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Procurement Type:	Central Purchase Order			SO Dept:	0603	
Vendor ID:	00000218570	2		SO Doc ID:	ADJ2400000002	
Legal Name:	GRW ENGINEERS INC			Published Date:	5/17/24	
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First Name:	Karri	Total of All Attachments: 1				
Last Name:	Sandino					
Email:	ksandino@grwinc.com					
Phone:	859-223-3999					



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:	1434011				
Solicitation Description:	WVARNG Child Development Center HVAC Renovations Design EOI				
Proc Type:	Central Purchase Order				
Solicitation Closes		Solicitation Response	Version		
2024-06-04 13:30		SR 0603 ESR06042400000007518	1		

VENDOR					
000000218570 GRW ENGINEERS INC					
Solicitation Number:	CEOI 0603 ADJ240000002				
Total Bid:	0	Response Date:	2024-06-04	Response Time:	13:27:41
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 WVARNG Child Development Center HVAC Renovations Design EOI					0.00		
Comm	Code	Manufacturer		Specifica	ition	Model #	
811015	08						

Commodity Line Comments:

Extended Description:

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



EXPRESSION OF INTEREST

WVARNG Child Development Center HVAC Renovations Design | Charleston, WV

WV Department of Administration WV Army National Guard | CEOI 0603 ADJ240000002

June 4, 2024





Expression of Interest

WVARNG Child Development Center HVAC Renovations Design | Charleston, WV CEOI 0603 ADJ240000002

WV Department of Administration WV Army National Guard

Table of Contents

Cover Letter

- 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 Project Management & Quality/Cost Control
- Section 6.0 References
- Section 7.0 West Virginia EOI Forms



June 4, 2024

Mr. David Pauline, Senior Buyer Department of Administration, Purchasing Division 2019 Washington Street, East Charleston, WV 25305

RE: Child Development Center (Coonskin Complex) HVAC Renovation Design Solicitation Number: CEOI 0603 ADJ240000002

Dear Mr. Pauline and Selection Committee Members:

Achieving the goals established for the HVAC renovation project at the WVARNG Child Development Center is greatly dependent upon selecting the right A/E design partner. We understand you're looking for a team to assist you with redesigning the HVAC equipment at the Center to better support the needs to the individuals using the facility. GRW would like to work with you on your project – and we believe we offer you the right experience and expertise to successfully delivery the results you require.

Experience & 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 in West Virginia is substantial and encompasses projects at locations including Charleston, Kingwood, Ripley, and Martinsburg, WV. **See Sections 2.0 and 3.0.**

GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) also have experience developing projects through the WV Purchasing Division. 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, the Division of Corrections and Rehabilitation, as well as the National Guard. Although every agency has its own particulars regarding bidding projects, our experience with the WVARNG and the State's Purchasing Division will help ensure effective and efficient project delivery.

Our Team Offers HVAC Engineering Expertise

By selecting GRW, you will be working with knowledgeable mechanical and electrical engineers who regularly work on the design of heating and cooling system renovations for existing buildings, as well as new facilities. These professionals offer specialized experience with HVAC system renovations for state and educational facilities as well as municipal entities and government clients. **Section 2.0** includes more information about our HVAC project experience. You can read more about our team qualifications in the resumes provided in **Section 3.0**.

Our Project Manager Understands HVAC Replacements/Repairs

Our proposed Project Manager/Mechanical Engineer **Cory Sharrard** possesses more than 20 years' experience with mechanical engineering including design of traditional water source heat pump (WSHP), geothermal WSHP, hybrid geothermal WSHP, variable refrigerant flow systems, and traditional RTU/VAV systems.

Mr. David Pauline, WV Department of Administration, Purchasing Division June 4, 2024 Page 2

For example, Cory served as Project Manager for these mechanical engineering/ HVAC system projects:

- Clay County High School Renovation and Addition, Clay, WV
- West Virginia ARNG Martinsburg Secure Facility Renovation, Martinsburg, WV
- West Virginia Division of Natural Resources Building 74 Renovation, South Charleston, WV
- Fayette County Public Schools Multiple HVAC System Evaluations & Renovations, Lexington, KY
- Wayne County Schools Gymnasium Building HVAC Renovation, Monticello, KY
- West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV
- Kentucky School for the Deaf and Kentucky School for the Blind HVAC Upgrade, Danville & Louisville, KY

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,

narrand

Cory Shafrard, PE, LEED AP GRW Vice President / Project Manager

859-880-2346 csharrard@grwinc.com

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859-223-3999, ext. 262 mmaynard@grwinc.com



1.0 GRW Introduction

About GRW

Founded more than 50 years ago, GRW is an employee-owned architectural, engineering, and geospatial services firm with more than 200 employees.

At GRW, we can address your projects from nearly every angle. Because of our in-house capabilities, we can more easily tailor our approach allowing our teams to deliver more quickly, with greater potential

for more accurate cost estimates, and fewer change orders.

Among our achievements, GRW is listed in *Building Design and 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 one of close collaboration with an approach that gives our project managers and their project teams a hands-on approach, as needed, 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 at Camp Dawson and 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.

