architect in:**
West Virginia
Ohio
Pennsylvania
Tennessee
Virginia

**National Board Certification:**
NCARB #48600

**President:**
West Virginia Society of Architects

**Member:**
The American Institute of Architects
US Green Building Council
Sustainable Building Industries Council
Recognized Educational Facility Professional

**Founder & Chairman of the Board:**
US Green Building Council's WV Chapter

**Former voting member:**
ASHRAE 90.1 Int'l Energy Code Committee

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Manager, Charleston Office
Charleston, WV (2005 to present)

Proactive Architecture Inc.
President
Charleston, WV (1999-2005)

Silling Associates Inc.
Vice President
Charleston, WV (1992-1999)

TAG Architects
Charleston, WV (1985-1990)

Alpha Associates Inc.
Morgantown, WV (1983-1985)

### SUMMARY OF EXPERIENCE:

Mr. Worlledge is a skilled **Architect** with over 35 years of experience, who has been the former President of the WV chapter of AIA, has received State and National design awards, and placed in National and Global design competitions. Unlike many architects who are new to green building and alternate energy, Thom started his career designing and building alternate energy systems, and was the first LEED Accredited Professional in West Virginia! He believe energy efficient design is simply good design practice. As a **LEED Accredited Professional specializing in Building Design & Construction (LEED AP BD+C)** and a **recognized sustainable design expert**, he has **2 LEED Certified** projects, **multiple LEED Registered** projects, several other energy-efficient projects, has articles published in State and National trade publications, was a featured speaker at multiple State and National conferences, served on the committee that set the ASHRAE 90.1 Standards for the International Energy Code, professionally teaches and trains other professionals in the art of High Performance Design, is a Founder & Chairman of the Board for the US Green Building Council's West Virginia Chapter, and much more.

### NOTABLE PROFESSIONAL ACHIEVEMENTS:

**West Virginia State University - Gus R. Douglass Economic Development Center (DigiSo) renovations/repurpose**

Fairmont State University - College Student Housing Apartments 3 Building Complex ($30M)

Southern WV Community & Technical College - Wyoming/McDowell Campus and Williamson Campus renovations

West Virginia University - University Police Building office fit-out

WVU Institute of Technology - Maclin Hall Dormitory build-out

Building 55: WV State Office Complex in Logan (**LEED Certified** / **ENERGY STAR Rating of 91**)

West Virginia Department of Health & Human Resources' Ohio County Office Building fit-out / renovations

Boone County Schools - Several projects County-Wide

Hancock County Schools - Several projects County-Wide

Harrison County Schools - new Johnson Elementary School (**ENERGY STAR Rating of 90 / NCWV Media's Public Project of the Year / Collaborative for High Performance School registered**)

Marshall County Schools - new Hilltop Elementary (**LEED Certified** / **ENERGY STAR Rating of 86** / **won multiple State and National Awards & Recognitions**)

Ohio County Schools - Several projects County-Wide

Wood County Schools - Several projects County-Wide

United States Postal Service - multiple projects throughout WV

West Virginia State Police - state-wide projects

Veterans Affairs Medical Centers - multiple VAMCs around WV and PA

# Heath L. Fain

## Construction Contract Administrator

### EDUCATION:

Putnam Career and Technical College
Certificate in Journeyman Carpentry - 2005

West Virginia State University
Associate in Architectural Drafting / Construction Management - 2003

### PROFESSIONAL LICENSEES AND CERTIFICATIONS:

**Capital Fund Specialist**

**UPCS Certified Housing Inspector**

**LEED Green Associates Sustainable Green Building Practices**

**HVAC Technician Type I, II**

**Lead Paint Removal**

### PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Construction Contract Administrator
Charleston, WV (2023 to present)

Union Mission Ministries Incorporated
Vice President of Operations
Charleston, WV (2018-2023)

Camel Technologies
Operation Manager
Dunbar, WV (2013-2018)

Local Union 128 & 1207
Journeyman Carpenter
Charleston, WV (1995-2016)

Charleston-Kanawha Housing Authority
Modernization Coordinator
Charleston, WV (2004-2013)

### SUMMARY OF EXPERIENCE:

Mr. Fain has vast experience in construction, with construction management, business management, and contract contract administration. With a proven track record of success within several industries he brings a well-rounded approach to keeping things on task, finding solutions and working to see a job completed in excellence. As your CA, Heath will observe the construction progress; is the liaison between the owner, contractor, and architect/engineer; will ensure that the contractor is following the construction documents; and more.

