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

State of West Virginia **Solicitation Response**

Proc Folder:	1611518			
Solicitation Description:	National Guard Readiness Center Parkersburg-Design EOI			
Proc Type:	Central Purchase Order			
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VENDOR					
000000218570 GRW ENGINEERS INC					
Solicitation Number:	CEOI 0603 ADJ2500000016				
Total Bid:	0	Response Date:	2025-02-05	Response Time:	13:11:35
Comments:					

FOR INFORMATION CONTACT THE BUYER David H Pauline 304-558-0067 david.h.pauline@wv.gov Vendor Signature X FEIN# DATE

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

Line	Comm Ln Desc		Qty	Unit Issue	Unit Price	Ln Total Or Contract Am	ount
1 National Guard JFHQ Readiness Center- Parkersburg Design EOI					0.00		
Comm	Code	Manufacturer		Specifica	ation	Model #	
811015	08						

Commodity Line Comments:

Extended Description:

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



EXPRESSION OF INTEREST National Guard Readiness Center Parkersburg - Design



WV Army National Guard | WV Department of Administration | CEOI 0603 ADJ250000016

February 5, 2025





February 5, 2025

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

RE: National Guard Readiness Center | Parkersburg - Design Solicitation No.: CEOI 0603 ADJ2500000016

Dear Mr. Pauline and Selection Committee Members:

Achieving the goals you've established for the Parkersburg Readiness Center is important for the West Virginia Army National Guard's mission. GRW would like to work with you on this project – and we believe we offer you the right experience and expertise to successfully delivery the results you require.

Experience and Familiarity. GRW is a full-service A/E design consulting firm that has been working with clients like you on similar projects throughout the region for more than 60 years. Our project team's experience with the National Guard is substantial and ranges from projects for both the West Virginia Army and Air National Guard, as well as reserve/readiness centers for the Kentucky, Ohio and Indiana Army National Guard. Our team includes Terracon as our geotechnical consultant. The firm's Charleston-based team also has experience with the WV National Guard. See Sections 1.0 and 2.0.

GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) also have extensive experience in developing projects through the WV Purchasing Division. For example, we have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state, as well as projects for the Department of Highways. Although every agency has its own particulars with regard to bidding projects, our experience with the WVARNG and the State's Purchasing Division will help ensure effective and efficient project delivery.

We Are Committed to Your Success. Taking care to meet your goals for your budget and schedule is a priority, as it is on every GRW project. The ultimate measure of success is how well the completed projects meet your needs and aspirations. To this end, our project team is committed to establishing an inclusive, methodical and logical approach to the design process. **See Sections 4.0 and 5.0**.

Thank you for your consideration and for the opportunity to work with you. We look forward to the next step in your selection process where we can present our additional ideas toward the successful completion of your project.

If you have questions about our qualifications or any other items, please feel free to call or email.

Respectfully submitted

1

Aaron Nickerson, AIA, LEED Green Assoc. GRW Architect / Vice President

859-880-2267 anickerson@grwinc.com



Expression of Interest

National Guard Readiness Center | Parkersburg - Design CEOI 0603 ADJ250000016

WV Department of Administration WV Army National Guard

Table of Contents

Section 1.0	GRW Introduction
Section 2.0	Project Experience
Section 3.0	Staff Qualifications
Section 4.0	Approach & Methodology for Meeting Goals & Objectives
Section 5.0	Quality/Cost Control
Section 6.0	References
Section 7.0	West Virginia EOI Forms



1.0 GRW Introduction

About GRW

Founded more than 60 years ago, GRW is an employee-owned architectural, engineering and geospatial services firm with approximately 200 employees.

At GRW, we have the ability to address your projects from nearly every angle using our comprehensive inhouse capabilities. We tailor our approach to each project, ensuring that our teams deliver quickly, with

greater potential for accurate cost estimates, and fewer change orders.

Among our achievements, GRW is listed in *Building Design* + *Construction's Giants 300* report as one of the nation's top



Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.

Our Corporate Culture

Our corporate culture is based on collaboration. Our project managers and their project teams are completely hands-on, from planning through construction phases.

At GRW, we know that business relationships are built on trust – the ability to trust your business partner to deliver on their promises. By choosing GRW for your professional services, you are choosing a company that delivers on our promises. You can expect our full attention starting on day one and extending to the day of project completion and beyond. **Listening diligently to your needs, and those of your stakeholders, is the hallmark of our approach**. Delivering projects that meet our clients' goals – honestly, reliably, and efficiently, time after time – is the reason why GRW has achieved a 90% rate of repeat business.





Department of Defense Experience

GRW brings to the table a wideranging body of military experience that includes work for the National Guard, U.S. Army, U.S. Air Force, the U.S. Army Corps of Engineers, and the Naval Facilities Engineering Command (NAVFAC). These projects include renovation and new construction work, as well as military master plans, and a broad range of geospatial services.

The map below provides a general geographic overview of where we have provided services to the military.





* U.S Army Corps of Engineers work encompasses multiple IDIQs and task orders in 18 Districts OCONUS Locations: Kadena Air Base, Okinawa, Japan and Camp Lemonnier, Djibouti

GRW's Experience with the West Virginia Army & Air National Guard – Partial List

GRW has a long history of experience with the West Virginia Army and Air National Guard. Examples of many of these projects are shown on these pages. *Please note that the contacts listed for some of these projects may have been promoted or reassigned since the time of project performance.*

West Virginia ARNG Camp Dawson Ranges at Briery Mountain, Kingwood, WV –

Project included design and construction of new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range at Briery Mountain Training area to conform site to government standard Breach Range Design Requirements. Included design of access road to the remote site, electrical connections, breaching structures, open covered range operations and control shelter, storage building, dry latrine, covered viewing stands, and parking area. Client Contact: MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG Camp Dawson Live Fire Exercise Shoot House, Kingwood, WV – Design

for innovative re-use of a recently-acquired former industrial complex adjacent to Camp Dawson to provide a \$2 million Live Fire Exercise Shoot House, including shoot house to be housed in a metal warehouse, operations / storage, after action review (AAR) facility, ammunition breakdown facility, warehouse restroom renovation, access road and parking area, and utility services. Completed conceptual design for LFSH facility with final design and construction of LFSH completed by selected vendor

(design / build); balance of facilities delivered with traditional design / bid / build approach. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG Relocation of Camp Dawson Electrical Power and Communications

Lines, Kingwood, WV – Study and design for 4-phase construction program to relocate overhead electrical power lines and communications lines (telephone, data, etc) to underground duct banks in order to eliminate historic problems associated with overhead services. Phase 1: 3000 LF of power line relocation to new underground duct banks, with the associated replacement of pole-mounted transformers with pad-mounted transformers (1000 KVA to 50 KVA). Phase 2: Relocation of communications service to new underground duct banks along Phase 1 route. Phases 3 & 4: Relocation of approximately 2000 LF of overhead power lines and overhead communications lines to new duct banks, respectively. Client Contact: MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade,

Kingwood, WV – Expansion of sewer (1,996 LF), water (1,996 LF) and electric (1,797 LF) to all existing and future buildings, unit training equipment site (UTES) and wash rack locations. Also included design of Forward Operating Base (FOB) including 20 14' x 16' wooden buildings, new bath house for approximately 200 people and pavilion. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ANG 130th Airlift Wing Master Plan Update and CIP, Charleston, WV –

Engineering consulting for preparation of a Web-Enabled Master Plan Update and GeoBase Common Installation Picture (CIP) for the 130th Airlift Wing in Charleston to evaluate benefits and impacts associated with acquiring additional airfield property for aircraft parking, operations, and maintenance facilities to meet current and future proposed missions. Identified constraints and opportunities that apply to the 130th AW aircraft parking, operations and maintenance areas, including Anti-Terrorism/Force Protection (AT/FP) measures; quantified existing and required airfield

facilities; developed new alternatives for long- and shortrange plans; and created plan tabs that depict constraints and opportunities, long- and shortrange development plans, land use and circulation plan, real estate plan, and facility utilization plan. **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 130th Airlift Wing Communications Duct, Charleston, WV – Concept

Development Report to select a preferred concept for a new duct system for routing the base's communications network to a new Communications Facility. New fiber optic cable for base network to consist of two ITNs (Information Transfer Nodes); ITN-1 in the new Communications Facility and ITN-2 in new hangar, Building 407. Duct bank designed to carry fiber optic lines, television and coaxial cabling; allows looping of current system; and provides redundancy of assets. Client Contact: LtCol Rick Thomas, Base Civil Engineer

West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV –

Preparation of a Program Planning Document Charrette (PPDC) for replacement of two local armories and a USAR center with aging facilities and site limitations, with a new, \$17 million Joint Armed Forces Reserve Center and support facilities on a 94-acre site. Resulting plans include an Armed Forces Reserve Center (60,927 SF), unheated storage (6,000 SF), area maintenance support (4,500 SF) and helipad. **Client Contact:** MG Melvin Burch, (304) 561-6458, melvin.burch@us.army.mil

West Virginia ARNG Readiness Center Commissioning Projects,

WV – LEED Fundamental Commissioning for four building construction projects: Buckhannon AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost; Morgantown Readiness Center, 58,520 SF and \$20,500,888 construction cost; Moorefield Readiness Center, 57,256 SF and \$17,725,351 construction cost; and Logan Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost. Scope included all commissioning, coordination and documentation required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems. Client Contact: MAJ Daniel Clevenger, CFMO, (304) 561-6446, daniel.w.clevenger.mil@mail.mil

West Virginia ANG 130th Airlift Wing LOX Storage Relocation, Charleston, WV – Type A and B

design and construction administration services to relocate LOX function to south end of flight line to meet operational and installation development plan requirements. Facility included covered storage facility with adjacent tank storage canopy; elevated pads and spill containment structure for storage tanks; paved entry road; protective fencing; and utilities (electric and communications). **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV

- Design services for \$3 million renovation and energy-efficient improvements to 25,765 SF facility with history of remodeling activities resulting in a building that inadequately serves its users (Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center). Work included Charrette to develop alternative floor plans. Selected design allows for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding. Client Contact: Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 167th Airlift Wing Basewide Sewer Line Repair, Martinsburg, WV –

Planning, design and construction administration services for replacement of sanitary sewer system, circa 1954. Pipe included combination of various construction materials including vitrified clay pipe (VCP) with dilapidated sections allowing high rates of inflow and infiltration during storm events. **Client Contact:** Col Rodney Neely, MSG Commander, (304) 616-5198

West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair,

Martinsburg, WV – Concept Development Report for C-5 aircraft complex which requires electrical modifications to meet needs of current occupants' activities, and

investigation/resolution of temperature control in numerous locations. Report included detailed discussion of current electrical, architectural and HVAC system problems; recommendations to resolve large-system problems, as well as particular solutions for small areas; conceptual level drawings; conceptual level drawings; conceptual level outline specification; and construction cost estimate. **Client Contact:** Col Rodney Neely, MSG Commander, (304) 616-5198

West Virginia ANG 130th Airlift Wing Communications Facility Code / Criteria Review,

Charleston, WV - Code/Criteria Review and LEED Update Report for facility designed to 65% three years prior under separate GRW/NGB contract then put on hold pending funding. Twofold project goal included: 1) identify and delineate known codes/criteria that are either new or updated since 65% Design Submittal; and 2) describe revised LEED 3.0 criteria now in effect for project and outline points for LEED Silver certification, compared to LEED Silver 2.2 criteria in effect at the 65% design stage. Client Contact: LtCol Rick Thomas, Base **Civil Engineer**

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and

Expansion, Charleston, WV -

Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project (MILCON/SRM split funded) increased space and improved mission performance and operational efficiency for command and administrative functions in ways that are energy efficient, code compliant and in accordance with current ANG policies. Project met LEED Silver design criteria, and all AT/FP and ADAAG requirements. Client Contact: Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 130th Airlift Wing Building 107 Study & Renovation, Charleston, WV –

Scope of work included design services (LEED Silver design criteria) for two separately funded (MILCON/SRM) sub-projects to repurpose existing unoccupied hangar into space for the Aeromedical Evacuation Squadron (AES). Repairs and building repurposing included: new interior spaces within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATFP standards. New functional areas include spaces for medical simulation training, maintenance, operations, administration, storage, and other mission-related activities. Client Contact: Capt Harry Netzer,

Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 167th Airlift Wing C-17 Fuel Cell Hangar Modifications, Martinsburg, WV

 Fast-track design of fuel cell hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft. Client Contact: Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ANG 167th Airlift Wing C-17 Maintenance Hangar Modifications, Martinsburg, WV

 Fast-track design of maintenance hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft. Client Contact: Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ARNG Martinsburg Secure Facility,

Martinsburg, WV – Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Included HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements. Client Contact: Matthew Reynolds, Deputy Branch Chief - Design & Construction, (304) 561-6568, matthew.t.reynolds18nfg @mail.mil

Geotechnical Engineering

Terracon has been a trusted geotechnical engineering provider for more than 55 years.

The firm will support the GRW team and the work with the WV ARNG by providing geotechnical engineering services.