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. A 4-duct and a 12-duct PVC conduit system with inter-duct was proposed. Client Contact: LtCol Rick Thomas, Base Civil Engineer

West Virginia ANG 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility,

Charleston, WV – Design for a new aboveground fuel station for the installation's governmentowned vehicles, comprising two new aboveground tanks (1 diesel, 1 unleaded gasoline) and a new dispensing system, replacing an older fuel station that included underground fuel storage tanks. 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 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 Building 107 Consolidation Study,

Charleston, **WV** – Consolidation Study for historic hangar which will be renovated in phases to house Aero-Medical Evacuation Squadron, new Aerial Port Facility and Deployment Processing Center, and mobility storage for Security Forces Squadron. Work included floor plans for each phase as well as final floor plan and construction cost estimate. Major challenge involved consolidation of organizations with a total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions were allowed. AT/FP, energy and ADA accessibility measures were incorporated, as well as current ANG guidelines. Client Contact: Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

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 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 missionrelated activities. **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 167th Airlift Wing C-5 Apron Repair,

Martinsburg, WV – 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. Client Contact: LtCol John Poland, Base Civil Engineer, (304) 616-5198, john.r.poland4.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 ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV – Fast-

track design of composite material shop to the existing corrosion control hangar 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 Corrosion Control Hangar Modifications,

Martinsburg, WV – Fast-track design of corrosion control 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 Munitions Storage, Martinsburg, WV – New

munitions inspection building, five magazines (all premanufactured modular units), new concrete pads (2,865 SF), allweather pavement (5,566 SF) for vehicular access, gate/fencing, utilities, exterior lot lighting, communications, and security for the munitions area. **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



2.0 Project Experience

Within this section, we have included examples of our recent relevant project experience for your review. We encourage you to contact any of our references to verify our performance.



Clay County Schools

Clay County High School Renovation and Addition, Clay, WV

GRW, working with its subsidiary Chapman Technical Group, was contracted by the Clay County School District to provide design and construction administration phase services to upgrade the existing high school building. The scope of work includes replacing all of the existing windows with new energy efficient windows, building a new addition to the front of the school to provide a new commons/lobby area, and reconfiguring the existing gymnasium and existing restrooms throughout the building. A portion of the construction will occur during summer months, but much of the work will be completed while school is in session.

The entire existing HVAC system is being replaced. The new HVAC system includes standalone heat pump units for each classroom, new rooftop units for common areas such as the lobby, gymnasium, cafeteria, etc., and Variable Refrigerant Volume (VRF) systems for the two office areas. Outside air is being brought into the building thru each of the pieces of equipment as well as new energy recovery ventilators. New direct digital controls (DDC) will be installed throughout the building to control all of the new equipment. Back up heating for the stand-alone units and various unit heaters will be connected back to the existing hot water hydronic heating system in the building that is being fed by two existing gas fired boilers.

New plumbing fixtures and piping will be installed in the newly configured restroom areas. The plumbing piping will connect back to the existing main piping and existing hot water heating system for the



building. The existing fire protection system will remain in place and be reconfigured as needed to accommodate floor plan changes.

New power will be provided for all of the new HVAC equipment being

installed. New LED lighting will be installed in the new commons/lobby addition as well as the gymnasium. New clocks and intercoms will be installed throughout the building as well as new security cameras. The fire alarm system will be upgraded as needed for the new systems and layouts.

CLIENT CONTACT: Joe Paxton, Superintendent, Clay County Schools, (304) 587-4266



Fayette County Public Schools, Lexington, KY

GRW has been working with the Fayette County Public Schools to complete a series of HVAC evaluation and replacement projects. Descriptions of these are provided on this page and next.



Henry Clay High School HVAC System Evaluation & Replacement

Fayette County Public Schools hired GRW to provide mechanical engineering services to replace all major HVAC equipment located on the roof at Henry Clay High School in Lexington, KY. Prior to being hired for the renovation, GRW completed an evaluation of the HVAC system.

The school is approximately 250,000 SF and the current **HVAC system consists of 26 multi-zone rooftop units and several additional split-system air handling units that** have air cooled DX coils for cooling and hot water heating coils for heating.

GRW provided design and construction administration services to replace all the HVAC units, provide new DDC controls, and provide testing and balancing for both the air and water sides of the system. The 26 new multi-zone rooftop units were replaced in existing roof locations utilizing the existing roof curbs and connecting back to the existing ductwork. GRW also coordinated the cleaning of all the existing ductwork throughout the building.



CLIENT CONTACT: Myron Thompson, Chief Operating Officer, Fayette County Public Schools, (859) 381-4165, Myron.thompson@fayette. kyschools.us

Booker T. Washington Elementary School HVAC Replacement

Fayette County Public Schools hired GRW to provide engineering services for HVAC improvements at the Booker T. Washington Elementary School in Lexington, KY. **The project includes the replacement of 5 rooftop/CAV units, 3 rooftop single zone units, and 2 split system air handling units**. A new DDC control system for the school shall be installed with new controllers for the new equipment as well as all existing equipment in the building. The existing ductwork throughout the building shall be cleaned as part of this project. The electrical work shall be included to disconnect and reconnect the new units.

CLIENT CONTACT: Melinda Joseph-Dezarn, AIA, Director of Facility Design & Construction, Fayette County Public Schools, (859) 381-3826, melinda.josephdezarn@fayette.kyschools.us

Northern Elementary School HVAC Replacement

Fayette County Public Schools hired GRW to provide engineering services for HVAC improvements at the Northern Elementary School in Lexington, KY. **The project includes the replacement of 10 rooftop multi-zone units and 3 rooftop single zone units**. A new DDC control system for the school shall be installed with new controllers for the new rooftop

units. The existing ductwork throughout the building shall be cleaned as part of this project. The electrical work shall be included to disconnect and reconnect the new units.

CLIENT CONTACT: Melinda Joseph-Dezarn, AIA, Director of Facility Design & Construction, Fayette County Public Schools, (859) 381-3826, melinda.josephdezarn@fayette.kyschools.us

Lexington Traditional Magnet School HVAC Replacement

Fayette County Public Schools hired GRW to provide engineering services for HVAC improvements at the Lexington Traditional Magnet School in Lexington, KY. The school has existing corner water-source heat pump units that shall be replaced with new rectangle stand-alone water-source heat pumps.