### NOTABLE PROFESSIONAL EXPERIENCES:

**McKinley Architecture and Engineering**

Cabell County Schools - new Milton Elementary

Fayette County Schools - county-wide window and door replacements

Fayette County Schools - 6 Schools' Outdoor Classrooms

Fayette County Schools - new Meadow Bridge PK-12 School

Fayette County Schools - Valley PK-8 School renovations

Summers County Schools - HS/MS addition and renovations

Summers County Schools - Talcott Gym renovations

Wayne County Schools - county-wide plumbing replacements

Wayne County Schools - county-wide window replacements

Wayne County Schools - Tolsia High School gymnasium

Wyoming County Schools - Westside HS Field renovations

Wyoming County Schools - Wyoming East HS Field renovations

WV Lottery Building roof

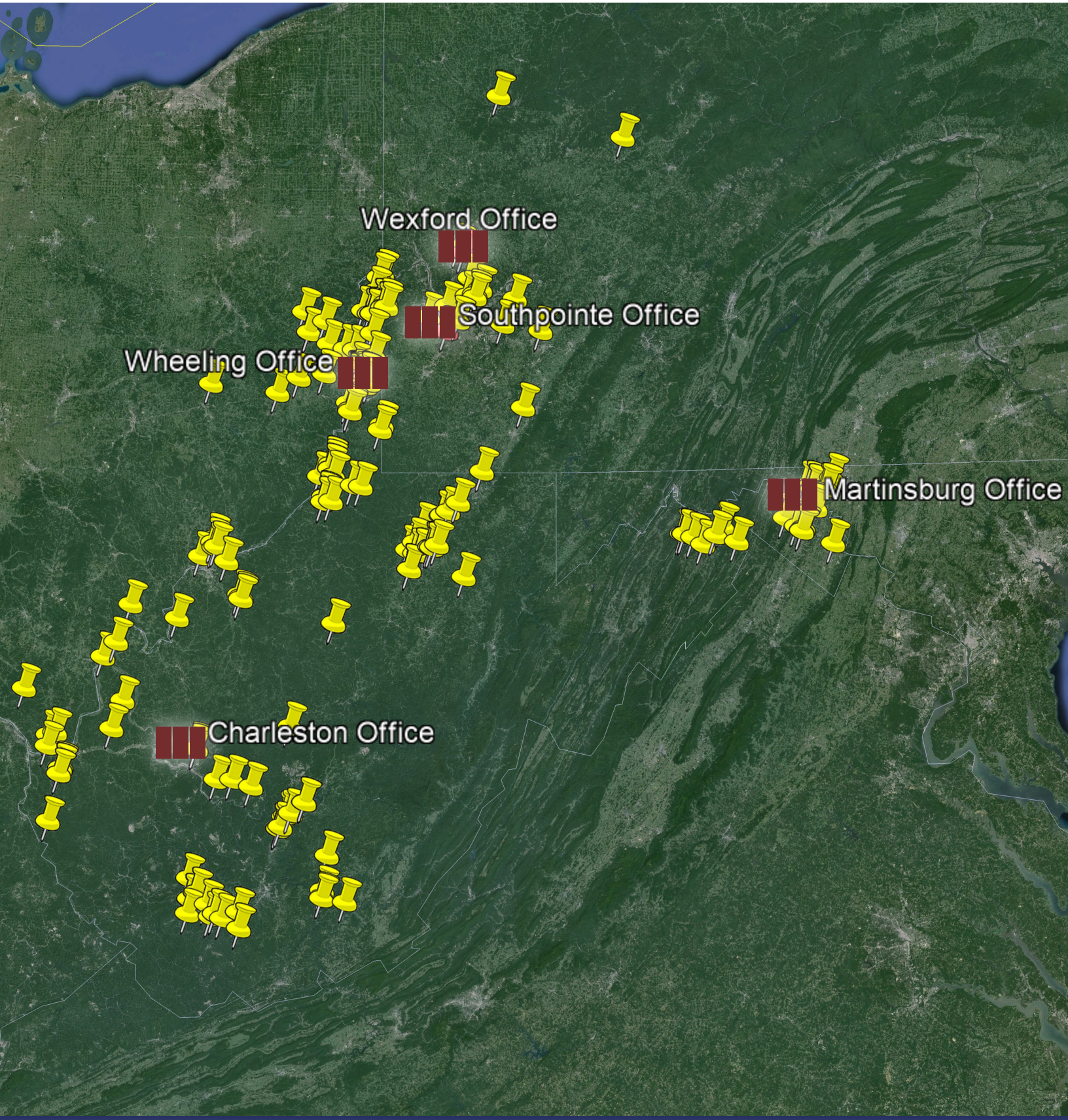
Kanawha Valley Memorial Garden

**Union Mission Ministries Incorporated***
Mr. Fain was employed as the VP of Operations and he worked as a part of the administrative team, to facilitate programs, purposes and policies detailed by the CEO to ensure the success and sustainment of Union Mission Ministries. He assisted in budget preparation, maintaining budget restraints, tracking expenditures, and had direct oversight of all Union Mission facilities, vehicles and equipment. His experience also included supervision over multiple directors and staff. He met with, directed, and trained staff on a regular basis. Mr. Fain coordinated and supervised all outside contractor maintenance work, maintained work order program, as well as maintained working drawings and possessed ability to read and interpret those drawings.

** previous work experience with a firm other than McKinley Architecture and Engineering*

# Current Projects

McKinley Architecture and Engineering currently has over **200 projects** in the design and construction phases, representing **over $200 million** in construction value.




McKINLEY
ARCHITECTURE + ENGINEERING

# HVAC Replacement Projects

Our firm has completed a variety of projects, which serve to illustrate the creative and talented nature of our professional design staff. The following examples are chosen to exhibit a **partial assortment** of **HVAC system replacement** projects:

Barnesville School District
Bayer Heritage Federal Credit Union
Bennett Square
Boone County Schools - multiple projects
Braxton County Schools - multiple projects
Braxton County Senior Center
Brooke County Schools - multiple projects
Capitol Theatre
Cardinal Health - multiple projects
Carenbauer Wholesale Corporation
Charleston Enterprise Center
Clay County Schools Middle School
Coldwater Creek Distribution Centers
Community Action Southwest Senior Center
Community Trust Bank - multiple projects
Convenient Food Mart
Cornerstone Group - Highlands Office
Coronet Foods - multiple projects
Diocese of Wheeling/Charleston Rectory
Dr. Chapman DDS Office Building
Dr. Ganzer Medical Office Building
First Choice America Federal Credit Union
First National Bank Williamson
Franciscan Multi-Tenant Building
Franciscan Office Building
Fresh-Twist
Glenville State College - RF Kidd Library
Grant County Schools - multiple projects
Grave Creek Mound Museum
Hampshire County Courthouse
Hancock County Schools - multiple projects
Hope VI Units
Jefferson County Justice Center
Linsly School - multiple projects
Marshall County Court
Marshall County Schools - multiple projects
Martins Ferry Stadium
McDowell County Schools - Mount View
McKinley Carter Wealth Services renovations
Mt. Calvary Chapel
Oglebay - Glassworks
Ohio County Schools - multiple projects
Orrick's Global Operations Center
Panhandle Cleaning & Restoration
PRT Technical Center renovation
Raleigh County Emergency Services Authority
Ritchie County Schools - MS/HS
Sisters of St. Josephs Convent
Southern WV Community & Technical Center
St. Matthews Church Parish Hall
Steubenville MLK Recreation Center
Summers County Schools - Summers Middle
The Towers Building in Steubenville
Tyler County Schools - multiple projects
Union Bank Sistersville Branch
USPS - multiple projects
Wagner Building
WV Department of Health and Human Resources
WV Department of Highways
West Virginia Independence Hall
West Virginia Northern Community College
WV State Police - multiple projects
West Virginia University - multiple projects
Wetzel County Schools - multiple projects
Wood County Schools - multiple projects
(*and much more*)

# ESSERF HVAC Projects

We have recently been awarded several **Elementary and Secondary School Emergency Relief Fund(ESSERF)** Projects for several Schools Districts across the State. Most are HVAC renovations, but there are also roof replacements. The ESSERF projects include, but are not limited to, these HVAC projects:

**Fayette County Schools – Fayette Institute of Technology**

- Comprehensive HVAC & Electrical Renovation
- $4,900,000 (Bid Fall of 2022 / Construction in Progress)
- Complete replacement of all airside equipment within the building, including new electrical service.
- Multiple single-zone Package Rooftop Units for all classrooms w/ gas or hydronic heat, Active Dehumidification.
- Full Air Conditioning for High-Bay / Shop Areas.
- Kitchen Ventilation
- Full Building Automation System