The firm's approach begins by developing an opinion of

expected conditions and designing a customized work plan to explore the site based on local data and a proprietary Geographic Information Systems (GIS) platform. Then Terracon executes the plan using its arsenal of conventional drilling/sampling, in-situ testing and nonintrusive, geophysical exploration tools, along with safe, current, and effective tools and procedures.

Terracon maintains required state and federal program accreditations and validations. It uses an internal quality program that confirms standards are met for safety, efficiency and quality, lowering costs to get the data needed to optimize design. The firm's geotechnical engineers analyze the information, develop site preparation options, foundations, and pavements, and consult with you and your entire design team to create faster solutions.

Terracon services are coordinated using local, regional, and national resources - and as your project moves to construction, the firm's materials professionals partner with its geotechnical engineers to further confirm subsurface understanding, perform testing necessary to document quality, and address encountered variations.

Geotechnical Services include:

- Stage 1 Site Considerations
- Site Characterization (Subsurface Exploration, In-Situ Testing, and Geophysics)
- Geotechnical Engineering and Rock Mechanics
- Laboratory Testing
- Geostructural Design and Instrumentation
- Pavement Management
- Collaborative Reporting/Decision Making
- Engineering Consultation During Construction

Federal Facility Experience

Terracon has provided services to the federal sector since 1965 and has completed over 19,000 federal projects.

LOCAL FACILITIES INCLUDE:

- National Guard Readiness Center Lewisburg, WV
- National Guard Readiness Center Parkersburg, WV
- National Guard Maintenance Complex Addition -Charleston, WV
- Armed Forces Reserve Center Moorefield, WV
- Armed Forces Reserve Center Utility Extension -Elkins, WV
- Armed Forces Reserve Center Fairmont, WV
- Camp Dawson Kingwood, WV
- Yeager Air National Guard Fuel Storage Tank -Charleston, WV
- Logan County Airport Equipment Building -Logan, WV
- Upshur County Regional Airport Slides -Buckhannon, WV
- Braxton County Airport T-Hanger Sutton, WV
- Grant County Airport T-Hanger Expansion -Petersburg, WV
- Upshur County Regional Airport Terminal Building - Buckhannon, WV
- Braxton County Airport Access Road Sutton, WV
- Raleigh Airport Main Apron Beaver, WV



National Guard Readiness Center in Lewisburg, West Virginia



2.0 Project Experience

Ohio Army National Guard, Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH



GRW provided full-discipline A/E services for planning, design and construction of a new LEED Silver Certified 85,865 SF Joint Armed Forces Readiness Center (AFRC) and Field Maintenance Shop (FMS) for the OH Army National Guard (ARNG) and the US Army Reserves in Springfield, Ohio. The new complex was designed to match the architecture of the nearby Ohio ANG structures; both the ARNG and ANG facilities are located within the secure perimeter of the Springfield-Beckley Municipal Airport.

The 60,902 SF administrative/training complex includes the following functional spaces and features:

- Private offices and administrative common spaces
- Classrooms and library
- Gymnasium-type multipurpose assembly hall with fully functional kitchen
- Energy submetering connected to building management system (DDC)
- Physical fitness area
- Heated and unheated storage areas
- Occupancy sensor controlled interior lights throughout

 ""I want to take this opportunity to tell you and your team how much the Ohio ARNG appreciated the design GRW produced for the Springfield AFRC and FMS. Of particular note was your Project Manager, who did an outstanding job coordinating all design disciplines, incorporating the Ohio ARNG design comments, and following all required design guidance from the NGB to ensure all design submissions were timely and complete."

COL Robert C. Clouse, CFMO, Ohio ARNG

- Emergency power generator
- Full cutoff luminaires for site lighting to eliminate light trespass
- Site AT/FP measures, security card readers, security lighting, security fencing, utilities and landscaping

CLIENT CONTACT: George McCann, Ohio Army National Guard, (614) 336-7413, george.c.mccann@us.army.mil

West Virginia Air National Guard 130th Airlift Wing Building 107 Renovation

This project included two separately funded (MILCON/SRM) sub-projects. These two companion projects were designed to re-purpose an existing unoccupied hangar into administrative, simulation training, and storage spaces for the Aeromedical Evacuation Squadron (AES). The project was designed to meet LEED Silver design criteria.

The project scope included:

- Upgrade of mechanical and electrical systems to meet current building codes and standards
- Replacement of inadequate restrooms and locker rooms
- Replacement of fire alarm and fire protection systems
- Hardening of the front façade, replacement of windows, and elimination of on-street parking to achieve ATFP compliance
- Construction of new interior spaces and renovation of existing shop areas to create necessary office, training, and support spaces

The completed building includes the following programmed spaces:

- Command and administration
- Flight crew support spaces
- Medical simulation areas for flight crew training
- Mobile storage and staging
- Medical equipment maintenance
- Conference rooms, classrooms, and breakrooms
- Restrooms and locker rooms
- HVAC, electrical, and communications support

CLIENT CONTACT: Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, harry.g.netzer.mil@mail.mil

Contractor Performance Assessment Report (CPAR) from Contracting Officer Robert Barker:

- QUALITY: Contractor meet requirements for design on this project. Firm worked a difficult task order with 2 project task order numbers, utilizing 2 designs for one project. Quality of work for project benefited the government by providing a thorough final design for the project.
- SCHEDULE: Contractor kept to scheduled deadlines for project requirement. Worked well with Base Contracting and Civil Engineering to discuss any issues that would delay deadlines.
- COST CONTROL: Contractor kept costs controlled during project and worked very well with Base Contracting and Civil Engineering, keeping pace in utilization of 2 sources of funding, both MILCON and SRM.
- MANAGEMENT: Contractor met contractual requirements and worked well with the 130th Airlift Wing Base Contracting Office and Civil Engineering office. No major management issues were noted during the performance of the contract and GRW engineers and team continued to communicate regularly to ensure all aspects of the project were on track.
- REGULATORY COMPLIANCE: Performed all necessary environmental testing and occupational health requirements for project; kept base personnel informed of any findings or issues that would significantly delay project completion.
- ADDITIONAL/OTHER: Good team to work with; continues to maintain very professional standards and conduct.





West Virginia Air National Guard 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion

GRW was retained to provide complete architectural and engineering Type A, B and C services for renovating the existing 5,395 SF Security Forces Squadron facility and adding 2,500 SF of administrative and training space to the facility. This project uses MILCON/SRM split funding to deliver a renovated and expanded SFS facility, which provides increased space for command and administrative functions.

A few relevant spaces and features include:

- Expanded command/administrative space
- Arms vault
- Training rooms
- SIPRNet
- ATFP building/site security
- ADA compliance

- Geothermal
- Extensive communications infrastructure
- Split MILCON/SRM funding

This project meets LEED Silver measures for sustainable design.

Contractor Performance Assessment Report (CPAR) from Contracting Officer Matthew Corcoran:

- Quality: Exceptional/Outstanding Overall Job
- Schedule: Exceptional/Outstanding Overall Job
- Cost Control: Exceptional/Outstanding Overall Job
- Management: Exceptional/Outstanding Overall Job
- Regulatory Compliance: Exceptional/Outstanding Overall Job

CLIENT CONTACT: Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia Army National Guard Martinsburg Secure Facility

GRW is designing renovations for a secure facility located adjacent to the Eastern WV Regional Airport in Martinsburg, WV. The purpose of the renovation is to provide new secure office space, and related support spaces, for a specific using agency. The main renovated area is on two upper levels, containing approximately 6,200 SF per level. The scope includes:

- Demolition of existing interior finishes and other improvements within the renovation area
- Complete replacement of the existing nonoperational HVAC system with a new energyefficient system
- New interior finishes throughout the areas, including raised access flooring throughout the renovated areas
- New structural roof deck and roofing system
- New elevator and fire stairs
- New site security fencing, sliding vehicular security gates, exterior parking, walkways, site utility improvements, and storm drainage improvements
- New building security and cameras

Client Contact: Matthew Reynolds, Deputy Branch Chief - Design & Construction, West Virginia Army National Guard, (304) 561-6568, matthew.t.reynolds18nfg@mail.mil

West Virginia Buckhannon Readiness Center Phase II Commissioning

GRW is overseeing commissioning services during the design, construction, and post-construction phases for the Buckhannon Readiness Center addition. The scope of work includes:

- Attend design, construction, and postconstruction meetings
- Conduct reviews of design documents to ensure compliance with project requirements and specifications
- Develop a commissioning plant for testing of

equipment, systems, and controls

- Verify installation and performance of systems to be commissioned
- Verify that a systems manual has been prepared that included operations and maintenance documentation, full warranty information
- Complete preliminary and final commissioning reports

West Virginia ARNG Readiness Center Commissioning Projects

GRW was contracted by the West Virginia Army National Guard to provide LEED Fundamental Commissioning for four building construction projects: 1) the Buckhannon, WV AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost, 2) the Morgantown, WV Readiness Center, 58,520 SF and \$20,500,888 construction cost, 3) the Moorefield, WV Readiness Center, 57,256 SF and \$17,725,351 construction cost, and 4) the Logan, WV Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost.

The scope of services included all commissioning required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems, including coordination with providing contractors, documentation of all installations and testing, coordination of owner training and assistance with LEED submittals.

Contractor Performance Assessment Report (CPAR) from Contracting Officer Matthew Corcoran:

Quality: Exceptional/Outstanding Overall Job

Schedule: Exceptional/Outstanding Overall Job

- Cost Control: Exceptional/Outstanding Overall Job
- Management: Exceptional/Outstanding Overall Job

Regulatory Compliance: Exceptional/Outstanding Overall Job

CLIENT CONTACT: MAJ Daniel Clevenger, CFMO, West Virginia Army National Guard, (304) 561-6446, daniel.w.clevenger.mil@mail.mil

Indiana Army National Guard Readiness Center, Lawrence, IN

GRW provided A/E design and construction administration services for a new 109,555 SF twostory Army National Guard Readiness Center in Lawrence, a suburb of Indianapolis, IN. This facility is located on a site that was formerly part of Fort Benjamin Harrison. An 8,300 SF unheated storage facility is also included.

Among other functional items, this Readiness Center includes the following spaces and features:

- Private offices and administrative common spaces, fully networked
- Classrooms, library and training center, training aid storage area, audio/visual area
- Assembly hall with fully functional kitchen and chair and table storage
- Locker rooms, medical section room
- Mechanical and electrical system rooms, communications equipment rooms
- Energy management and control system, lighting controls

"I want to take this opportunity to express my appreciation and gratitude to you and your team for what we feel will be a highly successful design of our Lawrence Readiness Center. The design process that your team led us through has been extremely productive and efficient. Their effectiveness was due in large part to the highly professional team you assembled for this project, and their willingness to meet the owner's requirements and timeline. Again thank you and the team at GRW for the hard work and professional approach to this design."

Steven Hines, Facilities Management Officer, Indiana ARNG

CLIENT CONTACT: Major Chris Purtell, Contracting Officer, Indiana Army National Guard, (317) 247-3514; chris.purtell@us.army.mil





Kentucky Army National Guard Joint Armed Forces Reserve Center and Field Maintenance Shop, Paducah, KY

GRW provided mechanical, electrical, fire protection and civil engineering design services as part of a design-build team for this \$14.7 million BRAC project. This project was managed by the Commonwealth of Kentucky Finance and Administration Cabinet on behalf of the Kentucky Army National Guard. This complex, which meets the **LEED Silver** sustainable design rating, is located in Paducah, KY, and serves units from the KY ARNG and U.S. Army Reserves.

The 66,035 SF reserve center includes the following functional spaces:

- Private offices, administrative common spaces, recruiting office, family support office
- Classrooms, COMSEC training, library and training center, distance learning, weapons simulator, training aid storage area, audio/visual area

- Assembly hall with fully functional kitchen and chair and table storage
- Heated unit storage rooms, facility maintenance, and arms vault
- Building operating spaces and support spaces

The 13,917 SF FMS facility includes:

- Private offices
- Classrooms and a library
- Tools and parts storage, battery room, bulk POL storage, and lubrication system storage
- Building operating spaces and support spaces, unheated storage building
- 6 vehicle work bays

The complex also includes the following features:

- Energy submetering connected to building management system (DDC)
- Energy management and control system, lighting controls, intrusion detection system, mass notification system
- Site lighting which meets the Dark Skies Initiatives
- Occupancy sensor controlled interior lights throughout
- Full cutoff-type site lighting (no light trespass)
- T5 low mercury, high-efficiency fluorescent lamps and electronic ballasts throughout for 12.5% energy reduction over ASHRAE 90.1 baseline figures
- Military and POV parking, wash platform, loading dock, access roads and ramps
- Flammable material storage and controlled waste facilities
- Site AT/FP measures, security lighting, utilities, security fencing, landscaping

A 3,358 SF unheated storage facility is also included.