Approximately 24 of the corner units in the building that need replacement. The units shall connect back to the existing hydronic loop. The existing cooling tower feeding the existing watersource heat pump hydronic loop shall also be replaced. New DDC controls for the new units shall be installed to match the existing control system. The electrical work shall be included to disconnect and reconnect the new units.

CLIENT CONTACT: Melinda Joseph-Dezarn, AIA, Director of Facility Design & Construction, Fayette County Public Schools, (859) 381-3826, melinda.josephdezarn@fayette.kyschools.us

Landsdowne Elementary School HVAC Replacement

Fayette County Public Schools hired GRW to provide mechanical and electrical design services to replace HVAC equipment in the building at Lansdowne Elementary School in Lexington, KY. **The project includes the replacement of multi-zone rooftop units, single-zone rooftop unit, and split system air handling unit.**

CLIENT CONTACT: Melinda Joseph-Dezarn, AIA, Director of Facility Design & Construction, Fayette County Public Schools, (859) 381-3826, melinda.josephdezarn@fayette.kyschools.us

Wayne County Schools

Bell Elementary New HVAC System, Monticello, KY

GRW's services were procured to provide mechanical and electrical as well as architectural design services for an HVAC renovation for the Wayne County Schools Bell Elementary School in Monticello, KY. **The project includes new VRF systems for the original construction portion of the building. A new roof as well as new exterior doors and windows are a part of this project to improve the building envelope for the new HVAC equipment.**

A new electrical service is required to feed and power the new HVAC equipment. This will include roof penetration/deck repair and roof flashing where existing rooftop equipment is being removed and new rooftop equipment being installed. New lay-in ceiling with new LED lighting will be installed as well as an upgraded fire alarm system. Window replace/repair where existing penetrations are removed as well as wall repair are included.

CLIENT CONTACT: Wayne Roberts, Superintendent, Wayne County Schools, (606) 348-8484

Wayne County Schools

Gymnasium Building HVAC Renovation, Monticello, KY

GRW provided mechanical and electrical as well as architectural design services for an HVAC renovation for the Wayne County Schools gymnasium building in Monticello, KY. The project includes design of new rooftop equipment for the gymnasium as well as VRF systems for the remaining portions of the building including a kitchen/cafeteria and locker rooms. A new roof as well as new exterior doors and windows are a part of this project to improve the building envelope for the new HVAC equipment.

A new electrical service is required to provide power to the new HVAC equipment. The existing roof will be removed and a new 2-ply SBS Modified Bitumen Roofing System will be installed. This will include roof penetration/deck repair, roof flashing, and trim. The existing exterior windows will be removed and replaced with new, energy efficient, aluminum clad windows. In addition, **existing exterior doors shall be removed and replaced with new hardware to further improve the building envelope and assist with the efficiency of the new HVAC system.**

CLIENT CONTACT: Wayne Roberts, Superintendent, Wayne County Schools, (606) 348-8484

West Virginia Army National Guard

The Adjutant General (TAG) Wing Renovation, Charleston, WV

GRW is providing architecture and engineering services to renovate The Adjutant General (TAG) Wing of the Joint Forces Headquarters (JFHQ) in Charleston, WV. Work for the 7,200 SF facility includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

Electrical engineering services included the design for new lighting and power provided at lower-level restrooms and the entire first floor level. Also included were adjustments to several existing outlets and fire alarm systems, recessing them in the existing

West Virginia Army National Guard

Martinsburg Secure Facility Renovation, Martinsburg, WV

GRW designed renovations for a secure facility located adjacent to the Eastern WV Regional Airport in Martinsburg, WV. The purpose of the renovation was 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:

- Complete replacement of the existing nonoperational HVAC system with a new energyefficient system. New system consists of water source heat pumps (WSHP) connected to a new boiler and closed loop fluid cooler. A new water-cooled dedicated outside air unit with heat recovery was designed for required outside air to the building.
- Redundant HVAC systems for secure IT room and non-secure IT room. Each room is served by the WSHP system as well as ductless split systems.

CMU walls to provide a cleaner look. Data ports were provided at many desk locations within private offices as well as the large conference room table. A new security camera system also was designed.

Mechanical engineering services included design for new piping tied into the existing HVAC system, as well as return grilles for new tile ceiling.

CLIENT CONTACT: Jim Skaggs, West Virginia Army National Guard, (304) 561-6550, robert.a.skaggsii.nfg@army.mil

- Demolition of existing interior finishes and other improvements within the renovation area
- New DDC control system for all new equipment
- 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
- 515KW/644KVA standby diesel generator

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

West Virginia Air National Guard

130th Airlift Wing Building 107 Renovation, Charleston, WV

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). Both projects were 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 40,800 SF renovated building includes the following programmed spaces:

- HVAC, electrical, and communications support: The HVAC system includes a geoexchange system utilizing a closed wellfield and geothermal heat pumps throughout, to maximize energy savings and sustainability goals. A new wet-pipe sprinkler system was added that includes an electric fire pump system.
- 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

CLIENT CONTACT: Capt Harry Netzer, Deputy BCE, West Virginia Air National Guard, (304) 341-6649, harry.g.netzer.mil@mail.mil

Building 107 Renovation Contractor Performance Assessment Report (CPAR) from Contracting Officer Robert Barker:

QUALITY: Contractor met 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.

Morehead State University

Morehead State University HVAC Upgrades - Breckinridge, Baird, Button & Enrollment Services Buildings

Morehead State University selected GRW to provide design services for **HVAC upgrades in four buildings:** Breckinridge Hall, Baird Music Hall, Button Auditorium and university's enrollment services building.