**Fayette County Schools – Midland Train & Oak Hill High Schools**

- Gymnasium Renovations / HVAC funded via ESSERF
- $1,500,000 (Mechanical substantially complete)
- New packaged Rooftop Units for gymnasiums & locker rooms
- Energy Recovery / Demand Controlled Ventilation
- Gas Heating and Heat Pump / Electric Heat
- Integrated into existing Building Automation System

**Fayette County Schools –Valley PK8**

- Comprehensive HVAC & Electrical Renovation
- $3,500,000(Bid Fall of 2022 / Construction in Progress)
- Partial renovation of airside systems in building.
- New Electrical Service
- Two new large VAV Rooftop Units, new VAV boxes & Controls
- Full Air Conditioning for Gymnasium & Locker Rooms
- Full Building Automation System

**Harrison County Schools – Multiple Buildings**

- South Harrison HS / MS - $2,500,000
  - Gymnasium Air Conditioning / Boiler Plant / New Electrical Service
- Bridgeport Middle & High School - $1,000,000
  - New Boilers (MS) / Full Boiler Plant (HS)
- Lincoln HS / Liberty HS - $1,000,000
  - Gymnasium Air Conditioning
- Bridgeport MS / Bridgeport HS / Robert C. Byrd HS - $2,000,000
  - Gymnasium Air Conditioning
- Simpson Elementary - $1,800,000
  - New Roofing , New Classroom Packaged Rooftop Units ***

# ESSERF HVAC Projects

**Marshall County Schools – Central Elementary**

- Comprehensive HVAC & Electrical Renovation
- $2,300,000 (Construction substantially complete)
- Complete renovation of airside systems throughout the building.
- Removal of existingVAV Rooftop Units & Steam Boiler
- Single zone Packaged Rooftop Units for all classrooms / complete with Energy Recovery and Active Dehumidification
- Existing Cafeteria/Gym provided with full Air Conditioning
- New Electrical Service
- Full Building Automation System / Integration

**Wayne County Schools – Multiple Buildings**

- $9,000,000 across multiple buildings and projects
- Multi-Building window replacement. (In Construction)
- Multi-Building plumbing fixture replacement. (Completed)
- Recently Awarded Projects
  - Wayne Elementary School – HVAC (Packaged Rooftop Units)
  - Wayne Middle School – Classroom HVAC (Self-Contained Units)
  - Wayne High School – Classroom HVAC (Self-Contained Units)
  - Vinson Middle School – Classroom HVAC (Self-Contained Units)
  - Tolsia Middle School – Classroom HVAC (Self-Contained Units)
- Multi-Building Building Automation System / Integration

**Wirt County Schools –Wirt Middle School**

- Comprehensive HVAC Renovation
- $2,100,000 (Construction complete March 2023)
- Complete renovation of existing Water Source Heat Pump System.
- New Water Source Heat Pumps for all classrooms
- New Closed Circuit Fluid Cooler - “right sized”
- New Condenser Water Loop
- Full Building Automation System / Integration

Statewide On-Call Agreement

# WVDOT, Division of Highways

## State-wide, West Virginia

### Owner
West Virginia Department of Transportation,
Division of Highways

### Construction Cost
Multiple projects completed under
2 multi-year open-ended contracts

### Project Architects-Engineers
McKinley Architecture and Engineering

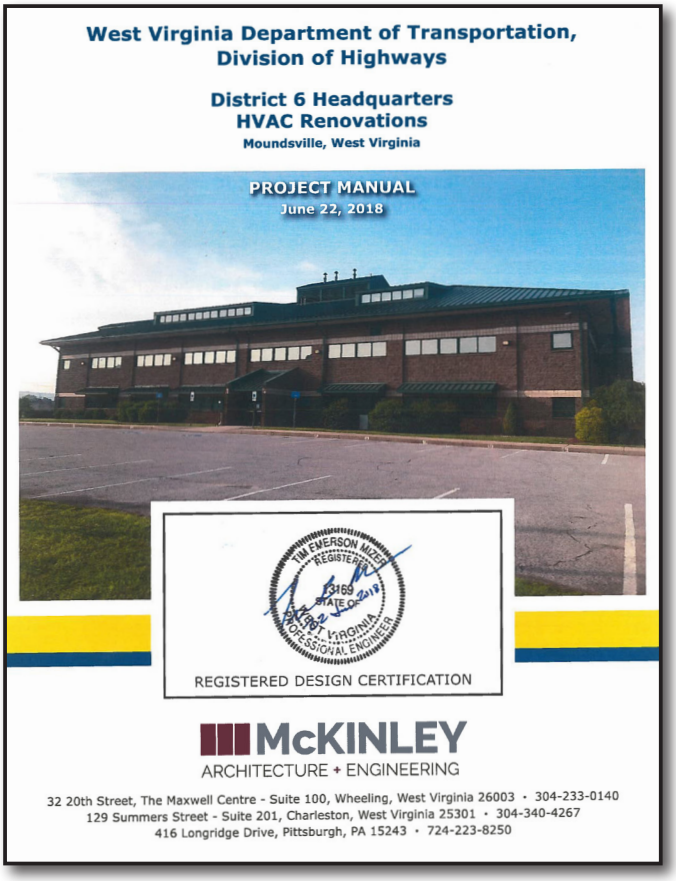
### Project Engineer
Tim E. Mizer, PE, RA, QCxP

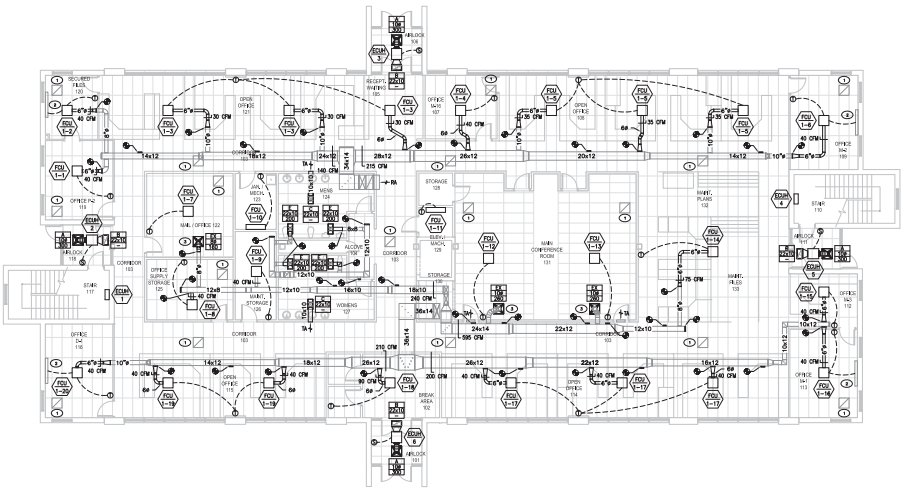
McKinley Architecture and Engineering has been honored to be a partner with the **West Virginia Department of Transportation, Division of Highways**, and we are now on our **2nd consecutive Statewide On-Call Agreement** with them. This open-ended contract is to provide both architectural/engineering consulting services (along with Construction Administration, and more) for the performance of various "tasks."