First Place Award for Public Sector Projects over \$15 Million | Design-Build Institute of America, Ohio Valley Chapter

Design-Build Excellence Award | Design-Build Institute of America, Ohio Valley Chapter



Kentucky Army National Guard Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Bluegrass Army Depot

GRW served as the "Design Criteria Consultant" to the KY ARNG for the design-build of a new \$19.2 million Armed Forces Reserve Center (AFRC) and Field Maintenance Shop (FMS). This complex is designed to meet the **LEED Silver** sustainable design rating. The services provided by GRW included RFQ and RFP development, assistance in short-listing and final selection of the design-build team, construction administration and commissioning of the new facilities. These facilities serve units from the KY ARNG and US Army Reserves. Two unheated storage facilities (4800 SF and 2600 SF) are also included. The AFRC is a 63,250 SF facility. It includes the following functional spaces:

- Administrative areas: Private offices, administrative common spaces, recruiting office, family support office
- Education spaces: Classrooms, COMSEC training, library and training center, distance learning, weapons simulator, training aid storage area, audio/visual area
- Assembly hall with fully functional kitchen and chair and table storage
- Storage areas: Heated unit storage rooms, facility maintenance, arms vault, unheated storage building
- Building operating spaces and support spaces



The FMS is a 31,725 SF facility. It includes:

- Administration area: Private shop offices
- Educational spaces: Classrooms and a library
- Storage spaces: Tools and parts storage, battery room, bulk POL storage, and lubrication system storage
- Building operating spaces and support spaces, unheated storage building
- Workbays: 12 vehicle workbays

The AFRC/FMS complex includes the following features:

- Military and POV parking, wash platform, loading dock, access roads and ramps
- Flammable material storage and controlled waste facilities
- Site AT/FP measures, security lighting, utilities and landscaping
- Energy management and control system, intrusion detection system, mass notification system



Consolidated Municipal Utility Administration Building, Frankfort, KY

The Frankfort Plant Board, a municipal utility company that provides cable, broadband, telephone, security, electric and water for the city of Frankfort, KY, and surrounding areas, hired GRW to provide programming, planning and design services for its new consolidated administration building and associated 30-acre site.

The three-level, 46,000 SF administration building project consolidates the Frankfort Plant Board's **administrative offices**, as well as customer service offices. The **multipurpose board/ community room** is regularly used by the community, the utility, and other entities for meetings, trainings, gatherings, etc.

CLIENT CONTACT: Sharmista Dutta, PE, Project Manager, Frankfort Plant Board, (502) 352-4407, sdutta@fewpb.com



"From the beginning, Aaron has been attentive and took the time to gain a good understanding of how our business functions. He, along with the rest of the GRW project team, has been helpful and responsive throughout the design and construction phases.

> Sharmista Dutta, PE, Water Engineer, Frankfort Plant Board



West Virginia State Capitol East Campus Warehouse/Grounds Building, Charleston, WV

This new construction project involves planning and design services for a warehouse facility with surplus and receiving, a warehouse store, office area, maintenance shop with welding, grounds mechanic shop for vehicle maintenance, and equipment storage facility serving the West Virginia Department of Administration, General Services Division on the Capitol East Campus. This project also includes Open Storage and Bulk Storage Building on site as well as a separate building for Capitol Mail Room Building.

Key components of the Warehouse/Grounds Building 26,771 SF facility include:

- One heavy vehicle repair bay
- One large welding hood with curtains for multiple welding applications
- Air compressor and air compressor reels throughout shops
- Wash bay
- Woodworking shop
- Parts storage
- Offices
- Support facilities
- Sloped Concrete floor with floor drains
- Oil/water separator
- Emergency generator

The building is a pre-engineered metal building that utilizes a wall system with girts with batt insulation, vapor barrier, and metal liner panels on the inside face. The roof is a standing seam metal roof system on purlins w/batt insulation, vapor barrier, and metal liner panels on the inside face.

The building HVAC includes gas radiant heaters, rooftop units mounted on the ground, exhaust fans, and dual fuel split system heat pumps to feed the different areas of the building. A wet sprinkler system has been designed to protect the multiple hazardous classifications for each area of the building. Coordination of new equipment and existing equipment relocated from a previous facility enables the facility to flow and function properly.

As a safety concern, special attention was paid to separate pedestrian and vehicle paths. The facility is secured with perimeter fencing and keycard entry systems. A generator was provided for the facility to keep operations functional, which is critical for heavy snow emergency situations. All new underground utilities were provided to the site, further enhancing the dependability of the facility. The project includes CAT 6 structured cabling, fiber optic network communications, electronic access control. and surveillance camera systems.

CLIENT CONTACT: Robert Kilpatrick, Acting Business Manager, West Virginia Department of Administration, (304) 352-5491, robert.p.kilpatrick@wv.gov



WV Division Highways Vehicle Maintenance and Equipment Shops Building, Charleston, WV

This new construction project involved planning and design services for a vehicle maintenance and equipment storage facility serving the WVDOT Division of Highways' District One vehicle fleet and equipment.

Key components of the 35,000 SF facility include:

- Eight heavy vehicle repair bays
- Six light vehicle repair bays
- Two welding bays
- Wash bay
- Small engine shop
- Parts storage
- Tire storage
- Offices
- Support facilities
- Concrete floor with trench drains
- Oil/water separator

Two cranes serve the repair bays, and a third crane serves the entire weld shop area. The two story structure includes a freight elevator to allow storage of parts and tires on the second floor. The rest of the building is protected from the tire storage area by fire barriers and a sprinkler system with hazardous material design for the area. Coordination of new equipment and equipment relocated from the previous facility enables the facility to flow and function properly.

The structure utilizes cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists. This allows the entire building to be insulated without risking damage to the insulating envelope. With brick facades, pilasters, and careful detailing, the building design draws on elements from the surrounding historic structures to make the building fit into the center of Charleston's Historic Warehouse District.

As a safety concern, special attention was paid to separate pedestrian and vehicle paths. The facility is secured with perimeter fencing and keycard entry systems. A generator was provided for the facility to keep operations functional, which is critical for heavy snow emergency situations. A separate streetscape project is providing underground utilities to the site, which will further enhance the dependability of the facility.

CLIENT CONTACT: Travis Knighton, PE, District Engineer, West Virginia Department of Transportation, (304) 356-3771, Travis.W.Knighton@wv.gov

West Virginia Division of Natural Resources Building 74 Renovation, South Charleston, WV

GRW was selected to complete a multiphase project for the renovations of Building 74 for the General Services Division (GSD). Phase 1 provided a thorough evaluation of the interior and exterior of the existing 37,000 square-foot building, including functional analysis, code review, and evaluations of the building enclosure, roof, electrical, and mechanical systems.

The three-story, masonry-construction facility was built sometime in the late 1970s. Following the purchase of the building by the State in 2009, extensive renovations were completed to create spaces suitable for the user. No upgrades were made to the primary mechanical and electrical systems at that time – and it is believed the rooftop mechanical units are at least 15 years old.

Based on GRW's evaluation of the building systems, the following recommendations have been selected by the State and are being designed by GRW:

- Replacement of existing heating and cooling systems, including all ductwork and all rooftop equipment, with new energy efficient rooftop units with electric heating VAV boxes
- New DDC controls throughout building
- Replacement of existing single-pane windows with energy-efficient double-pane windows
- Replacement of existing T5 light fixtures with energy-efficient LED fixtures
- Updated security system and fire alarm modifications as needed for the updated building layout
- Minor reconfiguration of office space on the second floor to address code egress issue
- Replacement of existing ceilings and floor finishes

CLIENT CONTACT: Mark Crites, Building Project Management Specialist, West Virginia Department of Administration, (304) 957-7142, Mark.A.Crites@wv.gov



WV Dept. of Administration/WV Army National Guard | National Guard Readiness Center - Parkersburg

3.0 Staff Qualifications

By choosing GRW, you have access to some of the most qualified and knowledgeable military design consultants in the region.

Our clients directly benefit from GRW's one-stop business model and multidiscipline staff who specialize in architecture, engineering (mechanical, electrical, structural, civil/site, water resources), landscape architecture, survey, and interior design. Aaron Nickerson, AIA, LEED Green Assoc., will be the overall leader of the design team and directly involved with you through every stage of the project. He regularly provides architectural leadership for complex building projects, and he has overseen several major new construction projects for facilities 780,000 SF (gross building area) and a cost of \$182M.

Our team's discipline leaders - and

their backup team members – are equally experienced and will work closely with Aaron. Furthermore, our team's local knowledge and capacity has been strengthened by GRW's subsidiary Chapman Technical Group, a 25-person St. Albans, WVbased firm. These team members will be close at hand as we collaborate with you on this work. More information about all roles is provided in Section 4.0, Approach & Methodology.



West Virginia Department of Administration and West Virginia Army National Guard



CEOI 0603 ADJ2500000016 - National Guard Readiness Center - Parkersburg





YEARS OF EXPERIENCE: With GRW: 35 Total: 41

EDUCATION

Bachelor of Architecture (with honors), 1983, University of Kentucky

REGISTRATION

Registered Architect: WV, KY, TN, AL, GA, IN, TX, MS, NC, SC, FL, MO, AZ, NM, CA, WA, KS, MD, NE

National Council of Architectural Registration Boards (NCARB) Certification

LEED Accredited Professional, Building Design + Construction

Certified Interior Designer: Kentucky

PROFESSIONAL AFFILIATIONS AND TRAINING

American Institute of Architects

Past President - AIA East Kentucky Chapter Board of Directors

American Correctional Association (ACA)

Member / Past Officer -UK College of Architecture Alumni Association

Life Member - UK Alumni Association

Shane Lyle, AIA, LEED AP BD+C GRW Principal

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Building 107 Renovation,

Charleston, WV – Principal. Scope of work included design services (LEED Silver design criteria) for two separately funded (MILCON/SRM) sub-projects to repurpose existing unoccupied hangar into space for Aeromedical Evacuation Squadron (AES). Repairs and building repurposing included: new interior spaces within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATFP standards. New functional areas include spaces for medical simulation training, maintenance, operations, administration, storage, and other mission-related activities.

West Virginia ARNG JFHQ TAG Wing Renovation, Charleston, WV -

Project Manager. Work for 7,200 SF facility includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

West Virginia ARNG Buckhannon Readiness Center Phase II Commissioning, Buckhannon, WV – Architect. Provided commissioning services during design, construction, and post-construction for the Phase 2 addition of Buckhannon Readiness Center.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – Project Manager. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement (including redundant HVAC systems for secure IT room and non-secure IT room); new DDC control system for all new equipment, new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

West Virginia ANG 167th Airlift Wing Munitions Storage, Martinsburg, WV – Architect. New munitions inspection building, five magazines (all premanufactured modular units), new concrete pads (2,865 SF), all-weather

pavement (5,566 SF) for vehicular access, gate/fencing, utilities, exterior lot lighting, communications, and security for munitions area.

West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV – Principal. Expansion of sewer (1,996 LF), water (1,996 LF) and electric (1,797 LF) to all existing and future buildings, unit training equipment site (UTES) and wash rack locations. Also included design of Forward Operating Base (FOB) including 20 14' x 16' wooden buildings, new bath house for approximately 200 people and pavilion.

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV – Project Manager. Fast-track design of corrosion control hangar (B308) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft. West Virginia ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV – Project Manager. Fast-track design of 7,600 SF composite material shop to existing corrosion control hangar required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Maintenance Hangar Modifications, Martinsburg, WV – Project Manager. Fast-track design of maintenance hangar (B306) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Fuel Cell Hangar Modifications, Martinsburg, WV – Project Manager. Fast-track design of fuel cell hangar (B305) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ARNG Camp Dawson Ranges at Briery Mountain, Kingwood, WV – Principal. Project includes design and construction of new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range at Briery Mountain Training area to conform site to government standard Breach Range Design Requirements. Included design of access road to remote site, electrical connections, breaching structures, open covered range operations and control shelter, storage building, dry latrine, covered viewing stands, and parking area.

West Virginia ANG 167th Airlift Wing C-5 Apron Repair, Martinsburg, WV – Principal. Evaluation and design services to repair fractured/heaved C-5 apron caused by poorly draining base and sub base. Pavement repair of approximately 1,755 SY included demolition and removal of fractured and heaved pavement down to below original base and sub base, compaction of new material, placing of sub base and base and concrete pavement parking apron, asphalt shoulder stabilization, all constructed to support C-5 aircraft. Utility and site improvements were also included.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Principal. Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project (MILCON/SRM split funded) increased space and improved mission performance and operational efficiency for command and administrative functions in ways that are energy efficient, code compliant and in accordance with current ANG policies. Project meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

West Virginia ANG 130th Airlift Wing Communications Facility Code / Criteria Review, Charleston, WV – Project Manager. Code/criteria review and LEED update report for facility designed to 65% three years prior under separate GRW/NGB contract then put on hold pending funding. Twofold project goal included: 1) identify and delineate known codes/criteria that are either new or updated since 65% design submittal; and 2) describe revised LEED 3.0 criteria now in effect for project and outline points for LEED Silver certification, compared to LEED Silver 2.2 criteria in effect at 65% design stage. West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair, Martinsburg, WV – Principal. Concept development report for C-5 aircraft complex which required electrical modifications to meet needs of current occupants' activities, and investigation/resolution of temperature control in numerous locations. Report included detailed discussion of current electrical, architectural and HVAC system problems; recommendations to resolve large-system problems, as well as particular solutions for small areas; conceptual level drawings; conceptual level outline specification; and construction cost estimate.