CLIENT CONTACT: Kim Oatman, PE, PLS, Assistant Vice President Facilities Operations, Morehead State University, (606) 783-2066, k.oatman@moreheadstate.edu

Kentucky Division of Engineering & Contract Administration

Southeast Kentucky Community and Technical College – Cumberland, KY, Campus

Falkenstine Hall HVAC Renovation

This project included **replacement of most of the existing heating and air conditioning (HVAC) equipment in this heavily utilized building**. Work also included the installation of a new Direct Digital Control system which communicates with the facilities offices via a new control data network.

Newman Hall HVAC Renovation

This HVAC renovation project included:

 New four-pipe mains from the central utility plant to Newman Hall

- Replacement of the oldest chiller in the central utility plant with a new larger unit
- Addition of an LP gas-fired base-load boiler to supplement the existing stoker-fired units
- Modifications to the existing pumping, piping and control systems
- The installation of a new DDC system that communicates with facilities via a new network

Modifications allow simultaneous heating and cooling in areas of four buildings served by the plant.

West Virginia Air National Guard

130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV

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.

HVAC systems were replaced in their entirety with a new packaged rooftop VAV system and electric reheat terminal units. A server rooms and arms vault were conditioned with precision cooling systems. Energy recovery was implemented for the ventilation system. The systems achieved 32% improvement over code to exceed the requirements of EPAct. Key program elements include:

- Expanded command/administrative space
- Arms vault
- Training rooms
- SIPRNet
- ATFP building/site security
- ADA compliance
- Geothermal
- Split MILCON/SRM funding
- Extensive communications infrastructure

This project meets LEED Silver measures for sustainable design.

CLIENT CONTACT: Capt Harry Netzer, Deputy BCE, West Virginia Air National Guard, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia Air National Guard

130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV

GRW provided multi-discipline design services for renovations and energy-efficient improvements to the 25,765 SF Squadron Operations Facility at the WV Air National Guard Base at Yeager Field, Charleston, WV.

This facility was built in 1977 as a three-story, 18,265 SF building, and housed the Base Operations and Dining Area. In 1990, a two-story addition of 7,500 SF was constructed on the east end of the facility to increase space needed for airfield operations. The Dining Area was later relocated to another facility and its space was renovated for a Fitness Center and an Intelligence/Tactics unit. Other renovations and relocations made within the facility over the years have resulted in a building that now inadequately serves its current users, which include Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center.

The facility size met the ANG facility space requirements, but the user spaces were not efficiently arranged; the HVAC and electrical systems were inadequate; roofs needed repair; and the fire protection system did not comply with current codes. All of these factors contributed to a degradation of mission completion.

GRW began the project with a charrette to review the facility requirements with a Design Working Group, consisting of user groups and other key stakeholders, to confirm the authorized functional space requirements of each activity in the facility, develop alternative floor plans that overcome the current deficiencies, and validate the Government's construction cost estimate. A Concept Proposal Report and a Concept Development Report were prepared following the Charrette.

After considering the alternative floor plans, a plan was selected that met the goals of the project while also achieving a more energy-efficient, sustainable facility. The final design allows for the efficient use of space for squadron personnel to perform their operations, maintenance and training activities in a modern, comfortable environment that is conducive to effective mission execution.

Designed to achieve a USGBC LEED Certified rating and to meet other ANG Sustainable Design Policy, the renovated facility design includes new, efficient HVAC, lighting, and other support systems. This design also meets the AT/FP requirements of UFC 4-010-01, and other applicable current ANG requirements and building codes including ADA accessibility guidelines.

"From the Communications Building to the Master Plan, GRW has shown many of the traits that we look for in an A/E Firm. They have offered us outstanding solutions. They have shown their commitment to our unit by always going above and beyond; I know that I am extremely proud to have had them on our projects."

Comment from Lt. Col John Dulin 130th AW/CES

CLIENT CONTACT: Capt Harry Netzer, Deputy BCE, West Virginia Air National Guard, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia Division of Natural Resources Building 74 Renovation

West Virginia Department of Administration | Charleston, WV

GRW was selected by the State of West Virginia, Division of Natural Resources (DNR) to complete an evaluation of the building systems in Building 74. Services also have included making recommendations for possible improvements and upgrades needed to ensure continued suitability, improved energy efficiency, and code updates.

The three-story, 37,000 SF, 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 functions of DNR.

At that time, no upgrades were made to the primary mechanical and electrical systems – and it is believed the rooftop mechanical units are at least fifteen (15) years old.

The building is occupied by several sections of DNR including DNR Administration, State Parks, Wildlife Resources, Land and Streams, and Law Enforcement. There are approximately 100 employees in the building.

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, (304) 957-7142, Mark.A.Crites@wv.gov



U.S. Federal Courthouse Renovation, Lexington, KY

U.S. General Services Administration



GRW was part of the design-build team selected by the U.S. General Services Administration (GSA) to design and construct improvements for the federal courthouse in Lexington, KY. Built in 1934 and listed on the National Register of Historic Places, the fourstory building, plus basement, contains 84,000 SF of rentable space and currently houses both the U.S. District Court (79% of the building) as well as the U.S. Marshals Service (USMS), U.S. Attorneys and the U.S. General Services Administration.

GRW's role on the design-build team was to provide civil/site engineering, and mechanical and electrical engineering. The project involved a phased construction schedule; work was completed while the building was occupied.

HVAC Renovation & Energy Efficiency

Sustainability was a key factor as the addition achieved a 33% energy efficiency improvement over code, exceeding EPAct requirements for federal buildings. HVAC systems included the addition of variable refrigerant volume systems, as well as modifications to existing variable volume air-handling system. Included were state-of-the-art ventilation systems for the parking garage, loading dock, and sallyport controlled by occupancy, temperature, and hazardous gas (CO & NOx) levels. LED lighting was added in all new spaces.