The **scope of services** generally consist of planning, studying, designing, renovating, repairing, conducting plan/specification reviews, preparing equipment specifications and related services for Department of Transportation facilities, including the site, utilities, buildings, and structures.

**For one task,** we designed the **HVAC replacement** to the existing 2-story, 8,820 square foot **WVDOH Equipment Division Facility in Buckhannon** (State Project N081-BLD/GR-0.00 00). We designed a new Variable Refrigerant Flow (VRF) air handling unit with remote condensing unit to condition the offices and conference room. A complete digital controls system was installed, with a desktop computer to allow authorized users access to the system.

**For another task,** we designed the **HVAC replacement** to the **WVDOH District 6 Headquarters Complex in Moundsville** (State Project N081-BLD/GR-0.00). The 31,000 SF building was conditioned with cooling only Air Handling Units and duct mounted heaters. That served full floors of office cubicles with no regard to proper zoning. As the conditioning units began to fail, it was determined that the complete system be replaced with a more economic system. McKinley Architecture and Engineering designed 2 Air Handling Units that provided ventilation air to VRF cassettes in the ceilings above the office areas. This solution provided individual control of all office spaces.



# The Towers Building

## Steubenville, Ohio

### Owner
Jefferson County Commissioners

### Size
76,300 SF

### Construction Cost
$6.1 million approx.

### Project Architects-Engineers
McKinley Architecture and Engineering

### Project Architect
Christina Schessler, AIA, LEED AP BD+C

### Project Engineer
Tim E. Mizer, PE, RA, QCxP

**We have worked with the Board of Commissioners of the County of Jefferson on several projects over the past few years.**

One major project example is multiple phases of renovations and upgrades to **The Towers Building.** This is a **40+ year old, 8 story high-rise** in downtown Steubenville. Unusually cold weather, age, and the culmination of years of insufficient maintenance had resulted in a series of situations resulting in frozen pipes, systems shutting down, and continuing emergency maintenance issues in the building. In February 2014, due to primarily system malfunctions and weather related damages at the building, an overall building condition assessment was determined to be necessary by the Owner.

Therefore, McKinley Architecture and Engineering was hired to perform an emergency Preliminary Analysis of the Needs and Energy Efficient Services (including site visits, and write a report outlining our findings). Existing conditions related to the architectural, mechanical and electrical portions of the building were the primary focus of the study with the goal of **addressing concerns associated with occupancy comfort, continued tenant satisfaction and to determine an efficient repair and maintenance recommendations for the building.**

**Our recommendations addressed repair options, efficiency and energy saving solutions.** McKinley Architecture and Engineering's observations were conducted in a non-invasion fashion; essentially, this means that nothing was permanently removed or destroyed during the process. We completed a Building Condition Assessment and Energy Efficiency Analysis Report, and presented our findings.

After this, we have **designed multiple phases of renovations for the building**; a main roof replacement, mezzanine roof replacement and new lobby skylight, building envelope repairs, a **new boiler**, new ADA handicapped ramp, and an **overall HVAC replacement**. In addition, there was an adaptive reuse of a former bank on the first floor, into an office fit-out / renovations for the Jefferson County Board of Elections. **The construction was performed with the building in operation.** These projects were completed over time, with different General Contractors.

For one example, the **new boiler** project involved the replacement of existing inefficient electric boilers with a new gas fired boiler. The new boiler is **high energy efficiency**, and has a much **smaller footprint**.

The **$3.4 million HVAC replacement** project included **renovations to the entire building.** The **demolition** included the removal existing cooling tower, exhaust fan, rooftop unit, and associated ductwork and piping from upper roof (tower); removal of existing exhaust fan and gravity ventilating intake hoods from lower roof (mezzanine); removal of basement air handling units, chilled water piping and pumps, condenser water piping and pumps, ductwork, chiller, and VAV boxes throughout the building. **The new HVAC system** included the installation of variable refrigerant flow system (VRF) throughout the building; installation of new dedicated outside air system (DOAS-1) on the upper roof (tower) and an air handling unit (AHU-1) in the basement with the condensing unit installed on the lower roof (mezzanine); installation of new and the reworking of existing ductwork; new shut-off and control valves installed on the existing hot water perimeter finned-tube baseboard; and installation of a new DDC Control system throughout the building. The electrical work included disconnecting existing power from demolished equipment and the installation of new circuits to the new equipment, which included adding a sub-panel on every floor. There was also partition extensions, ceiling removal and replacement, fire sealant work, and fireproofing repairs.

***On the following page are pictures of the HVAC replacements.***

# The Towers Building




BEFORE



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2 Open-Ended IDIQ Contracts

# United States Postal Service

## Appalachian Area (West Virginia & Virginia) and Erie/Pittsburgh District in Pennsylvania

### Owner
United States Postal Service

### Construction Cost
Multiple projects completed under 2 multi-year open-ended contracts

### Project Architects-Engineers
McKinley Architecture and Engineering

McKinley Architecture and Engineering has had **2 separate multiple year open-ended IDIQ agreements with the United States Postal Service.** One is for the **Appalachian Area**, which includes the State of West Virginia, and 49 counties and/or independent cities in Virginia. The second is for the **Erie/Pittsburgh District in Pennsylvania**.

We have designed **dozens of facilities** for the USPS, including **new construction, additions, renovations, and rehabilitations** in numerous cities within these areas. We have completed studies, reports, general building renovations, **HVAC** and electrical systems improvements, utility infrastructure, roofs, elevators, building envelope improvements, and much more. **HVAC projects include commissioning, testing and balancing.** One recently completed example was a $1.8 million **build-out / renovation project** for the Parkersburg Carrier Annex & Hub, which includes **new HVAC systems, testing and balancing,** masonry wall, concrete work, exterior wall thermal and moisture protection, site concrete paving, etc. In addition, we have designed over 100 Postal facilities for ADA compliance. We have also completed **Historic Preservation** work, such as extensive interaction with The Secretary of the Interior's (NPS) Standards for the Treatment of Historic Properties and working with the Section 106 process required by SHPO and the Federal Department of the Interior.