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV – Principal. Design services for \$3 million renovation and energy-efficient improvements to 25,765 SF facility with history of remodeling activities resulting in building that inadequately served its users (Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center). Work included Charrette to develop alternative floor plans. Selected design allowed for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding.

West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV – Architect. Preparation of Program Planning Document Charrette (PPDC) for replacement of two local armories and USAR center with aging facilities and site limitations, with new, \$17 million Joint Armed Forces Reserve Center and support facilities on 94acre site. Resulting plans included an Armed Forces Reserve Center (60,927 SF), unheated storage (6,000 SF), area maintenance support (4,500 SF) and helipad.

West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV – Project Manager. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide centrally located common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.). Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.



YEARS OF EXPERIENCE: With GRW: 18 Total: 19

EDUCATION

Bachelor of Architecture (with honors), 2006, University of Kentucky

Master of Architecture, 2007, University of Kentucky

REGISTRATION

Registered Architect: WV, KY, TN, IN, FL, NY, WA, DE, AR, DC, KS

National Council of Architectural Registration Boards (NCARB) Certification

LEED Green Associate

Certified Interior Designer: Kentucky

PROFESSIONAL AFFILIATIONS AND TRAINING

American Institute of Architects (AIA)

U.S. Green Building Council (USGBC)

Society of American Military Engineers (SAME)

Aaron Nickerson, AIA, LEED Green Asc. GRW Project Manager

RELEVANT PROJECT EXPERIENCE

West Virginia ARNG JFHQ TAG Wing Renovation, Charleston, WV – Architect. Work for 7,200 SF facility includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

West Virginia ANG 130th Airlift Wing Communications Facility,

Charleston, WV – Architectural Designer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating. Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.

Jeffersontown Fire & EMS Station #54, Jeffersontown, KY – Project Manager. Complete A/E design services for new 17,500 SF city Fire and EMS station. Facility consists of two-story fire house, accessory 3-bay garage building, storage building, and full site development. Fire house has dorms, office, decontamination areas as well as a 3-bay pull through apparatus bay (storage of 7 vehicles), ICC-500 compliant tornado shelter, and building wide natural gas generator.

Louisville MSD Morris Forman Water Quality Treatment Center and Central Maintenance Facility Entrance Enhancements, Louisville, KY – Project Manager. Full-service A/E design and construction administration services for replacement of guard facilities. Scope of work includes new guard buildings; access drives; security measures including access control, cameras, gates, and lighting; and utilities including data, power, generator backup, and plumbing.

Louisville MSD Morris Forman Water Quality Treatment Center and Central Maintenance Facility-Guard Facility Study, Louisville, KY – Project Manager. Programming report for investigation into replacement of guard facilities. Scope of work included investigations into current security measures, vehicle access, power and distribution requirements, and guard building accommodations for staff.

NYRA Belmont Park, Aqueduct Racetrack and Saratoga Race Course Improvements, Elmont, Queens & Saratoga Spri, NY – Architect. Improvement projects at Belmont Park include rebuilding main dirt track and two turf tracks; new pump house and irrigation system; widening of training track; and new three-bay vehicle maintenance and wash facility.

Wright-Patterson AFB Consolidate / Renovate Building 614, Wright-Patterson AFB, OH – Architect. Demolition of Building 745 CE Grounds Maintenance; consolidation and renovation of existing Building 614 CE Grounds Maintenance Shop; and addition to Building 614 in Area B. Designbuild delivery.

Blue Grass Army Depot Personnel Support Facility, Richmond, KY – Project Manager. Design-build project of approximately 7,500 SF, preengineered metal building including space for field office activities, conference rooms, locker and changing areas, and laundry and storage. **Nicholasville Fire Station No. 4, Nicholasville, KY** – Project Manager. Facility programming, facility needs assessments, architectural and engineering design, and construction phase services for new 6,825 SF fire station with two pull-through apparatus bays, and vehicle storage for up to six vehicles. Facility includes controlled security lock systems for visitors; backup generator power for entire building, communications, electrical, and mechanical/HVAC; zoned sloped concrete floors with trench drain and oil/water separator system; high pressure washing system in apparatus bays; four zones of dedicated vehicle exhaust and makeup air units in vehicle maintenance area; high-speed, motorized overhead section doors; staff and visitor parking; concrete apparatus vehicle parking and driveways; staff assembly areas with sustainable stormwater including rain garden and vegetated filtration plantings.

Blue Grass Army Depot Visitor Control Center and Battlefield Memorial Highway Revisions, Richmond, KY – Architect. Design and construction administration services for design-build project at main visitor control center (VCC). Revisions involved removing, closing, and relocating VCC to current parking lot entrance, as well as widening and providing KYTC-required improvements, such as new traffic signals, warning signals, and revised signage to U.S. 421 at new entrance. VCC structures, signage, fencing, utilities, pavement, and pedestrian facilities improvements were also included.

Pulaski County Schools Bus Maintenance Garage, Somerset, KY – Construction Administration. New 11,036 SF, pre-engineered metal building with three drive-through maintenance bays equipped with motorized, vertical lift sectional doors with space for six buses; tire room; work room; parts room; toilets; break room; waiting area; office; and mezzanine storage/mechanical area. Also included 3 in-ground, adjustable bus lifts; concrete floor with trench drains and oil/water separator; fire suppression system; centralized vehicle fluids system piped to 4 central dispensing locations; compressed air system; vehicle exhaust systems; overhead radiant system and ventilation in bus bays; and complete HVAC in office areas.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architectural Designer. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF, with a construction bid of \$14 million (\$9 million under the MCC of \$23 million) due in large part to innovative design and alternative construction materials. Functional spaces include administrative, educational (classrooms, weapons simulator, distance learning, training-specific libraries, COMSEC), assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR). Site work included extension of utilities from adjacent ANG base, grading, drainage and stormwater detention, perimeter fencing and entry point control, parking and access roads, wash platform, AT/FP measures, and geothermal system for heating and cooling.



YEARS OF EXPERIENCE: With GRW: 30 Total: 39

EDUCATION

Bachelor of Architecture, 1987, University of Kentucky

REGISTRATION

Registered Architect: KY, IN, VA, OH, MI, GA

National Council of Architectural Registration Boards (NCARB) Certification

LEED Accredited Professional BD+C

PROFESSIONAL AFFILIATIONS AND TRAINING

AIA Kentucky Code Review Committee (2021)

Kentucky Housing, Buildings and Construction Advisory Committee (2016-2017, 2017-2018)

AIA East Kentucky Chapter Board of Directors (2017)

American Institute of Architects (AIA)

Kentucky Masonry Institute Certified Masonry Specialist

Steel Window Restoration Seminar, Kentucky Heritage Council

AIA School Facilities Construction A to Z Continuing Education

Society for College and University Planning

Jimmy Piper, Jr., AIA, LEED AP BD+C GRW Architect

RELEVANT PROJECT EXPERIENCE

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Project Manager. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF. Functional spaces include administrative, educational (classrooms, weapons simulator, distance learning, training-specific libraries, COMSEC), assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR).

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Architect. Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit.

Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN – Project Manager. Planning, design and construction administration services for new 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage facility.

Michigan ARNG Design & Renovation of 8 Facilities at Ft. Custer, Camp Grayling, Grayling Army Airfield and Midland, MI – Architect. Architectural and engineering design for 8 "fast track" projects for Michigan Army National Guard scattered throughout state, including: new Bachelor Officer Quarters at Fort Custer, Camp Grayling and Grayling AAF; addition to Range Control Building and new Logistics Facility at Fort Custer; new General Officers BOQ at Camp Grayling; new Company Operations Facility at Grayling AAF; and kitchen and other renovations to existing armory in Midland that required lead and asbestos abatement. Completed design, permitting, and master planning for future expansion and/or facilities in 10 weeks, in time to meeting funding deadlines for bid advertisements.

Ohio ARNG Regional Training Institute, USP&FO Office/Warehouse and Combined Support Maintenance Site (Phase 2) Construction Services, Columbus, OH – Architect. Commissioning services and construction observation/documentation services for 123,000 SF, \$13.9 million Regional Training Institute, 69,880 SF, \$7.5 million USP&FO Office/Warehouse, and Phase 2 of 97,635 SF, \$19.3 million Combined Support Maintenance Site, all located at Defense Supply Center Columbus (DSSC).

Indiana ANG 122nd Fighter Wing Security Forces Operations and Training Facility, Fort Wayne, IN – Project Manager. Conceptual design for design-build bridging document for new 18,494 SF Security Forces Operations and Training Facility, including Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, providing offices for Flight Chief, open office area for base security forces, classrooms, workout room, locker room, weapons simulator room and weapons storage. **Texas ANG 136th Airlift Wing Security Forces Squadron Facility, NAS JRB, Fort Worth, TX** – Architect. Design-build RFP and construction administration services for \$4.5 million, 17,400 SF, 2-story addition to 136th Airlift Wing Headquarters Building to house personnel and equipment for unit's Security Forces Squadron (SFS) at NAS JRB Fort Worth (Carswell Field). Provides command, control and administrative office space, weapons simulator, arms vault, classrooms, weapons and equipment storage / maintenance areas, locker rooms and restrooms, fitness room, mobility equipment storage and utility vehicle storage. Site work included new utilities, stormwater controls, pavements, security fencing, grading and AT/FP measures. Designed to meet the USGBC LEED Silversustainable design criteria and EPAct 2005 energy efficiency standards.

Indiana ARNG Combined Arms Collective Training Facility Project, Planning Design Charrette, Muscatatuck, IN – Architect. Design and engineering consulting to conduct multi-agency collaborative Project Planning Document Charrette (PPDC) for development of Combined Arms Collective Training Facility (Muscatatuck CACTF) and to validate \$16.1 million project award estimate, involving senior leadership, key staff, other stakeholders, ARSC-TPIO-Live, USACE Huntsville Division MCX (CEHNC), and DAMOTRS. Confirmed project development cost and facilities needs and recommended major renovation / conversion of 23 of 70 existing buildings and new construction.

Indiana ANG 122nd Fighter Wing Installation Development Plan, Ft. Wayne, IN – Project Manager. IDP to support mission transition of increased A-10 aircraft, F-15E and later to F-35A or joint cargo aircraft over next 15 to 20 years while accommodating future Red Horse Beddown. Included Common Installation Picture (CIP), which forms backbone of IDP and provides rapid access to GIS databases for detailed information on real property, utility systems, real estate and other assets vital to base's mission capability.



Years of Experience: 32 Years with Chapman: 21

Education

B.S., Architecture, 1995 University of Tennessee

Registration

Architect: WV, KY, IN, TN

Affiliations

National Council of Architectural Registration Boards

WV Chapter, American Institute of Architects

Awards

Honor Award, WV AIA Upshur County Courthouse

Merit Award, WV AIA I-79 Burnsville Rest Area

Merit Award, WV AIA State Road Commission Building

Publications

Structure Magazine, February 2010 "A Gem in the Mountains" Upshur County Courthouse Restoration

Phillip A. Warnock, NCARB, AIA Project Architect

Experience

Phill is an award-winning architect with extensive experience, having worked with clients on programming / planning, budget analysis, design, construction documents, meeting coordination, bidding / negotiation services, construction phase services, and code compliance. He is especially skilled in renovation and historic restoration projects for government and municipal facilities.

WV General Services Division, Building 74 Renovation;

South Charleston, WV

Project Architect for evaluation and recommendations for possible improvements and upgrades to building systems in three-story, 37,000 SF, masonry-construction facility that houses approximately 100 employees. Among improvements selected for design are replacement of heating and cooling systems, windows, T5 lighting with LED fixtures, and replacement of ceilings and floor finishes, as well as new DDC controls throughout building.

WV General Services Division, Capitol East Campus;

Charleston, WV

The Capitol East Campus Project transforms a 5 ½ acre site adjacent to the State Capitol into upgraded and consolidated facilities, including several buildings supporting the building and grounds maintenance needs for the entire Capitol Complex. The Warehouse/Grounds Building is a 27,000 square-foot structure providing high-bay storage, low-bay storage, maintenance shop, a grounds/mechanics shop, distribution area, and office suite. The 4,300 square-foot Open Storage Building provides covered storage for vehicles, tools, and equipment. The Bulk Storage Building provides 600 square feet of covered storage for salt, gravel, and mulch. The wedge-shaped site was designed to accommodate the buildings, parking for 369 vehicles, vehicular circulation, and greenspace with storm detention systems to reduce flooding in the area. A 6,000 square-foot Mail Room Building provides the mail service and sorting center for the entire Capitol Complex.

WV Division of Highways State Road Commission Building; Charleston, WV

Project Architect for the renovation of the historic State Road Commission Building for the West Virginia Division of Highways. The 40,000 square-foot building houses offices and support facilities for the local highway district. In addition to a complete interior makeover that included a historic information center and radio studio, the building also received new exterior doors, windows, roofing and a new elevator. A skywalk connects the building to a new Headquarters Building that was constructed beside the State Road Commission.