A few of the major components included:

- Site work, storm water/drainage, HVAC, plumbing, and electrical rewiring for all affected spaces
- Emergency generator serves entire building (350 KW)
- Additions and modifications to IDS, CCTV system and access control systems
- Ballastic protection of courts security booth
- USMS vehicular sallyport
- Prisoner elevator, judge's elevator, freight elevator & overhaul of two public elevators
- Addition of a new fire exit stairwell
- Secure 4th floor corridor to judge's chambers

CLIENT CONTACT Kevin Dunham, Architect, U.S. General Services Administration, (404) 331-2998, kevin.dunham@gsa.gov

KSD & KSB Campus HVAC Assessments & Upgrades (Multiple Buildings)

Kentucky Division of Engineering & Contract Administration | Frankfort, KY

The Kentucky School for the Deaf (KSD) located in Danville, Kentucky and the Kentucky School for the Blind (KSB) located in Louisville, Kentucky, have multiple buildings on campus with varying HVAC system types/ages in need of replacement or upgrades. Heating, ventilation and air conditioning are critical to the school's learning and living environment. The campuses are typically occupied 24 hours a day Monday – Friday during the school year. Systems need to accommodate school schedules for

occupancy differences from school session to summer break. Design experience in phasing work for construction to coordinate with school occupancy timeframes is important. E

The work for this project includes assessment of existing mechanical systems for multiple buildings, recommendations for upgrades with current cost estimates, and design of projects chosen by the client.

KSD school buildings have been recently removed from the central steam plant by adding independent boilers in each building. KSB is still currently on a central boiler plant and part of this study is to review the possibility of removing part of the campus from the boiler plant. Both campuses would like to have a central control system BACNet to better control and monitor buildings. Electrical systems and piping will also need to be reviewed for any possible upgrades that may be necessary in order to upgrade HVAC systems.

Possible projects at KSD include:

- Separate HVAC system for Argo Classroom Building art room
- New roof top units, exhaust fans, air compressor as well as adding air conditioning to the gym portion of the Thomas Athletic Building
- Upgrade of chilled water air handlers with electric strip heat system at Middleton Dorm Building
- Replacement of water source heat pumps and a cooling tower to alleviate humidity issues and negative building pressure issues at Brady Administration/Dorm Building



- Chiller replacement at Kerr Classroom Building
- Fan coil units upgrades at Grow Hall cafeteria/kitchen building
- Complete replacement of HVAC boiler, unit ventilators, piping at Beauchamp Building

Possible projects at KSB include:

- HVAC systems full upgrade at Evans Hall
- Addition of controls through a BACNet at Scoggan and McDaniel Classroom Buildings
- HVAC system full replacement along with electrical upgrade at Langan Gym Building
- HVAC renovation for a portion o f Howser Dorm Building along with upgrade of controls in all of the building to connect to a new campus wide system
- HVAC upgrade including repair of controls and update of electrical infrastructure for Richie Hall Auditorium/Music Building
- HVAC improvements includes replacement of air distribution system at Hartford Cafeteria/Kitchen
- HVAC upgrades including replacement of steam piping, valves, and controls at Gregory-Ries Student Center
- HVAC improvements include replacement of controls and roof top AC unit at Begley Central Plant Building
- HVAC replacement for KSB Foundation Building
- HVAC replacement for three residential houses

CLIENT CONTACT Tony Yates, Kentucky Division of Engineering & Contract Administration, (502) 564-3155, tony.yates@ky.gov



WV Dept. of Administration / WV Army National Guard | Child Development Center HVAC Renovations Design

3.0 Staff Qualifications

To assist you with the design of HVAC system renovation for the WVARNG's Child Development Center project in Charleston, WV, we've selected GRW team members with the relevant experience and availability. Our clients also directly benefit from **GRW's one-stop business**

model and multidiscipline

staff who specialize in architecture, engineering (mechanical, electrical, structural, transportation, civil/site), interior design, and landscape architecture. These capabilities allow our teams to **collaborate** more efficiently with you, which can make a significant positive impact on your project experience. **Resumes** are on the following pages. Read more about our **approach** and **methodology**, including an overview of key team member responsibilities in **Section 4.0**.





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

NCEES Member allows reciprocity with other states LEED Accredited Professional

PROFESSIONAL AFFILIATIONS AND TRAINING

Society of American Military Engineers (SAME)

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

Cory Sharrard, PE, LEED AP GRW Project Manager

RELEVANT PROJECT EXPERIENCE

Clay County High School Renovation and Addition, Clay, WV -

Mechanical Engineer. Design and construction administration phase services for gymnasium and locker rooms, commons area, and HVAC system renovations; door/window replacement; and security/communications system improvements. Portion of construction will occur during summer months, but much will be completed while school is occupied.

Fayette County Public Schools Henry Clay High School HVAC System Evaluation & Replacement, Lexington, KY – Project Manager. Mechanical engineering design and construction administration services to replace all major HVAC equipment on the roof of approximately 250,000-SF high school. Current HVAC system, evaluated by GRW prior to this assignment, consists of 26 multi-zone units and several additional split-system air handling units with air-cooled DX coils for cooling and hot water heating coils for heating. Project to include replacement of units, new DDC controls, and testing and balancing for both the air and water sides of the system.

Fayette County Public Schools Landsdowne Elementary School HVAC Replacement, Lexington, KY – Project Manager. Mechanical and electrical design services to replace HVAC equipment in the building at Lansdowne Elementary School. The project includes the replacement of multi-zone rooftop units, single-zone rooftop unit, and split system air handling units.