For the newest projects, they incorporate **energy efficient** design which follow the newest USPS Standards compliance **to provide a more efficient systems.** For example, **the energy saving on a recent HVAC replacement project was achieved with the use of economizers to allow free cooling when ambient temperatures are below 60° F, and there was commissioning provided on the RTUs. We followed the USPS Standards, and we also completed Form ECC-EZ - Energy Compliance Certification for Low Energy-Impact R&A Projects.**

**A majority of the projects we have completed for the USPS over the past 20+ years have been various HVAC projects, including these recent examples which were all completed while the buildings remained occupied!:**

**-Altoona, PA Post Office - $350,000 HVAC project involved Air Handling Units be replaced along with an addition of a DDC Control System in a historic 1931 facility.**

**-Charleston Processing & Distribution Center - $375,000 HVAC renovation project involved replacing thermofusers and the ceiling fan coil units with 8 fan powered VAV boxes and 3 single duct VAV boxes with hot water reheat coils; replacing 3 failed rooftop units with new RTUs with electric heat and economizers; installing 2 new 5-ton mini split AC units in an area without cooling; and extending the existing DDC control system to control these new items. The new RTUs have economizers to allow the unit to provide free cooling whenever the outside air temperature is below 55° F, by modulating the amount of outside air delivered through the unit.**

**-Clarksburg Finance Station - $460,000 HVAC project involved the replacement of the outdated 120-ton water cooled chiller and two 107-ton cooling towers, with new energy efficient systems.**

**-Huntington Processing & Distribution Center - $201,000 HVAC project replacing hot water boiler with like-in-kind.**

2 Open-Ended IDIQ Contracts

# United States Postal Service

-Martinsburg Processing & Distribution Center (*seen below*) - $280,000 HVAC project replacing 4 Packaged Rooftop Units with new, like-in-kind, Packaged Rooftop Units. While the RTUs are similar, there were some design changes made to bring the units in to USPS Standards compliance and to provide a more efficient system. The new units were installed on the existing RTU curbs and tied into the existing duct systems. In order the meet the USPS Standards, the units all utilized R-410A refrigerant. The energy saving mentioned above were achieved with the use of economizers to allow free cooling when ambient temperatures are below 60° F. The existing equipment consists of Packaged Rooftop Heating and Cooling Units with DX Cooling and Gas Heating. The workroom, which makes up the majority of the building square footage houses high amounts of equipment providing high levels of internal heat gain, requiring DX Cooling when the outside air temperatures are below the economizer enable setpoint. As a result, currently to maintain space comfort the RTUs must operate DX Cooling into the heating months or the units are turned off, to save energy. The new equipment provides increased operating efficiencies with the addition of Economizers.

-Monongahela, PA Main Office - $330,000 HVAC project replacing hot water boiler with 2 high efficiency condensing boilers in a historic 1913 facility; we recommended the most energy efficient solution that is life cycle cost effective over a 20-year period (with the upgrade from 83% to 95% efficient boilers the system operates more efficiently). While cutting the openings in the structural slab for the supply and return duct, the contractor created and/or noticed cracks; therefore we performed an emergency engineering site visit the next day on the condition of the concrete, provided a sketch for the required structural reinforcements, and the reinforcements were installed.

-Williamson Main Office - $422,000 HVAC project replacing hot water boiler with high efficiency condensing boiler.



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Brooke County Schools

# Brooke High School HVAC

## Wellsburg, West Virginia

### Owner
Brooke County Schools

### Size
278,000 SF

### Construction Cost
$5 million

### Project Architects-Engineers
McKinley Architecture and Engineering

### Project Engineer
Tim E. Mizer, PE, RA, QCxP

### Contractor
R&B Mechanical, Inc.

For the **Brooke High School HVAC** project, McKinley's role had originally included preliminary planning stages to secure a successful bond vote and state funding requests. Brooke High School HVAC is 1 of 2 projects within Brooke County Schools' $36 million District-Wide Construction Program. We gathered data, analyzed, and performed services to help promote HVAC upgrades at Brooke High as well as a new Middle School.

This **278,670 SF of HVAC replacement/renovations for Brooke High School** included **major HVAC/mechanical,** electrical, and plumbing engineering design, and associated architectural design. The vocational shops and science labs were brought up to Code. The **$5+ million** project involved the removal of the existing hydronic heat pump system equipment and replace such with a new Variable Refrigerant Flow (VRF) System, we replaced 19 Air Handling and ERV units with electric heating and cooling to gas units serving the required ventilation in the classrooms. There were approximately 200 VRF indoor consoles to replace floor mounted water source heat pumps. There were alteration and reconfigurations to the existing ceiling ductwork for the installation of the new VRF Units. There was also demolition of other existing equipment and material.

Furthermore, the HVAC replacement/renovation package also includes HVAC control modifications, exhaust fans, exhaust valves, louvers and gravity ventilators, grilles, register, and diffusers, new gas piping and painting, and electrical modifications. There was testing, adjusting, and balancing of the installed equipment. This project was designed with **energy efficiency** in mind; the VRF system to cool/heat the building has an anticipated energy cost reduction of 30% compared to existing mechanisms. **The entire work was less than 1% in total non-elective change orders!**