YEARS OF EXPERIENCE: With GRW: 26 Total: 26

EDUCATION

Bachelor of Architecture (Dean's List), 1998, University of Kentucky

Associates Degree, Applied Science, 1993, Lexington Community College

REGISTRATION

Associate Member, American Institute of Architects

PROFESSIONAL AFFILIATIONS AND TRAINING

Member, Construction Specification Institute (CSI)

Intern Development Program Completed

David Vaught, Assoc. AIA, CSI GRW Architectural Designer

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV – Architectural Designer. Fast-track design of 7,600 SF composite material shop to existing corrosion control hangar required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV – Architectural Designer. Fast-track design of corrosion control hangar (B308) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Fuel Cell Hangar Modifications, Martinsburg, WV – Architectural Designer. Fast-track design of fuel cell hangar (B305) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Maintenance Hangar Modifications, Martinsburg, WV – Architectural Designer. Fast-track design of maintenance hangar (B306) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

Kenton County School District Transportation & District Support Facility, Fort Wright, KY – Architectural Designer. New approximately 80,578 SF transportation and support facility to support staff and operations for these critical district functions: transportation, maintenance, technology, and support operations. Spaces anticipated range from offices and conference rooms to a garage with eight drive-through bays, a food service area, a network operations center (NOC), specialized spaces (image room, bug rooms), and numerous other items.

Berea College Facilities Maintenance and Auxiliary Maintenance Buildings, Berea, KY – Architectural Designer. New 37,445 SF preengineered metal Facilities Maintenance (FM) and 15,504 SF pre-engineered metal Auxiliary Maintenance (AM) buildings to unify and improve efficiency for Facilities Maintenance Departments. FM building includes office space; office support spaces; maintenance work areas for each department; multipurpose lunchroom/classroom for 60+ staff; toilet/shower/locker area; general work/storage area; additional mezzanine storage area with freight service elevator access; unit heaters and exhaust/air circulation systems in shop areas; HVAC in office areas via one central roof top unit; and building wide fire suppression. AM building includes: vehicle repair area with two, slab-supported lifts; vehicle wash bay; bus storage; campus recycling center with industrial cardboard bailer and paper shredder; offices; bathrooms; additional overflow storage area; and 30 electric cart maintenance vehicle charging/parking spaces. Both buildings have card reader access, motorized overhead doors, man doors, concrete floors with trench drains where applicable, and oil/water separator systems.

Roederer Correctional Complex Security Upgrades, LaGrange, KY – Architectural Designer. New security perimeter around Unit 5 Building which houses 225 occupants. Improvements included: approximately 1,450 LF of perimeter fencing, gravel perimeter drive, vehicular sally port, exterior security lighting and cameras, and routing existing overhead power underground at fencing.

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Architectural Designer. Design-build delivery of \$196 million, LEED Silver women's medium-security Federal Correctional Institution (70-acre site) and minimum-security Federal Prison Camp (20-acre site) totaling 665,889 SF, housing approximately 1,790 inmates. FCI includes three 4-story housing units and one single-story segregation unit dormitory. Complex includes food service (kitchen/dining), medical services, warehouses/ sanitation, administrative, recreational, academic educational, industrial/ vocational, personal services, vehicle maintenance, and central utilities plant.

Twin Lakes Emergency Services Building, Albany, KY – Project Manager. Preliminary design services for new, 12,150 SF emergency services building providing 4 truck bays for firefighting, 6 truck bays for EMS, and 911 dispatch. Included storage areas, sleeping quarters, kitchen, conference and training room, and offices.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architectural Designer. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF, with a construction bid of \$14 million (\$9 million under the MCC of \$23 million) due in large part to innovative design and alternative construction materials. Functional spaces include administrative, educational, assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR). Site work included extension of utilities from adjacent ANG base, grading, drainage and stormwater detention, perimeter fencing and entry point control, parking and access roads, wash platform, AT/FP measures, and geothermal system for heating and cooling.

Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN – Architectural Designer. Planning, design and construction administration services for new 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage facility. Includes: administrative areas; classrooms, COMSEC training, library and training center, distance learning; assembly hall with fully functional kitchen; locker rooms, medical section room; heated unit storage and unheated storage rooms, facility maintenance, arms vault, tool rooms; RAPIDS, family support and recruiting offices; space for future indoor range or simulator; military and POV parking, wash platform, loading ramp and dock, helipad; site Antiterrorism / Force Protection (AT/FP) measures, security lighting; energy management and control system, intrusion detection system, mass notification system; stormwater bioretention pond.



YEARS OF EXPERIENCE: With GRW: 1 Total: 3

EDUCATION

M.A., Interior Design, 2023, University of Kentucky

B.S., Architecture, 2021, Bowling Green State University, OH

Rosemary Harms GRW Interior Designer

Rosemary's experience as a designer and instructor has molded her to clearly communicate and develop design concepts/rationale while giving careful consideration and attention to detail as projects unfold. Additionally, her skills include design software such as Revit/AutoCAD, Adobe Creative Suite, and Sketchup. Rosemary's recent experience includes collaborating with architects to develop design concepts, space plans, renderings, and complete construction documents.

RELEVANT PROJECT EXPERIENCE

Lexington Division of Water Quality Headquarters & Operations Center Renovation/Refit, Lexington, KY – Interior Designer. Design services for the renovation of an existing building for a Headquarters and Operations Facility. The proposed site consists of approximately 67,000 square feet on approximately 8.4 acres. DWQ will have approximately 125 staff assigned to this building in a mix of administrative and operational spaces. An overall design identifying the building as part of LFUCG while staying sensitive to the neighborhood and context of the surrounding structures was imperative.

Winchester Fire & EMS District-Wide Facility Study and Design, Winchester, KY – Interior Designer. GRW will be providing a Facility Study for the City of Winchester Fire / EMS department. The Study shall include City Stations to determine deficiencies to meet the department's needs. Design on two fire stations have been assigned.

Kentucky Department of Juvenile Justice Jefferson County Youth Detention Center Renovation, Louisville, KY – Interior Designer. Renovation of facility to house functions for high security youth population that is intended to provide adequate space for functions of 64-bed high-security youth detention facility, including secure housing facilities, medical services, educational spaces, recreational spaces, kitchen and dining spaces, and other necessary functions of a secure youth detention facility.

Kenton County Fiscal Court Independence Courthouse Phase 4 Renovation, Independence, KY – Interior Designer. Work includes designing new layout for public restrooms, as well as replacing lighting and ventilation. In main lobby, lighting is being replaced to match recently replaced courtroom lighting.

Berea College Hutchins Library IT Suite Renovation, Berea, KY – Interior Designer. Architectural and engineering design to renovate the 9,135 SF Hutchins Library IT Suite for use by several other groups including 2,842 SF for Student Success Transitions; 878 SF for Disability and Accessibility Services; 1,457 SF for Center for Transformative Learning; and 5,177 SF for existing occupants.

East Kentucky Power Cooperative Spurlock EOP Operations Employee Facility, Maysville, KY – Interior Designer. Addition to existing building to house an office, break room / Kitchenette, locker room, and restroom space.

Rural Lorain County Water Authority Administrative Office Renovation, Lagrange, OH – Interior Designer. Planning, design, bidding and construction administration services for updates to the administration building.



YEARS OF EXPERIENCE: With GRW: 5 Total: 25

EDUCATION

B.S., Industrial Technology, 1996, Murray State University

B.S., Mechanical Engineering, 1998, University of Kentucky

REGISTRATION

Professional Engineer: WV, KY, IN, OH, NY, FL, TN

NCEES Member allows reciprocity with other states

LEED Accredited Professional

PROFESSIONAL AFFILIATIONS AND TRAINING

Kentucky Local Correctional Facilities Construction Authority Board (through 2023)

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) - Board of Governors, Bluegrass Chapter

Kentucky Society of Professional Engineers (KSPE) - Professional Development Committee (Vice Chair), Bylaws & Operational Procedures Committee, Ethical Practices Committee

Society of American Military Engineers (SAME)

Society of Marketing Professional Services (SMPS) -Past President

Cory Sharrard, PE, LEED AP GRW Mechanical Engineer

RELEVANT PROJECT EXPERIENCE

West Virginia Division of Corrections HVAC Multiple Facilities, Multiple

Locations, WV – Project Manager. Schematic design, design, development, construction documents, cost estimates, construction bid services, and construction administration services to replace the central air systems and building automation controls systems at ten (10) facilities across West Virginia including Lakin, Eastern Regional, Salem, Kuhn, Tiger-Morton, Chick-Buckbee, Rubenstein, Yeager, Shell, and Perdue.

West Virginia ARNG JFHQ TAG Wing Renovation, Charleston, WV -

Mechanical Engineer. Work for 7,200 SF facility includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV -

Mechanical Engineer. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement (including redundant HVAC systems for secure IT room and non-secure IT room); new DDC control system for all new equipment, new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

West Virginia Division of Natural Resources Bath House Renovations, South Charleston, WV – Project Manager. Engineering and architectural services for the design of renovations to bathhouses and restrooms at 26 locations throughout the West Virginia parks systems. Renovations include new fixtures, finishes, and minor electrical and mechanical upgrades. The project also includes new modular bathhouses and restrooms, as well as ADA access improvements.

West Virginia State Capitol East Campus Warehouse/Grounds Building, Charleston, WV – Mechanical Engineer. Planning, design, and bidding services for a 26,771-SF warehouse facility with surplus and receiving, a warehouse store, office area, maintenance shop with welding, grounds mechanic shop for vehicle maintenance, and equipment storage facility serving the WV Department of Administration, General Services Division on the Capitol East Campus. Included are an open storage and bulk storage building on site as well as a separate building for Capitol mail room building.

West Virginia Division of Natural Resources Building 74 Renovation, South Charleston, WV – Project Manager. Evaluation and recommendations for possible improvements and upgrades to building systems in three-story, 37,000 SF, masonry-construction facility that houses approximately 100 employees. Among improvements selected for design are replacement of heating and cooling systems, windows, T5 lighting with LED fixtures, and replacement of ceilings and floor finishes, as well as new DDC controls throughout building. West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Mechanical Engineer. Approximate 35,000 SF facility includes: 8 heavy vehicle repair bays; 6 light vehicle repair bays; 2 welding bays; wash bay; small engine shop; parts and tire storage areas; offices; 2 cranes serving repair bays; 1 crane serving entire weld shop area; freight elevator; perimeter fencing; keycard entry system; and generator. Structure features cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists.

Kenton County School District Transportation & District Support Facility, Fort Wright, KY – Mechanical Engineer. New approximately 80,578 SF transportation and support facility to support staff and operations for these critical district functions: transportation, maintenance, technology, and support operations. Spaces anticipated range from offices and conference rooms to a garage with eight drive-through bays, a food service area, a network operations center (NOC), specialized spaces (image room, bug rooms), and numerous other items.

Jeffersontown Fire & EMS Station #54, Jeffersontown, KY – Mechanical Engineer. Complete A/E design services for new 17,500 SF city Fire and EMS station. Facility consists of two-story fire house, accessory 3-bay garage building, storage building, and full site development. Fire house has dorms, office, decontamination areas as well as a 3-bay pull through apparatus bay (storage of 7 vehicles), ICC-500 compliant tornado shelter, and building - wide natural gas generator.

Berea College Facilities Maintenance and Auxiliary Maintenance Buildings, Berea, KY – Mechanical Engineer. New 37,445 SF pre-engineered metal Facilities Maintenance (FM) and 15,504 SF pre-engineered metal Auxiliary Maintenance (AM) buildings to unify and improve efficiency for Facilities Maintenance Departments. FM building includes office space; office support spaces; maintenance work areas for each department; multipurpose lunchroom/classroom for 60+ staff; toilet/shower/locker area; general work/storage area; additional mezzanine storage area with freight service elevator access; unit heaters and exhaust/air circulation systems in shop areas; HVAC in office areas via one central roof top unit; and building wide fire suppression. AM building includes: vehicle repair area with two, slabsupported lifts; vehicle wash bay; bus storage; campus recycling center; offices; bathrooms; additional overflow storage area; and 30 electric cart maintenance vehicle charging/parking spaces. Both buildings have card reader access, motorized overhead doors, man doors, concrete floors with trench drains where applicable, and oil/water separator systems.

Pulaski County Schools Bus Maintenance Garage, Somerset, KY – Mechanical Engineer. New 11,036 SF, pre-engineered metal building with three drive-through maintenance bays equipped with motorized, vertical lift sectional doors with space for six buses; tire room; work room; parts room; toilets; break room; waiting area; office; and mezzanine storage/mechanical area. Also included 3 in-ground, adjustable bus lifts; concrete floor with trench drains and oil/water separator; fire suppression system; centralized vehicle fluids system piped to 4 central dispensing locations; compressed air system; vehicle exhaust systems; overhead radiant system and ventilation in bus bays; and complete HVAC in office areas.



YEARS OF EXPERIENCE: With GRW: 15 Total: 27

EDUCATION

B.S., Electrical Engineering, 1997, University of Kentucky

REGISTRATION

Professional Engineer, Electrical: WV, KY, IN, OR, NM, SC, TN, VA, NY

NCEES Member allows reciprocity with other states

LEED Accredited Professional, Building Design + Construction

Registered Communications Distribution Designer

Patrick Baisden, PE, LEED AP BD+C, RCDD GRW Electrical Engineer

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair, Martinsburg, WV – Electrical Engineer. Concept development report for C-5 aircraft complex which required electrical modifications to meet needs of current occupants' activities, and investigation/resolution of temperature control in numerous locations. Report included detailed discussion of current electrical, architectural and HVAC system problems; recommendations to resolve large-system problems, as well as particular solutions for small areas; conceptual level drawings; conceptual level outline specification; and construction cost estimate.