Fayette County Public Schools Booker T. Washington Elementary School HVAC Replacement, Lexington, KY – Project Manager. Engineering services for HVAC improvements including the replacement of 5 rooftop/CAV units, 3 rooftop single zone units, and 2 split system air handling units. A new DDC control system be installed with new controllers as well as all existing equipment in the building. Existing ductwork throughout the building shall be cleaned, and electrical work shall be included to disconnect and reconnect new units.

Fayette County Public Schools Northern Elementary School HVAC Replacement, Lexington, KY – Project Manager. Engineering services for HVAC improvements including the replacement of 10 rooftop multi-zone units and 3 rooftop single zone units. A new DDC control system shall be installed with new controllers for the new rooftop units. Existing ductwork throughout the building shall be cleaned, and electrical work shall be included to disconnect and reconnect the new units.

Fayette County Public Schools Lexington Traditional Magnet School HVAC Replacement, Lexington, KY – Project Manager. Engineering services for HVAC improvements including the replacement of 5 rooftop/CAV units, 3 rooftop single zone units, and 2 split system air handling units. A new DDC control system be installed with new controllers as well as all existing equipment in the building. Existing ductwork throughout the building shall be cleaned, and electrical work shall be included to disconnect and reconnect new units. Kentucky School for the Deaf and Kentucky School for the Blind HVAC Upgrade, Danville & Louisville, KY – Project Manager. Work for project includes assessment of existing mechanical systems for multiple buildings, recommendations for upgrades with current cost estimates, and design of projects chosen by client.

Wayne County Schools Bell Elementary New HVAC System, Monticello, KY – Project Manager. Mechanical and electrical as well as architectural design for an elementary school HVAC renovation. Project includes new VRF systems for the original construction portion, new roof, new exterior doors and windows, new electrical service for new HVAC equipment, roof penetration/deck repair and roof flashing, lay-in ceiling with new LED lighting, and upgraded fire alarm system.

Wayne County Schools Gymnasium Building HVAC Renovation, Monticello, KY – Project Manager. Mechanical, electrical, and architectural design services for an HVAC renovation that includes new rooftop equipment for the gymnasium as well as VRF systems for the remaining portions of the building including a kitchen/cafeteria and locker rooms. A new roof as well as new exterior doors and windows will further improve the building envelope for the new HVAC equipment.

Morehead State University HVAC Upgrades - Breckinridge, Baird, Button & Enrollment Services Buildings, Morehead, KY – Principal. Design services for HVAC upgrades in four buildings: Breckinridge Hall, Baird Music Hall, Button Auditorium and university's enrollment services 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 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 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.



YEARS OF EXPERIENCE: With GRW: 28 Total: 47

EDUCATION

B.S., Electrical Engineering, 1978, University of Kentucky

REGISTRATION

Professional Engineer (Electrical): KY, WV, IN, GA, TN, TX, NV, NC, MS, MI, AL, CA, DC, FL

NCEES Member allows reciprocity with other states

LEED Accredited Professional, Building Design + Construction

PROFESSIONAL AFFILIATIONS AND TRAINING

Design-Build Institute of America National Fire Protection Association International Society of Automation American Institute of Architects American Council of **Engineering Companies** National Council of Examiners for Engineering and Surveying Air National Guard Civil **Engineering Association Life** Member (Associate) Society of American Military Engineers American Water Works Association Kentucky Society of Healthcare Engineers

Monty Maynard, PE, LEED AP BD+C GRW Electrical Engineer/Technical Advisor

RELEVANT PROJECT EXPERIENCE

West Virginia Division of Natural Resources Building 74 Renovation, South Charleston, WV – Principal. 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 ANG 130th Airlift Wing Building 107 Renovation,

Charleston, WV – QA/QC. 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 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). 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 Division of Corrections Lakin Correctional Center Lightning Protection Improvements, West Columbia, WV – Project Manager. Lightning protection system ground study and improvements at 166,000 SF, medium-security, women's correctional facility in West Columbia, WV. Services included study of power distribution deficiencies, grounding study, as well as design and construction administration services for recommended new system.

West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV – Electrical Engineer. 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 94-acre 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 – Electrical Engineer. 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.

Blue Grass Army Depot Building 550 HVAC Renovation, Richmond, KY – Electrical Engineer. Engineering design for design-build of complete fabrication area HVAC renovation for aged munitions assembly building. Design involved controlled temperature/humidity environment for all spaces (many of which had never before been cooled) and 100% outside air supply system from ground-mounted custom air handling unit and packaged electric make-up air unit. Major upgrades to electrical service into building were required due to large increase in electric power required for equipment.

VA Medical Center, Leestown Road Division, Fire Alarm and HVAC Controls Replacement, Lexington, KY – Principal-in-Charge. Designed fire alarm system and HVAC facilities management system for 20 major buildings, encompassing 432,000 SF, at VA Medical Center. Fire alarm system includes modern, addressable-module system with new detection and alarm devices connected to various buildings by dedicated fiber-optic network. HVAC system is state-of-the-art, direct digital control system, using wired network within building and Ethernet LAN on dedicated fiber-optic connections between buildings. Each system has head-end computer/monitor station in boiler house for 24-hour supervision.

Central State Hospital Ackerly Gymnasium HVAC Replacement,

Louisville, KY – Principal-in-Charge. Design services for replacement of air handling equipment and addition of air conditioning to existing 14,153 SF gymnasium. Included new pre-insulated underground piping to existing central plant facility, new pumps for supply of chilled and hot water, new fan coil units, new exterior mounted air handler, new ductwork from outside air handler to gymnasium, associated power distribution and electrical work, addition of duct-mounted area smoke detectors, and modifications to existing fire alarm system to monitor and shutdown air handler.