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Brooke County Schools

# Brooke High School HVAC

BEFORE

& AFTER

BEFORE

& AFTER

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Tyler County Schools

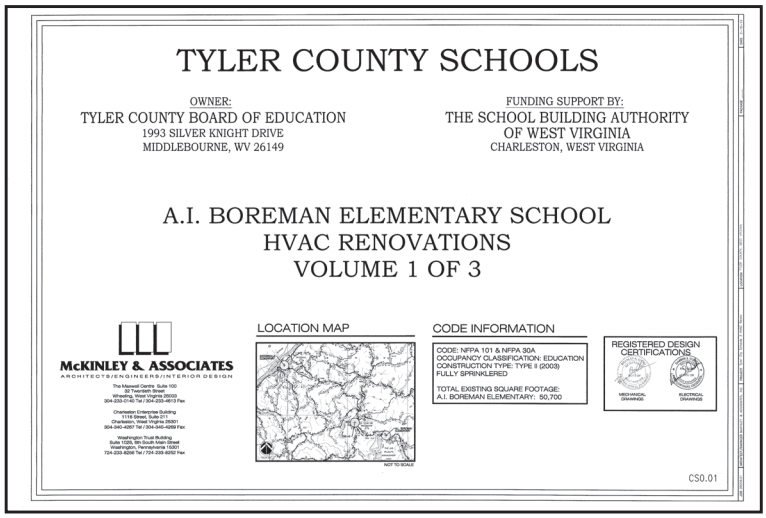
# Multiple HVAC Replacements +

## Tyler County, WV - county-wide

### Owner
Tyler County Schools

### Project Architects-Engineers
McKinley Architecture and Engineering

### Coordination Architect
Patrick J. Rymer, AIA, ALEP/CEFP


TYLER COUNTY SCHOOLS

OWNER:
TYLER COUNTY BOARD OF EDUCATION
1993 SILVER KNIGHT DRIVE
MIDDLEBOURNE, WV 26149

FUNDING SUPPORT BY:
THE SCHOOL BUILDING AUTHORITY
OF WEST VIRGINIA
CHARLESTON, WEST VIRGINIA

A.I. BOREMAN ELEMENTARY SCHOOL
HVAC RENOVATIONS
VOLUME 1 OF 3

McKINLEY & ASSOCIATES
ARCHITECTS/ENGINEERS/INTERIOR DESIGN

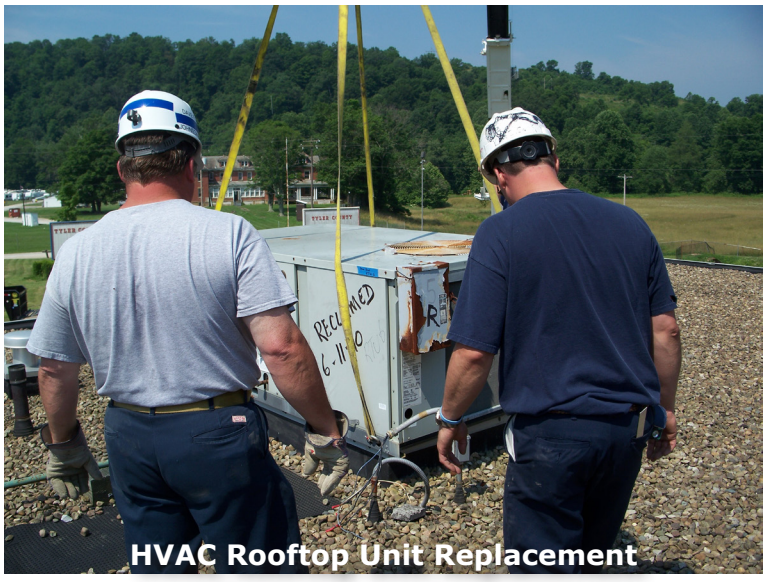
LOCATION MAP

CODE INFORMATION
CODE: NFPA 101 & NFPA 30A
OCCUPANCY CLASSIFICATION: EDUCATION
CONSTRUCTION TYPE: TYPE II (2003)
FULLY SPRINKLERED

TOTAL EXISTING SQUARE FOOTAGE:
A.I. BOREMAN ELEMENTARY: 50,700

REGISTERED DESIGN CERTIFICATIONS

CS0.01


HVAC Rooftop Unit Replacement

McKinley Architecture and Engineering has an **on-going relationship with Tyler County Schools**, and we have completed **multiple projects** for them **since 2003**, including their **10-year Comprehensive Education Facilities Plans (CEFP 2010-2020 and CEFP 2020-2030), various renovations, HVAC upgrades, School Access Safety project,** and more. **We also have a 5-year open-ended contract for implementing projects which resulted from that CEFP, as well as for other projects.** Some projects were a County-wide School Access Safety project, A.I Boreman Elementary School HVAC repairs and roof, Board of Education Administrative Office renovation, new Bus Maintenance Garage, Sistersville Elementary School HVAC repairs and roof, Tyler Consolidated renovations, new Tyler Consolidated High School Athletic Complex, and Tyler County Pre-K HVAC repairs and upgrades to name a few.

For one project, the **$2.5 million HVAC project** for Tyler County Schools involved the r**eplacements of the existing HVAC Systems at A.I. Boreman Elementary, Sistersville Elementary, and Tyler County Pre-K Schools** in Sistersville and Middlebourne, West Virginia. Boreman and Sistersville included the replacement of existing HVAC Equipment, including but not limited to **RTU's** and VVT Boxes, duct modifications and a new DDC Control System. Tyler County Pre-K School included New AHU with DX Cooling, new VAV Boxes with Hot Water Reheat, New Boiler Plant and DDC System. The contractor was Johnson Boiler Works.

A.I. Boreman Elementary School is a 50,700 SF facility. The HVAC project included the replacement of 17 Packaged **Rooftop Units** which includes gas heating, DX cooling, economizer with barometric relief & curb adaptor. There was also replacement of 31 VVT Dampers, duct modifications, controls, electrical work, miscellaneous construction (ceilings), as well as the demolition of existing systems being replaced.

Sistersville Elementary School is a 49,200 SF facility. The HVAC project included the replacement of 12 Packaged **Rooftop Units** which included gas heating, DX cooling, economizer with barometric relief & curb adaptor. There was also the replacement of 31 VVT Dampers, duct modifications, controls, electrical work, miscellaneous construction (ceilings), as well as the demolition of the existing systems being replaced.

Tyler County Pre-K School is an 8,700 SF facility. The HVAC project included the Installation of one 25 Ton Variable Speed AHU which includes gas heating, DX cooling, & economizer with barometric relief . There was also the installation of 10 VAV boxes with reheat, ducts, controls, electrical work, miscellaneous construction (ceilings), as well as the demolition of existing systems being replaced.

# Building 55
# West Virginia State Office Complex


## Logan, West Virginia

### Owner
State of West Virginia

### Size
53,200 SF approx.

### Project Architects-Engineers
McKinley Architecture and Engineering

### Project Architect
Thomas Worlledge,
AIA, LEED AP BD+C, REFP

### Contractor
Massaro Corporation

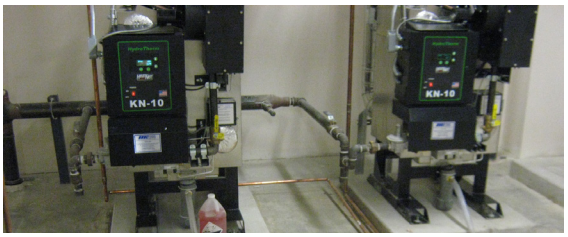
### Commissioning Agent
Iams Consulting, LLC

This new 5-story building underscores its major role in the development and revitalization of downtown Logan by uniting office space for 127 employees for **6 State agencies** under one roof, whom were once scattered throughout the city. The 53,200 SF building provides current technology, flexibility for future growth, and **security features** for existing and future tenants.