West Virginia ARNG JFHQ TAG Wing Renovation, Charleston, WV -

Electrical Engineer. Work for 7,200 SF facility includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV -

Electrical Engineer. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces. Includes HVAC replacement (including redundant HVAC systems for secure IT room and non-secure IT room); new DDC control system for all new equipment, new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

West Virginia State Capitol East Campus Warehouse/Grounds Building, Charleston, WV – Electrical Engineer. Planning, design, and bidding services for a 26,771-SF warehouse facility with surplus and receiving, a warehouse store, office area, maintenance shop with welding, grounds mechanic shop for vehicle maintenance, and equipment storage facility serving the WV Department of Administration, General Services Division on the Capitol East Campus. Included are an open storage and bulk storage building on site as well as a separate building for Capitol mail room building.

West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Electrical Engineer. Approximate 35,000 SF facility includes: 8 heavy vehicle repair bays; 6 light vehicle repair bays; 2 welding bays; wash bay; small engine shop; parts and tire storage areas; offices; 2 cranes serving repair bays; 1 crane serving entire weld shop area; freight elevator; perimeter fencing; keycard entry system; and generator. Structure features cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists.

West Virginia ANG 167th Airlift Wing Munitions Storage, Martinsburg,

WV – Electrical Engineer. New munitions inspection building, five magazines (all pre-manufactured modular units), new concrete pads (2,865 SF), all-weather pavement (5,566 SF) for vehicular access, gate/fencing, utilities, exterior lot lighting, communications, and security for munitions area.

West Virginia ARNG Camp Dawson Ranges at Briery Mountain, Kingwood, WV – Electrical Engineer. Project includes design and construction of new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range.

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV – Electrical Engineer. Fast-track design of corrosion control hangar (B308) modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Electrical Engineer. Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV – Electrical Engineer. Design services for \$3 million renovation and energy-efficient improvements to 25,765 SF facility with history of remodeling activities resulting in building that inadequately served its users (Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center). Design allowed for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding.

Jeffersontown Fire & EMS Station #54, Jeffersontown, KY – Electrical Engineer. Complete A/E design services for new 17,500 SF city Fire and EMS station. Facility consists of two-story fire house, accessory 3-bay garage building, storage building, and full site development. Fire house has dorms, office, decontamination areas as well as a 3-bay pull through apparatus bay (storage of 7 vehicles), ICC-500 compliant tornado shelter, and building - wide natural gas generator.

Nicholasville Fire Station No. 4, Nicholasville, KY – Electrical Engineer. Facility programming, facility needs assessments, architectural and engineering design, and construction phase services for new 6,825 SF fire station with two pull-through apparatus bays, and vehicle storage for up to six vehicles.

Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN – Electrical Engineer. Planning, design and construction administration services for new 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage facility. Includes: administrative areas; classrooms, COMSEC training, library and training center, distance learning; assembly hall with fully functional kitchen; locker rooms, medical section room; heated unit storage and unheated storage rooms, facility maintenance, arms vault, tool rooms; RAPIDS, family support and recruiting offices; space for future indoor range or simulator; military and POV parking, wash platform, loading ramp and dock, helipad; site Antiterrorism / Force Protection (AT/FP) measures, security lighting; energy management and control system, intrusion detection system, mass notification system; stormwater bioretention pond.



YEARS OF EXPERIENCE: With GRW: 17 Total: 35

EDUCATION

B.S., Mechanical Engineering, 1990, The Ohio State University

M.S., Engineering (Focus on Structural), 1994, Purdue University

REGISTRATION

Professional Engineer:

AL, FL, GA, IN, KY, LA, MD, MI, MN, MO, MS, NC, OH, PA, SC, TN, TX, VA, WI

Licensed Structural Engineer: IL

LEED Accredited Professional

PROFESSIONAL AFFILIATIONS AND TRAINING

Structural Engineers Association of Kentucky (SEAoK), Past President

Matt Craig, PE, SE, LEED AP GRW Structural Engineer

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV – Structural Engineer. Design services for \$3 million renovation and energy-efficient improvements to 25,765 SF facility with history of remodeling activities resulting in building that inadequately served its users (Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center). Work included Charrette to develop alternative floor plans. Selected design allowed for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Structural Engineer. Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project (MILCON/SRM split funded) increased space and improved mission performance and operational efficiency for command and administrative functions in ways that are energy efficient, code compliant and in accordance with current ANG policies. Project meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

West Virginia ANG 130th Airlift Wing Building 107 Renovation,

Charleston, WV – Structural Engineer. Scope of work included design services (LEED Silver design criteria) for two separately funded (MILCON/SRM) sub-projects to repurpose existing unoccupied hangar into space for Aeromedical Evacuation Squadron (AES). Repairs and building repurposing included: new interior spaces within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATFP standards. New functional areas include spaces for medical simulation training, maintenance, operations, administration, storage, and other mission-related activities.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Structural Engineer. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF. Functional spaces include administrative, educational (classrooms, weapons simulator, distance learning, training-specific libraries, COMSEC), assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR). Site work included extension of utilities from adjacent ANG base, grading, drainage and stormwater detention, perimeter fencing and entry point control, parking and access roads, wash platform, AT/FP measures, and geothermal system for heating and cooling. **Texas ANG 147th Reconnaissance Wing Munitions Maintenance Shop, Ellington Field JRB, Houston, TX** – Structural Engineer. Design for \$1.5 million, 3,100 SF munitions maintenance and inspection shop relocating activities from another building that did not meet explosive safety requirements for current mission. New facility provides heavily reinforced concrete structure with two feet of earth on roof and between double concrete exterior walls, exterior doors designed as blast doors, 1,800 SF maintenance bay, electrical / communications / mechanical rooms, restroom and office equipped for SIPERNET, meeting ANG Sustainable Design Criteria and EPAct 2005 energy efficiency standards for industrial facility, secure fenced perimeter, access road, parking lot and gates, and new utility services.

Fort Knox Warriors in Transition Headquarters Building, Fort Knox, KY – Structural Engineer. Design services (including BIM model) for design-build of new 7,000 SF Warriors in Transition Headquarters Building to meet LEED Silver design criteria. Construction is single-story load bearing masonry with truss roof framing and shingle roofing. Sustainable design features included geothermal heat pump system, 100% LED lighting, manual on/automatic vacancy off lighting controls, and automatic daylight harvesting in rooms with south facing windows. Increased roof structure supports future installation of solar panels, making building zero energy ready.

Colorado ANG 140th Air Wing Add/Alter Weapons Release Facility, Buckley AFB, CO – Structural Engineer. Upgrade and expansion of existing Building 805 (from 12,100 SF to 16,200 SF) to support new missions: 18 PAI F-16 aircraft and Air Sovereignty Alert (ASA). Involved extensive modifications to existing floor plan and interior finishes, space allocated for training additional personnel and mission support equipment, increased energy efficiency through upgraded HVAC and lighting, as well as new roof and building envelope. Project received LEED Silver certification.

Crane NSA Depot Operations Field Office (Building 3530), Crane NSWC, IN – Structural Engineer. Design and construction administration services for design-build of new Depot Operations Field Office which included 2,800 SF pre-engineered metal building. Functional areas include private and shared offices, common multi-use area, break room, computer kiosk bank of seven computers with field scanner docking stations, storage and equipment room, restroom/locker rooms, and mechanical/utility space. Also included ABA compliant parking and sidewalks, designated ATFP standoffs from new building.

Fort Campbell Firefighting and Rescue Training Facility, Fort Campbell, KY – Structural Engineer. Engineering design and construction administration services for design-build of U.S. Army firefighting and rescue training facility at Fort Campbell, KY. Included helicopter concrete pad for aircraft fire training; concrete foundation for multistory training building; large staging/parking area; and two small infiltration basins.



Years of Experience: 40 Years with Chapman: 37

Education

B.S., Civil Engineering, 1983, West Virginia Institute of Technology

Registration

Civil Engineer: WV, OH, VA

Affiliations

WV Water Environment Association

Contractor's Association of WV

WV American Water Works Association

WV Society of Professional Engineers

WV American Council of Engineering Companies

WVUIT Civil Engineering Advisory Board

WV Qualifications Based Selection Council

Awards

George Warren Fuller Award, 2001 **Robert G. Belcher, P.E.** Senior Vice President Project Officer

Experience

Water Systems

Design and project management for numerous water systems for both public and private water companies. Projects include new water treatment plants as large as 6.0 MGD, improvements to existing plants, water mains and distribution systems. Water storage projects include glass-lined steel tanks, welded high-strength steel tanks, elevated pedestal tanks, and pre-stressed concrete tanks.

Wastewater Systems

Design and project management for numerous wastewater systems throughout West Virginia. Projects include new, secondary and tertiary wastewater treatment plants as large as 4.5 MGD, improvements to existing plants, smallflow treatment plants, new and rehabilitation of wastewater collection systems, CSO compiance, SSES Reports and I/I Studies, and facility plan updates.

Miscellaneous

Design and project management for large highway and bridge projects, airport improvements projects, large stormwater management projects including assistance with MS4 compliance, as well as potable water and wastewater system design for site development projects throughout West Virginia, and Virginia.

Recent Relevant Experience

St. Albans MS4 Stormwater Management Plan Update; St. Albans, WV St. Albans MS4 Stormwater Repairs; St Albans, WV City of Ashland Oakview Road Culvert Replacement; Ashland, KY City of Lewisburg Dogwood Heights Culvert Replacement; Lewisburg, WV City of Lewisburg Comprehensive Stormwater Report; Lewisburg, WV



Years of Experience: 19 Years with Chapman: 6

Education

MSE, Civil and Environmental Engineering, 2021 Marshall University

BS, Engineering Mechanics 2005, Lipscomb University

Registration

Professional Engineer: WV, OH, PA, KY, MD, TN

Affiliations

Member, Water Environment Federation Member, American Water Works Association Infrastructure Chair, American Council of Engineering Companies - WV

Projects Include:

City of Saint Albans Municipal Utility Commission WWTP Improvements (Saint Albans, WV)

Culloden Public Service District Virginia Avenue Sewer Replacement and Lift Station Relocation (Culloden, WV)

City of Lewisburg Water System Improvements (Lewisburg, WV)

Sanitary Board of Bluefield Westside Wastewater Treatment Plant Improvements (Bluefield, WV)

Sanitary Board of Bluefield College Avenue Sewer Replacement Phase II (Bluefield, WV)

Matthew T. Tanner, P.E. Civil/Environmental Engineer

Experience

Water Systems

Overall project experience includes design, permitting, bidding, and construction management of public and private water system projects. Specific project experience includes permitting, design, and construction administraton of distribution system extensions, water storage tanks, and water treatment system modifications for public water system compliance.

Wastewater Systems

Overall experience includes design, permitting, bidding, construction administration and management of various municipal and industrial wastewater systems. Specific project experience includes gravity collection systems, forcemain transmission systems, stream crossings, industrial wastewater treatability studies, onsite wastewater treatment systems, and municipal and industrial wastewater treatment facility improvements.

Storm Water Systems

Overall experience includes stormwater control and management design and permitting in West Virginia, Kentucky, Ohio, and Tennessee. Specific project examples include NPDES construction stormwater permitting, NPDES Multi-Sector Stormwater permitting, SWPPP preparation, and design of stormwater controls and management best management practices.



Years of Experience: 32 Years with Chapman: 8

Education

West Virginia University BS Landscape Architecture,1993

Registration

Landscape Architecture: WV

Kelly Estep, ASLA Project Manager

Experience

Kelly's design experience includes master planning, site design, stormwater management, and landscape design. She has been involved in park projects, sidewalk and streetscape projects, roadway replacement projects, ADA curb ramps, bio-retention and rain gardens.

Sidewalk & Streetscape Experience

West Virginia State Capitol Complex Hardscape Renovations Nitro 2nd Avenue Streetscape St. Albans Sidewalk Phase VI Project Lewisburg South Lafayette Sidewalk Project Lewisburg 219 South Sidewalk Project Petersburg Curb Ramp Replacement Project Salem Curb Ramp Replacement Project Hurricane Mainstreet Streetscape Project Eleanor Sidewalk Extension Project Gallaher Village Streetscape Master Plan

Trail Experience

Meadow River Trail FEMA and TAP Projects Clear Fork Trail Phase 1 Canaan Valley Trail Improvements

Other Projects

WVDNR Division of Parks and Recreation Toilet & Bathhouse Renovations WV Department of Arts, Culture and History North & South ADA Access Renovation City of Ashland, KY Pollard Mills Drainage Improvement Project – Phase 1-3 Old Central City Gazebo Project RD Management – Traffic Signal Study WV Capitol Hardscape Barrier Replacement

Construction Experience

For 13 years Kelly worked in commercial construction as a Project Manager. She managed design-build and design-bid-build projects for private entities and State agencies. Significant projects included WV Department of Environmental Projection Headquarters building, two University of Charleston resident housing projects, and a multi-agency office building for the WV Department of Health & Human Resources. Working with clients, designers, and subcontractors, Kelly coordinated design-build projects from conception to completion. She managed project design development, monitored budgets, issued contracts, developed and maintained the project schedule. She worked with project superintendents.