Kentucky ARNG Readiness Centers HVAC Replacement, Jackson and Williamsburg, KY – Electrical Engineer. Design for HVAC systems renovation for two small Army National Guard Readiness Centers in different Kentucky cities (Jackson and Williamsburg), totaling 32,000 SF, involving lighting (low mercury T5 lamps) and ceiling replacement and changes in electric services providing new high-efficiency air-cooled heat pumps for heating and cooling high-use areas and low-intensity gas infrared units for heating large drill halls cooled by air-cooled DX units, new duct work, and interior finish repair. Included web-based DDC control networks allowing monitoring, troubleshooting and adjustment of HVAC equipment from Frankfort HQ of KY ARNG.



YEARS OF EXPERIENCE: With GRW: 1 Total: 16

EDUCATION

B.S., Mechanical Engineering, 2006, University of Louisville

M.Eng., Mechanical Engineering, 2007, University of Louisville

REGISTRATION

Professional Engineer: KY

PROFESSIONAL AFFILIATIONS AND TRAINING

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

Chris Boggs, PE GRW Mechanical Engineer

Chris has 15 years of mechanical engineering experience with an emphasis on HVAC design including geothermal, boiler/tower, and hybrid water source heat pump systems, variable refrigerant flow, split system, rooftop units, unit ventilators, and variable air volume (VAV). He has been responsible for projects from initial planning with Owner, through design phase and construction administration. He has completed the HVAC design on a wide variety of projects including K-12 schools, higher education, courthouses, hotels, museums, medical office buildings, hospitals, behavior health facilities, and pharmacies.

RELEVANT PROJECT EXPERIENCE

Wayne County Schools Bell Elementary New HVAC System, Monticello, KY – Mechanical Engineer. Mechanical and electrical as well as architectural design for an elementary school HVAC renovation. Project includes new VRF systems for the original construction portion, new roof, new exterior doors and windows, new electrical service for new HVAC equipment, roof penetration/deck repair and roof flashing, lay-in ceiling with new LED lighting, and upgraded fire alarm system.

Wayne County Schools New Early Learning Center, Monticello, KY – Mechanical Engineer. Design of a new HVAC system as part of the renovation and addition of an existing elementary school for use as Wayne County's Early Learning Center. Scope includes replacements of rooftop equipment, a new VRF system serving an addition, electrical service for new HVAC equipment, new lay-in ceiling with new LED lighting, upgraded fire alarm system, as well as roof patching, window replace/repair.

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.

Louisville MSD Morris Forman WQTC Administration Building Computer Room Upgrades, Louisville, KY – Mechanical Engineer. Architectural and engineering design services for upgrades to the computer room in the administration building at the Morris Forman WQTC. Scope includes a new floor plan, operator workstations, ceiling, update mechanical systems, lighting, electrical and telecommunication systems, and a building wide generator system.

Loretto Living Center Design-Build Third Floor Renovation, Loretto, KY – Mechanical Engineer. Design-build renovation of the third floor into an independent living facility with a series of suites and studio apartments. New layouts, mechanical and plumbing systems, LED lighting, and finishes will be provided.

Kentucky Department of Juvenile Justice Jefferson County Youth Detention Center Renovation, Louisville, KY – Mechanical Engineer. Renovation of facility to house functions for high security youth population that is intended to provide adequate space for functions of 64-bed highsecurity 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. Approximately 50,000 square feet of facility is affected by project scope involving basement and first two floors.

Kentucky Department of Corrections Mechanical & Electrical Services -Five Locations, Various Locations, KY – Mechanical Engineer. Electrical and mechanical evaluation (cost estimates, priority lists) and design services for miscellaneous projects to be determined at five various corrections facilities in eastern part of State: Blackburn Correctional Complex, Bell County Forestry Camp, Northpoint Training Center, Eastern Kentucky Correctional Complex (EKCC) and Little Sandy Correctional Complex.

Jeffersontown Fire & EMS Station #4, 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.



YEARS OF EXPERIENCE: With GRW: 6 Total: 13

EDUCATION

B.S., Mechanical Engineering, 2010, Georgia Southern University

M.Eng., Mechanical Engineering, 2021, University of Cincinnati

REGISTRATION Engineer-in-Training: GA

Jon Sheppard, EIT GRW Mechanical Designer

Jon has ten years of experience with mechanical engineering with a variety of manufacturing companies including Yokohama Industries America, STIHL Incorporated, and Briggs & Stratton Corporation. Through this work, he has become skilled with programming PLCs for machinery and creating specialized tooling. Jon is proficient with the following software and technology: AutoCAD, Pro/Engineer Creo, Autodesk Inventor, Solidworks, and FANUC Robotics.

RELEVANT PROJECT EXPERIENCE

West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Mechanical Designer. 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 Division of Natural Resources Bath House Renovations, South Charleston, WV – Mechanical Designer. 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.

Kenton County School District Transportation & District Support Facility, Fort Wright, KY – Mechanical 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.

Pulaski County Schools Maintenance Projects, Somerset, KY – Mechanical Designer. Projects included: Northern Middle School masonry removal and repairs, metal roof flashing replacement, hot water heater replacement, and asphalt paving resurface; Oak Hill Elementary School roof replacement; Memorial Education Center roof replacement; and Day Treatment Center (alternative school) masonry replacement, roof replacement, door and window replacement, and replacement of two rooftop mechanical units.

FibroTex Manufacturing Facility Renovation and Expansion, Stearns, KY – Mechanical Designer. Design-build project including addition/renovation of approximately 80,000 SF to textile manufacturing facility.