At the request of the Owner, the building was designed to be **energy efficient** and meet **sustainable design** goals, confirmed by LEED and energy star requirements. In March 2014, this project became **LEED Certified** for energy use, lighting, water, material use, as well as incorporating a variety of other sustainable strategies. **To help achieve this, the HVAC System included the installation of custom air handling units with chilled and hot water coils, variable air volume boxes with hot water heating coils, 2 high efficiency condensing boilers, pumps with variable speed drive control, water cooled chiller with cooling tower, packaged rooftop energy recovery ventilator, and direct digital controls.**

**There is also a back-up/emergency generator for life safety systems and data server rooms. It is a 300kW, 480/277V, 3 Phase, 4W diesel generator with outdoor enclosure, concrete pad, and in-base fuel tank. The generator, Automatic Transfer Switches (ATS), controls, and annunciator meet the requirements of NFPA 110, "Standard for Emergency and Standby Power Systems." This generator powers emergency lighting and provides backup power to critical building systems.**

After the project was completed, the firm *alliantgroup* completed an **Energy Efficient Commercial Building Tax Deduction study** regarding the energy efficient features of the building (***seen on the following pages***), and they **projected the building's total energy costs and power costs to have savings of $34,231 annually!**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alliantgroup®

September 5, 2014

***Sent Via CMRRR: 7013 2630 0000 2069 4021***

Mr. David J. Hildreth
West Virginia Department of Administration
900 Pennsylvania Ave., Ste. 500
Charleston, WV 25302

Re: Logan State Office Bldg. – Energy Efficient Commercial Building Deduction

Mr. Hildreth:

alliantgroup has completed an Energy Efficient Commercial Building Tax Deduction study for Logan State Office Bldg. for Massaro Corporation. As required by U.S. Tax Code § 179D, notification must be given to the building owner regarding the energy efficient features of the building and the building's projected annual energy costs.

Below is a list of the energy efficient features of the building which were installed on or in the building as part of a plan designed to reduce the total annual energy and power costs in comparison to a reference building which meets the minimum requirements of ASHRAE (American Society of Heating and Refrigeration, and Air-Conditioning Engineers) Standard 90.1-2001.

Heating, Ventilation, and Air Conditioning Systems:

- Boilers
- Unit Heaters
- Chillers
- Energy Recovery Ventilation

Interior Lighting Systems:

- Fluorescent Bulbs
- LEDs
- Occupancy Sensors

Building Envelope System:

- Pre-Cast Panels
- Rigid Polyisocyanurate
- Gypsum Board

3009 POST OAK BOULEVARD, SUITE 2000 | HOUSTON, TEXAS 77056
www.alliantgroup.com | 800.564.4540


The projected annual energy cost for Logan State Office Bldg. was calculated to be $34,231. Please note that the projected annual energy costs may vary from the building's actual energy costs due to the exclusion of process loads, exterior lighting, variations in occupancy, and variations in usage schedules among other variables.

Please be advised that the amount of the deduction that has been allocated to Massaro Corporation is $98,658 for the building envelope, HVAC and hot water, and lighting systems in the building. For more information on the allocation of the section 179D deduction, please refer to the U.S. Tax Code § 179D and IRS Notice 2008-40. A copy of the notice can be found at www.IRS.gov

If you have any questions, please do not hesitate to contact me.

Very truly yours,

Rizwan Virani
Managing Director

www.alliantgroup.com | 800.564.4540

# References

We feel that the best way to demonstrate our strengths and leadership in **HVAC renovations and replacements** is by referring to our clients. We have an ever-growing list of repeat clients. We are able to respond to their needs, and we are certain that we are able to respond to all of your needs as well. So that you don't only have to take our word for it; we encourage you to call our references:

(*Several Projects County-Wide, including many HVAC renovation projects*)
Dr. Kim Miller
Ohio County Schools
2203 National Road
Wheeling, WV 26003
304 / 243-0300

(*HVAC Projects*)
Mr. Joshua Smith, PE
WVDOT Division of Highways
1900 Kanawha Boulevard, East
Building 5, Room 350
Charleston, WV 25305
304 / 887-2325

(*Several Projects County-Wide, including many HVAC renovation projects*)
Mr. Michael Price
Marshall County Schools
P.O. Box 578
Moundsville, WV 26041
304 / 843-4400 x349

(*Several Projects County-Wide, including many HVAC renovation projects*)
Ms. Amanda Kimble
Tyler County Schools
P.O. Box 25
Middlebourne, WV 26149
304 / 758-2145

# Project Approach

One of the most exciting aspects of our job is **listening to you**, our client, in how you envision these projects, and transforming your ideas into realities. **This can only be accomplished by effectively working together with you. We use and welcome your input throughout the projects.**

We continually achieve success in projects by maintaining time and cost management, quality control and excellent communication amongst the client and contractors. We hold weekly meetings to discuss your project, the budget, schedule and quality assurance. We provide Documented Minutes of all of our meetings and encourage West Virginia State University and representatives from the 5 facilities to participate in these meetings.

You will see in this submittal that we have included **several professionals** to handle your HVAC projects. We have **over 50 employees** on staff, so if your project requires additional staffing, we have the ability to dedicate additional resources to accomplish your goals.

We have completed a multitude of **HVAC assessments, renovations, replacements, upgrades, and/or repairs projects** over the past 43 years. During this time our expertise has been called upon many times upgrading outdated equipment, scheduling for phased construction around occupied areas of the buildings, bringing the systems and load requirements up to compliance, and even evaluating and correcting errors in existing design (pipe sizing, piping material errors, control valving etc). We have completed several HVAC replacement projects where we made the systems more **energy efficient**. We currently support clients on a number of significant HVAC projects that illustrate this ability.

Your **Lead Project Engineer** is **Kurt A. Scheer, PE, LEED AP**, who is our **Senior Mechanical Engineer**, as well as a **LEED Accredited Professional**. He has nearly 25 years of experience in the industry with a focus on mechanical systems design. Kurt also has significant experience energy modeling and ASHRAE 90.1 requirements he will design an **optimal system that can meet an array of design objectives.**

In addition, **Tim E. Mizer, PE, RA, QCxP**; our **Director of Engineering Services**, is a very talented and unique professional being a **Professional Engineer**, a **Registered Architect**, as well as a **Qualified Commissioning Process Provider** where he has been **formally trained to fully understand how integrated HVAC systems function and how systems interface with others to run your building efficiently, and has a comprehensive knowledge of the full American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Commissioning Process.** Also, being both an Engineer and Architect has provided him with a total understanding of the engineering components and the process necessary for integrating architectural design and building systems.