Years of Experience: 30 Years with Chapman: 22

Education

A.S., Land Surveying, 2002 Glenville State College, WV

Registration

Professional Surveyor: WV, KY, VA, PA

Jason Brown, P.S. Professional Surveyor

Experience

Jason leads the Chapman Technical Group survey team and is experienced in topographical and boundary surveys, as well as flood plain mapping, ALTA surveys, and construction layout. Jason also coordinates aerial mapping and LiDAR services with GRW, the parent company of Chapman Technical Group. Jason has completed projects for a variety of industries including airport layout and obstruction projects.

Highways

Established control, site surveying, topographic surveying, courthouse research, drawing production, Right-of-Way Questionnaires, bore hole stake out, and all surveying associated with the initial and final design of WV highways.

Site Development

Experienced in all types of surveying associated with site development, to include control, topographic boundaries, research, and drawing production. Projects include military complexes, public housing, commercial development, industrial and institutional complexes, churches, resorts and public facilities throughout the state.

Schools

Associated surveying for new schools, additions, athletic fields, and sidewalks projects.

Parks and Recreation

Associated surveying for projects including swimming pools, bathhouses, cabins and support facilities for the West Virginia Division of Natural Resources and similar facilities for county and municipal park systems.

Water/Wastewater/Stormwater Systems

Associated surveying for the design of water systems, sanitary sewer systems, and stormwater systems, including treatment facilities for both private and public systems throughout the state. Also, field experience in the inventory and collection of attribute data using GPS equipment for uploading to GIS databases.

Todd Griffith, PE

DEPARTMENT MANAGER, GEOTECHNICAL SERVICES

EDUCATION

Master of Science, Civil Engineering, Geotechnical Specialization, Virginia Tech, 2005

Bachelor of Science, Civil Engineering, West Virginia University, 2004

REGISTRATIONS

Professional Engineer: West Virginia #18217, Pennsylvania #79360, Kentucky #27791, Maryland #40119, Ohio #78282 American Red Cross for Adult First Aid CPR AED, OSHA 30-Hour Construction Safety, OSHA 30-hour Supervisor

AFFILIATIONS

American Society of Civil Engineers (ASCE) Member of American Society of Civil Engineers, West Virginia American Society for Testing and Materials (ASTM)

WORK HISTORY

Terracon Consultants, Inc. Geotechnical Department Manager, Charleston, West Virginia, 2021-Present

Triad Engineering, Geotechnical Practice Lead, Charleston, West Virginia, 2019-2021

TRC Engineers, Office Practice Lead - Geotechnical Engineering, Charleston, West Virginia,

2013-2019

PROFESSIONAL EXPERIENCE

Mr. Griffith currently serves as the Geotechnical Department Manager in Terracon's Charleston, West Virginia office. He is responsible for operational oversight of field and engineering activities in the Geotechnical (GEO) Department, mentoring staff, and management and analysis of geotechnical projects. He has over 15 years of geotechnical engineering experience working with public agencies such as WVDOH and USACE, working on projects involving site and subsurface investigations, design and construction of new or modified bridge foundations, cut slope analysis and design, fill slope analysis and design, the elevation and design of earth retainage structures (i.e., earthen dams, MSE walls, reinforced soil slopes), laboratory testing, and stream bank erosion mitigation. He has worked on numerous projects and variety of clients in different areas including transportation, landslide remediation, landfill, power generation and transmission, oil and gas transmission, retail/commercial developments, local and state infrastructure, and retaining walls in multiple states.

PROJECT EXPERIENCE

Tri-State Airport Access Road Retaining Wall I MALSR Road Slope Repair Projects - Huntington, WV | Served as the geotechnical project engineer and provided engineering analysis and recommendations during both the design and construction phase of both landslide projects at the Huntington Tri-State Airport. Landslides had threatened the stability of the main access road for the Huntington Tri-State Airport and had encroached on the MALSR road. Mr. Griffith developed and oversaw the execution of the subsurface investigations, developed slope remediation/retaining wall recommendations, and provided assistance to the client during retaining construction plan development.

Tri-State Airport Taxiway A East Expansion - Huntington, WV | Served as the geotechnical project manager and provided engineering analysis and recommendations during the design phase of the Taxiway A East expansion project at the Huntington Tri-State Airport. The project includes widening of the eastern portion of Taxiway A, pavement design, and a relatively large fill slope. Mr. Griffith developed and oversaw the execution of the subsurface investigations, developed slope recommendations, and provided assistance to the client during retaining construction plan development.

Tri-State Airport Landslide Remediation - Huntington, WV | Mr. Griffith provided engineering expertise and project management for remediation of a large landslide near the western edge of the safety area of the main runway of the airport. The slope failure was approximately 140 feet in height and 300 feet wide. The project included subsurface investigation and laboratory testing to aid in the design of the remediated slope as well as to aid in determination of the probable causes of the slope failure. It was determined that a combination of improper drainage at the toe of the slope, unauthorized earthwork at the crest of the slope, and removal of trees and vegetation from the face of the slope contributed to causing the landslide. Based on slope stability analyses performed by Mr. Griffith, the remediated design included removal of all failed material and excavation into the underlying bedrock and the slope design consisted of placement of a rock drainage layer and separation fabric, moisture conditioning of the excavated material and replacement as structural fill to a 2.5H:1V slope. During construction, Mr. Griffith oversaw the excavation and placement of fill material to the designed specifications.



EDUCATION

Master of Science, Civil Engineering, Specialization, Geotechnical Engineering, 1991, University of Rhode Island

Bachelor of Science, Civil Engineering, 1982, Purdue University

U.S. Navy Nuclear Propulsion Training, 1983, Orlando, Florida & Idaho Falls, Idaho

REGISTRATIONS

Professional Engineer: West Virginia #015825, Ohio #56245

AFFILIATIONS

American Society of Civil Engineers

Ohio Society of Professional Engineers - Past State President

American Society of Highway Engineers

National and Ohio Society of Professional Engineers - Ohio **Delegate for NSPE**

Deep Foundations Institute

Water Management Association of Ohio

WORK HISTORY

Terracon Consultants Inc., Regional Manager/Principal, 2021-Present

Terracon Consultants Inc., Office Manager/Principal, 2016-2020

Terracon Consultants, Inc., Geotechnical Department Manager, Senior Geotechnical Engineer to Senior Associate, 1998-2016

Kevin M. Ernst, PE

REGIONAL MANAGER, PRINCIPAL

PROFESSIONAL EXPERIENCE

Mr. Ernst's career as a geotechnical consultant began in 1991, and he currently serves as the Regional Manager for Terracon's Columbus, Ohio, Cleveland Ohio and Charleston, WV offices. His management responsibilities include client development, client relations. personnel supervision, project management, scheduling, technical review, report and proposal writing, and quality control.

He has extensive experience in geotechnical subsurface exploration, deep and shallow foundation design/analyses, cut slope and embankment design, slope stability analysis, settlement analyses, abandoned underground mine subsidence evaluation, landslide remediation, landfill cap and liner design, and geotechnical engineering forensic studies. Project experience includes dams/levees, water/wastewater facilities, educational facilities, industrial/ commercial/ retail developments, multi- and single-family residential developments, power generation and heavy industrial projects, landfill geotechnical design projects, radioactive/hazardous soils and groundwater remediation projects, roadway, bridges and infrastructure improvement/ development projects, and airports in Ohio, Kentucky, Indiana, West Virginia, Michigan, Indiana, Arkansas and Texas.

In addition to his geotechnical engineering background, Mr. Ernst has significant leadership and management experience related to his affiliations with the U.S. Navy and Naval Reserve. His experience includes nuclear power propulsion plant management and operations, engineering training and development of high level plans and policy.

PROJECT EXPERIENCE

Ohio Department of Transportation Statewide Geohazard Inventory - SFY 2020 -2021 | Project Manager for ODOT's FY 2020-2021 contract for statewide geohazard field inspection program for all inventoried landslides, rock slopes, and abandoned underground mines. Responsible for financial controls, staffing, training, equipment acquisition, safety, and quality of data collected and deliverables for the project. The project included development of an Abandoned Underground Mines GIS database to provide an inventory for the field inspections. Three 2-person teams comprised of Terracon geotechnical engineers and geologists perform Captain, U.S. Naval Reserve, Retired field inspection collecting data using handheld electronic devices facilitating real time upload of data to ODOTs database.

> FEDEX Ground Distribution Center - Cambridge, Ohio | Geotechnical subsur-face exploration, analysis and report for design and construction of a new FEDEX Ground distribution center. The site was located near the boundary of an abandoned underground coal mine. Terracon performed a mine map review and developed and implemented a subsurface exploration to better identify the loca-tion of the abandoned mine. This allowed designers to adjust the facility layout away from the mine, significantly reducing foundation and site development costs.

U.S. DOE - Fernald Environmental Management Project - On-site Soils Excavation and Landfill Disposal, Fernald, Ohio | Coordinated activities of geotechnical engineers in geotechnical design for excavation of radiologically contaminated soils within a 50-acre plant area of a former DOE uranium production facility in southwestern Ohio. Reviewed geotechnical engineering aspects of excavation stability and placement of soils within an on-site engineered landfill.



SECTION 4.0

Approach & Methodology for Meeting Goals & Objectives

4.0 Approach & Methodology for Meeting Goals & Objectives

The West Virginia Department of Administration along with the West Virginia Army National Guard (WVARNG) are embarking on an important project – the new National Guard Readiness Center in Parkersburg. The facility will be used by soldiers in training, as well as support elements of the WVARNG Command.

We understand your primary goals and objectives for this project include:

- 35% design and cost estimates to secure additional funding (Phase 1)
- Complete multi-code-compliant design architecture and engineering –to prepare construction bid documents for West Virginia State Purchasing. This would be provided, if funding is available (Phase 2), and would include bidding assistance and construction administration services for successful completion.
- Geotechnical engineering and utility location services are important steps included with the overall project.

NATIONAL GUARD READINESS CENTERS

Based on our experience, we understand the facility will include, at a minimum, spaces such as the following based on NG Pam 415-12 Army National Guard Facilities Allowances:

- Assembly hall
- Classrooms
- Learning center
- Multipurpose Training Area
- Kitchen
- Toilets and showers
- Physical Fitness
- Storage areas
- Administrative office space / Unit suites
- Arms vault
- Heated storage
- Unheated storage
- Special functional, mission dependent areas

- General purpose areas
- Electrical and mechanical systems
- Paved roads, concrete pads, sidewalks, and parking
- Physical security
- Energy conservation features

An Approach Based on Respect & Clarity

Our approach to accomplishing these goals and objectives for your project is straightforward:

- Assemble the best and brightest design talent with knowledge of the national guard/military projects;
- 2) Bring an open mind and fresh perspectives;
- remain accountable to you throughout the process for cost control/budget.

The relationship between you and your chosen design consultant is critically important. The cornerstone of the GRW design approach is collaboration, which we believe is key to this relationship. Communicating in an open dialog, where ideas can be freely expressed and considered, helps to vest everyone in the project's success, and is a vital prerequisite to ensuring buy-in from all project stakeholders.

A Project Team You Can Count On



Leading you and our team as our project manager will be GRW's Vice President in charge of Architecture, **Aaron Nickerson**. A **Morgantown WV native** with 19 years of experience, he'll provide overall supervision for the design team and

be directly involved with you through every stage of the project. Aaron regularly manages teams on projects ranging in scope from \$2.3 million to as high as \$182 million. We believe you will find him a knowledgeable architect and a valuable partner. Aaron's logical and methodical approach will provide a steady hand guiding the team and the WVARNG through the design process to a successful conclusion. He'll work to balance vision with a realistic and practical assessment of cost and schedule.

Jimmy Piper and Phill Warnock, both senior architects, will assist Aaron. Phill is based in St. Albans, WV where GRW's subsidiary Chapman Technical Group (Chapman) is located. He'll be able to offer easy access during the construction administration phase. They both regularly manage multidiscipline teams on projects with scopes as high as \$130 million. Our architectural services are bolstered by **David Vaught** and **Rosemary Harms** who bring a balance of WVARNG familiarity and the latest architectural design skills.

To ensure efficiency, effectiveness, and code compliance of mechanical systems our team includes

Cory Sharrard. Our electrical engineer **Patrick Baisden** will apply his experience with power, lighting, and communications systems. Both will ensure code compliance and well-coordinated system upgrades.

Our in-house structural engineer is **Matt Craig**, and WV-based **Greg Belcher and Matt Tanner** will address any site/civil and utilities issue for your project. Local survey needs will be addressed by **Jason Brown** with landscape architecture services provided by **Kelly Estep**. Our team includes **Terracon** to provide geotechnical engineering services. Their team includes experience with the WV guard as well as a history with readiness centers. All team members have the experience you need and are accustomed to working on complex, systems-oriented, code-oriented projects.

Project Goals & Objectives

GRW is familiar with the project goals and objectives as provided in the National Guard Readiness Center – Parkersburg Design RFQ. The following approach is a summary of GRW's proposed scope of services including our design approach. All tasks, architect engineer designs, submittals, construction administration will follow National Guard/DoD Design Guidelines.

Kickoff Meeting

Upon receiving notice to proceed, GRW will set up a kickoff meeting and site visit with the WVARNG Project Manager. GRW will use this meeting to review existing information and talk to WVARNG personnel about the proposed requirements for the project. This meeting can take the form of a formal design charrette, or a simple meeting, whichever is preferred by WVARNG. We will focus on your likes and dislikes – what's working and what isn't. This will give us a solid foundation for the design work as we move forward.

Site Survey - Utilities

GRW's subsidiary Chapman will complete a survey including but not limited to existing utilities, topo, roadways, and trees, required to complete the work

Site - Geotechnical

GRW teammate Terracon will complete geotechnical exploration coordinated with survey information and initial site plan, building location, and construction type **(see also Section 1.0)**. Terrcon will include recommendations for soils encountered during exploration, building foundation design, POV parking



of this project. Based on the outcome of this survey, we will collaborate with WVARNG staff to determine the initial alignment of any new utilities.

paving and Heavy-Duty paving required to complete the work of this project. GRW/Chapman have collaborated on multiple projects with Terracon. Results of the geotechnical investigations / recommendations will be coordinated with final 35% documents including construction cost estimate.

35% Design

Using the information from the Kickoff Meeting and analysis of existing conditions, we continue through the 35% design phase and present the **schematic design** concept to you through the use of drawings, product information sheets, written narratives and an initial cost estimate. After your review of the material, we will meet together to go over the design review comments, review the budget, and document any desired revisions. We will repeat this process as needed to reach an acceptable solution that meets your goals and budget.

We will also discuss with you potential construction phasing opportunities, if/as needed. We will document each step of the process with thorough meeting summaries.

GRW will format documents as required to assist with funding request submittal.

65%, 95%, & 100% Design

Once funding approval is received the design team will proceed with **65% design development** documents which will be issued for Owner/User review and approval before proceeding to **95% pre-final construction documents** and then finally to completion of **100% final construction documents** for bidding. The **estimate of probable cost** will be updated at each design review submittal to check the estimate against the drawings and specs, to make sure the work remains within budget. We will also reconfirm final decisions on materials, equipment, and finishes. The **final construction documents** will consist of bidready drawings, specifications, and instructions to bidders.

Bid Services & Construction Phase

The same Project Manager you worked with throughout design continues as your point of contact through the entire bidding and construction process. Also, the original designers are the team we use to review shop drawings, attend meetings and observe the work in progress. This provides a continuity that benefits the project, and is an integral part of our quality control process.

GRW manages and tracks our construction administration and resident inspection responsibilities using **Newforma**® Project Center (project information management software); this ensures that the process is transparent to all parties. Newforma has built-in modules specifically developed for the A/E industry. Using this system, Owners, Design Team, and Contractor/GC all have access to real-time logs showing the current status of all constructionrelated activities.

During project construction, GRW provides consultation and advice on construction matters including visits to the site to check work progress and quality and to evaluate general conformance with the contract documents.

In addition, we review equipment and materials related to the submittals. Once reviewed, copies of submittals, with comments, are distributed to the team members (Owner, Contractor, etc.) for appropriate action. A comprehensive submittal file is maintained in the Newforma software.

Our team members review and recommend progress payments to the construction contractor based on observation of the work in-place. Project costs automatically update for tracking of project budgets.

Our team performs semifinal inspections of the project and creates a list of work yet to complete prior to the final technical inspection. Upon completion, we will provide a set of record drawings based on mark-ups from the contractor, to show field changes made during construction. These drawings are reviewed by the Project Manager and serve as the record drawings for the project and are suitable for facility management.

Management Approach

Our project planning and organizational approach to assuring completion of multiple tasks is based on the centralized development of uniform procedures. This approach assures consistency in the conduct of multiple activities. The elements of this project planning and organization approach include:

- Establishment of clear lines of project team responsibility and authority.
- Establishment of clear lines of project team communication.

- Development and dissemination of project-wide procedures for implementation at individual task levels.
- Development and dissemination of procedures for cost and schedule control.
- Establishment and implementation of a Total Quality Management program.
- Establishment of the project management and technical staffing requirements.



GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) have extensive experience in developing projects through the WV Purchasing Division. These include design, bidding, and construction services for major Division of Natural Resources projects throughout the state, as well as the West Virginia Division of Highways. Our knowledge and experience of the State's purchasing procedures made this an easy transition for all stakeholders. Although every agency has its own particulars regarding bidding projects, our experience with the West Virginia Purchasing Division will help ensure effective and efficient project delivery.



5.0 Quality/Cost Control

At GRW, cost control, scheduling and value engineering are daily components of our design process. Project planning decisions are assessed in weekly project meetings with all A/E disciplines to confirm budgets and schedules will be met. During these sessions, project status is discussed to direct adequate resources to meet the project schedule. The issues tracking list we create is reviewed to ensure problems are resolved before they impact the schedule or budget. Our vision as your full-service architectural and engineering design firm is to partner with you to simplify the design and construction process for the results you intend.

Quality Control

Aaron Nickerson, Project Manager, has primary responsibility for the daily management and coordination of the project team. With over 19 years of experience, he has a clear understanding of the most effective methods for maintaining the programming, planning, and design schedule.

COMMUNICATION: At GRW, our highest projectmanagement priority is focused on maintaining clear and effective communication throughout the entire project. This focus includes our communication with you and your stakeholders, with the Contractor, and with our internal design team members. Key to this effort is our use of Newforma project information management software, which allows the storage, sharing, and retrieval of project information.

PROJECT MANAGER: Our process begins initially with the assignment of an experienced Project Manager who is responsible for organizing the design effort and who manages the Quality Control process. While a project design team may involve many different departments or groups, the Project Manager has ultimate authority over the project at all times.

A key element in effective Quality Assurance/Quality Control (QA/QC) is the use of regularly scheduled progress meetings. A kickoff meeting between key members of GRW's proposed project team and your management and staff will be held to ensure a common understanding of the goals and objectives among all project partners. These issues will be reviewed, and the work plan will be discussed in detail. Regular meetings will then be scheduled throughout the project to report on project progress and to review technical issues. These meetings provide a forum for discussing concerns and ideas. The assigned Project Manager is the primary conduit for communication between you and the design team. **TEAM MANAGEMENT**: QA/QC is enhanced at GRW since most design disciplines are in-house. Because of this, scheduling internal team meetings or over-theshoulder reviews is greatly simplified. On this project, the Project Manager will conduct weekly team meetings with the design team members to facilitate coordination of design issues. Any design problems are identified along with a path for their correct resolution. A checklist managed by the Project Manager is used to track the resolution of issues from meeting-to-meeting.

SCHEDULE MANAGEMENT: No QA/QC process can succeed without allocating sufficient time for internal review. The Project Manager will develop a proposed internal design schedule at the beginning of the project for appropriate time for internal review. These internal reviews typically occur prior to normal design submittal dates for the project.

QUALITY CONTROL REVIEWS: QC reviews at GRW includes desk-to-desk, task-to-task, and person-to-person crosschecking of work that takes place on a regular basis within the company. Impromptu meetings to discuss specific issues take place as often as needed. The peer review personnel are determined by the Project Manager at the beginning of the project, and remain consistent throughout the course of the project.

PROGRAMMATIC OVERSIGHT: The Project Manager is tasked with maintaining oversight of the project as the design develops, to insure that the design decisions are in keeping with the programmatic criteria developed with you at the project's initiation. At each interim submittal, the Project Manager takes a step back, and looks at the project in broad terms to insure that the design is progressing in accordance with the original criteria.

Cost Control

PROJECT BUDGET ACCOUNTABILITY: Government officials are accountable to the public for the expenditure of public monies. The GRW team understands this obligation and develops a project design that is cost-effective and delivers an efficient and appropriate use of funds assigned to the military. Rarely do projects have sufficient budget to accommodate everything on the programmatic *wish list.* Reconciling the program against the project budget is done early and often in order to guide the project to a successful conclusion. GRW approaches this process in a pragmatic and open manner. This subject will be on the agenda of every project meeting we have with you for open and frank discussion so that

everyone is kept abreast of any potential concerns. Prioritizing the program relative to the budget can be a difficult task, with different stakeholders sometimes at odds over how to resolve differences of opinion. GRW excels at guiding this process and helping you to resolve these differences.

GRW has a strong history of successful estimating of projects, and our design experts will draw upon this knowledge during the development of our construction cost estimates.

We can also develop a list of possible valueengineering for consideration to help manage construction costs and give you the most construction value for your dollar.



GRW provided design and construction phase services for the WV ANG's 130th Airlift Wing Building 107 Renovation.

With a construction budget of \$5M, the awarded bid was \$4,941,290, and the final construction cost was \$4,991,876 (within 1% of awarded bid).



6.0 References

GRW understands that professional consulting begins as a relationship built on trust. We fully understand the importance of gaining your respect, proving our worth, and being there long after your successful project is completed. With repeat clients providing more than 90 percent of GRW's current workload, we believe this is a testament to our business philosophy of providing close, personal, high-quality service. We invite you to contact our references to verify GRW's performance.



West Virginia Army National Guard Jim Skaggs

(304) 561-6550 robert.a.skaggsii.nfg@army.mil

KY Division of Engineering & Construction

Anne St-Aignan Muller Statewide Project Manager (502) 401-9839 (cell) anne.muller@ky.gov

Frankfort Plant Board

Sharmista Dutta, PE, Project Manager (502) 352-4407 sdutta@fewpb.com Aaron Nickerson was the Project Manager for this new three-level, 46,000 SF building (above)

Louisville Metropolitan Sewer District John Loechle Engineering Technical Services Director (502) 523-1218 john.loechle@louisvillemsd.org



Jeffersontown Fire and EMS

LT COL Joey Lamb Assistant Chief of Fire (502) 267-7300 ext. 1102 jklumb@jeffersontownfire.com Aaron Nickerson was the Project Manager for this new, two-story, three-bay, 17,500 SF building (above).



West Virginia EOI Forms



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

State of West Virginia Centralized Expression of Interest

Proc Folder:	1611518	Reason for Modification:	
Doc Description:	National Guard Readiness C		
Broc Typo:	Control Durchago Order		
Proc Type.	Central Purchase Order		
Date Issued	Solicitation Closes	Solicitation No	Version
2025-01-24	2025-02-05 13:30	CEOI 0603 ADJ2500000016	1
Proc Type: Date Issued 2025-01-24	Central Purchase Order Solicitation Closes 2025-02-05 13:30	Solicitation No CEOI 0603 ADJ2500000016	Version

BID RECEIVING LOCATION					
BID CLERK					
DEPARTMENT OF ADMINISTRATION					
PURCHASING DIVISION					
2019 WASHINGTON ST E					
CHARLESTON WV 25305					
US					
VENDOR					
Vendor Customer Code: 000000218570					
Vendor Name: GRW Engineers, Inc.	Vendor Name: GRW Engineers, Inc.				
Address : 801 Corporate Drive	Address: 801 Corporate Drive				
Street :					
City: Lexington					
State : Kentucky Country : USA Zip : 40503					
Principal Contact : Aaron Nickerson, AIA, LEED Green Asc.					
Vendor Contact Phone: (859) 880-2267	Extension:				

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

Vendor Signature X

ح. 0

FEIN# 61-0665036

DATE 02/05/2025

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

ADDITIONAL INFORMATION

The West Virginia Purchasing Division, for the agency, the West Virginia Army National Guard, Construction and Facilities Management Office, is soliciting Expressions of Interest from qualified firms to provide professional architectural and engineering design services to develop construction documents for the construction of a new National Guard Readiness Center, at 300 Campus Drive in Parkersburg, Wood County, WV, per the attached documentation.

INVOICE TO	SHIP TO		
ADJUTANT GENERALS OFFICE	PARKERSBURG NATIONAL GUARD ARMORY		
1707 COONSKIN DR	1500 BLIZZARD DR		
CHARLESTON WV 25311	PARKERSBURG WV 26101		
US	US		

Line	Comm Ln Desc	Qty	Unit Issue
1	National Guard JFHQ Readiness Co Design EOI		
Comm Code	Manufacturer	Specification	Model #

81101508

Extended Description:

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

SCHEDULE OF EVENTS

<u>Line</u>

<u>Event</u>

Event Date

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

(Printed Name and Title) Aaron Nickerson, Vice President

(Address) 801 Corporate Drive, Lexington, KY 40503

(Phone Number) / (Fax Number) (859) 880-2267 / (859) 223-8917

(email address) anickerson@grwinc.com

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

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

GRW Engineers, Inc.

(Company)

(Signature of Authorized Representative) Aaron Nickerson, Vice President 02/05/2025

(Printed Name and Title of Authorized Representative) (Date) (859) 880-2267 / (859) 223-8917

(Phone Number) (Fax Number)

anickerson@grwinc.com

(Email Address)