**We know the new technology and we know how and when to apply it effectively.** Our Architects and Engineers have been on the cutting edge of efficient design for years; we know the **newest technologies in HVAC systems**. We have **LEED Accredited Professionals** and **LEED APs specializing in Building Design & Construction** who can help **choose energy efficient solutions such as energy efficient HVAC systems, low maintenance materials, locally sourced materials,** etc. We have designed **LEED Certified** and **LEED Registered** projects, as well as several projects listed on the **U.S. Environmental Protection Agency's ENERGY STAR program.**

# Project Approach

Our design team will also strive to achieve the **best overall indoor air quality in the building**; studies have shown that it not only has health benefits to the employees and students, but also enhances the environment. To achieve this our team pays careful attention to the exterior enclosure to eliminate water penetration and minimize air leakage, specifies systems and materials that limit the pollutants from entering the building, and our HVAC engineers control the quality and quantity of fresh air into the building maximizing the air quality and energy efficiency. **We offer thoughtful design options that enhance the space, protect the environment, and meet your schedule and budget.**

McKinley Architecture and Engineering **takes pride in ourselves for designing projects tailored to all of our clients**, and we **understand every client has unique goals and objectives.** These **5 facilities' HVAC projects** will be **successfully designed to meet your needs, and this will be accomplished by effectively working together with you. We will design what YOU want.**

**We begin each project** with on-site investigations, review of the existing conditions, and study of any early planning and existing documentation/drawings. Our approach to design requires a dialog with the owners and the end users of the facility, so a **kickoff meeting** will be held with all available **West Virginia State University representatives, employees and maintenance staff of the 5 facilities**, along with **our design professionals.**

Through these on-site meetings and investigations of the buildings, we will better evaluate the problems or deficiencies in the current HVAC systems, and we will propose options for resolving the issues. We will then use all this information to produce a full reporting of the current conditions, with our recommendation of rework to best fit the present needs of this building. From our overall facilities surveys, we will then create floor plans of your existing buildings from which we will then design and specify new systems and equipment to best fit the standards of today's **design** and **energy efficiency standards.**

Also from this meeting the **Owners Project Requirements** (OPR) will be defined and documented, to be used as a **guideline through the design phase.** The OPR is a living document and will be revised as changes or revisions are required throughout the project. From the OPR, McKinley will work with you to develop a priority list of the construction components. A project schedule will also be developed at this time; the schedule will cover design, bidding and construction. The OPR and the project schedule will require input from West Virginia State University. During design, review meetings will be held to verify that the project is following the OPR, submission will include drawings and technical specifications, and that we are within budget. If budget issues are present we will review the priority list with you and determine how to proceed.

Upon approval by West Virginia State University, the bidding documents will be completed. By meeting early in the design phase, any issues that arise can be resolved without affecting the design and/or construction schedule. Upon completion of the Bidding Documents, a final design review meeting will be held to review the design, schedule and budget. The bidding documents will be sent to the Authority Having Jurisdiction for a final design submission. Through the Construction, McKinley will complete Construction Contract Administration services, attend meetings, have site visits, answer RFI's, etc.

# Project Approach

**The timeline of any project, especially an HVAC project, is critical.** Whereas almost all systems and equipment have a multi-month lead time, potential issues could be lead times for hardware and equipment, or compatibility with any existing systems. McKinley Architecture and Engineering has a **great working relationship with various HVAC suppliers**, which has helped us reduce the response time for our recent projects. A positive relationship with the installing contractors is also needed, and we have worked with the major HVAC contractors in the area.

Our HVAC redesign will include any required **Building Load Calculations** of the renovation space for **accurate sizing of new equipment.** This will be used for the evaluations of the existing spaces and also to include any additional new conditions as described by the 5 facilities' personnel. Additionally, we can commission the project to ensure everything is working properly, and to teach your maintenance personnel how to use the machinery and gives them all the correct manuals. McKinley can work with the Contractors and Testing Adjusting & Balancing (Rebalancing) Company to verify proper system operation. The purpose of this verification is to ensure all systems and equipment are operating as intended, and to the designed efficiency.

For all of our Clients we require a set of **Operation & Maintenance Manuals** be submitted from manufacturers as Closeout Documents. Often a videotaped demonstration of the instruction session(s) for each piece of equipment is required for future reference by the Owner's staff. Equipment specific Maintenance Agreements can be incorporated into the construction documents if the Owner believes staff availability might be sporadic.

Also, testing, adjusting and balancing are provided by a third party entity to **ensure proper operation of MEP equipment**. Lastly, **modern HVAC systems** have electronic monitoring options so that alerts are issued immediately upon detection. In addition, third party monitoring agreements of HVAC systems and Security Systems can be specified.

We do take a **holistic approach** to project involving extensive equipment replacements. At a minimum, the existing equipment/systems will be replaced. We will also look for opportunities to improve **overall efficiencies and building performance.** This includes comparing installed equipment capacities with calculated loads, improving ventilation air quality and quantity, addressing humidity concerns, reviewing overall building air balance, and more. We do not take a simple "replace in kind" approach with our projects.

McKinley Architecture and Engineering has built its reputation over the past 43 years on our ability to deliver projects on time, budget, and with minimal amount of change orders. Many of our projects over the past five years have been completed **on schedule** and with **less than 1% change orders, which is well below the national average.**

Our **Quality Assurance Program** starts with a peer review where a registered professional not involved in the design becomes reviewer of the project before going to bid. Additionally, at our regularly scheduled project meetings the entire design team is constantly reviewing the process. The entire team is involved in the design process **from the beginning** so that they know why the project was designed and how the building is intended to be used.

# Project Approach

This insight is especially advantageous to the on-site **Construction Contract Administrator** (CA). Our CAs have an important role as being the **liaison between the Owner, Contractor, and Architect/Engineers.** The primary objective of the Construction Contract Administration services is to ensure completion of work the way the client wants it - **as scheduled and as budgeted.**

In addition, the CAs also initially review change orders and contractor's cost proposals, review payment requests and assembly of the project close-out documents. The background knowledge on the project helps the CA better understand the end product, helps him/her communicate with the contractors and it provides valuable constructability insight for our designers when questions are brought back from the field, and verify that close-out documents are submitted in a timely manner upon Substantial Completion.

By virtue of our firm having a **Charleston office**, we can provide project services to all of your facilities in an **economical**, **effective** and **efficient manner**, while also **responding expeditiously** to your projects' needs. We also have 2 Construction Contract Administrators in this office, which will be beneficial for you.

The **project completion time frame expectation** for **Project Closeout** is defined in the front end of the Project Manual in the Specifications so that the contractors are aware of the requirements before submitting a bid. Our Construction Contract Administrators monitor progress during the project and verify that closeout documents are submitted in a timely manner upon Substantial Completion, and they can specify tools and goals (such as deadlines or monetary values) to encourage compliance.

Furthermore, our **11-Month Walk-Through** is a process where our professionals return to your facilities eleven months after the projects are completed. At that time they review all the work that was completed and check all warranties. We are making sure all of the covered work is in order and that the warranties do not expire with equipment or product not working properly. It should be noted that McKinley Architecture and Engineering has been performing our eleven month walk-through as part of our Standard of Care; long before it was adopted as an AIA 101 Standard.