Bert T. Combs Forestry Building HVAC Upgrade, Pineville, KY – Mechanical Designer. Design documents for heat pump replacements and piping changes required to install new heat pumps. **Jeffersontown Fire & EMS Station #4, Jeffersontown, KY** – Mechanical Designer. 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.

Kentucky Department of Veterans Affairs Thomas-Hood Veterans Center Heat Pump Replacement, Wilmore, KY – Mechanical Designer. Provided design documents for heat pump replacements and piping changes required to install new heat pumps.

Louisville MSD Morris Forman Water Quality Treatment Center Chiller Replacement, Louisville, KY – Mechanical Designer. Design and bidding services for new 125-ton screw-type chiller sized to match existing chiller which serves Morris Forman WQTC administration building, and administration portions of main equipment building and maintenance shop. Work includes connection of new chiller into existing piping loop to provide 100% backup and lead/lag operation of chilled water system; new DDC controls for operation of existing chiller and new chiller; and new electrical connections. Existing chiller, cooling tower, and pumps will remain in place and in service.

Orangetheory Fitness Center Fitups, Louisville, KY; Anderson, OH, – Mechanical Designer. Mechanical and electrical, plumbing, and fire protection engineering design services completed according to the company's corporate design manual for several fitness centers fitups/renovations in Kentucky and Ohio.

Petersburg Federal Correction Institution Food Service Building, Hopewell, VA – Mechanical Designer. Demolition and replacement of existing aged 22,000 SF dining and food service building with new 23,500 SF medium-security facility completed in two phases to accommodate Owner's funding allocation. Includes new food preparation area (including kitchen, coolers/freezers, dry storage, food prep areas, and dishwash); main dining hall with serving line for approximately 400 persons; separate staff dining area for approximately 40 persons; dock and receiving area; new security fencing and gates; reconfiguration of existing site utilities; and complete integration of new security electronics system with existing campus-wide system.

Taylor Regional Hospital A/E Services for Specialty & Diagnostic Clinic Fit Up, Columbia, KY – Mechanical Designer. Architectural and engineering services for fit up -- existing space modifications -- for diagnostic equipment for hospital's specialty and diagnostic clinic in Columbia, KY.



YEARS OF EXPERIENCE: With GRW: 15 Total: 27

EDUCATION

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

REGISTRATION

Professional Engineer, Electrical: KY, IN, WV, 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

Wayne County Schools Bell Elementary New HVAC System, Monticello,

KY – Electrical Engineer. Mechanical and electrical as well as architectural design for an elementary school HVAC renovation. Project includes new VRF systems for the original construction portion, new roof, new exterior doors and windows, new electrical service for new HVAC equipment, roof penetration/deck repair and roof flashing, lay-in ceiling with new LED lighting, and upgraded fire alarm system.

Wayne County Schools Gymnasium Building HVAC Renovation,

Monticello, KY – Electrical Engineer. Mechanical, electrical, and architectural design services for an HVAC renovation that includes new rooftop equipment for the gymnasium as well as VRF systems for the remaining portions of the building including a kitchen/cafeteria and locker rooms. A new roof as well as new exterior doors and windows will further improve the building envelope for the new HVAC equipment.

West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair, Martinsburg, WV – Electrical Engineer. 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 outline specification; and construction cost estimate.

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 for specific using agency. Includes 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.

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 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. 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 (MILCON/SRM split funded) increases space and improves 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.

Kentucky School for the Deaf and Kentucky School for the Blind HVAC Upgrade, Danville & Louisville, KY – Electrical Engineer. Work for project includes assessment of existing mechanical systems for multiple buildings, recommendations for upgrades with current cost estimates, and design of projects chosen by client.

Pulaski County Southwestern High School Addition and Renovation, Somerset, KY – Electrical Engineer. Engineering design for new 28,000 SF, two-story classroom addition (new chiller and variable-volume air-handling system), as well as 1,980 SF renovation and expansion to existing cafeteria. Also, central plant was replaced with new high-efficiency gas boilers and pumping systems, and new fire pump to upgrade entire school's sprinkler system.

U.S. Federal Courthouse Renovation, Lexington, KY – Electrical Engineer. Design-build improvements project to enhance security through renovation of existing space, as well as new construction. Improvements include upgraded security electronics, site blast protection, and circulation/control enhancements. Built in 1934, the federal courthouse is listed on National Register of Historic Places.

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.

Pulaski County Schools Eubank Elementary Renovation and Addition, Pulaski County, KY – Electrical Engineer. Mechanical and electrical engineering design, and construction administration services for renovation and addition of a 46,820-SF school. Scope includes a new kitchen and addition to the cafeteria, as well as a renovation of entire building. Mechanical work included HVAC systems involving rooftop VAV boxes with electrical reheat and energy recovery ventilation, as well as geothermal units. Electrical work included replacement of lighting, fire alarms, and communications, and new service for the addition.



YEARS OF EXPERIENCE: With GRW: 35 Total: 41

EDUCATION

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

REGISTRATION

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

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 Architect

RELEVANT PROJECT EXPERIENCE

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 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; 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 ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV – Architect. 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.

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 includes design of Forward Operating Base (FOB) including 20 14' x 16' wooden buildings, new bath house for approximately 200 people and pavilion.

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 the 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 Maintenance Mall (Building 307) Repair, Martinsburg, WV – Principal. 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 outline specification; and construction cost estimate.

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 the Aeromedical Evacuation Squadron (AES). Repairs and building repurposing includes: 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 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 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.

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) meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architect. 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.

Clark County Schools Transportation Offices and Bus Maintenance Facility, Winchester, KY – Principal. Design for a 2,250 SF administrative space, 8,700 SF maintenance space, and 2,450 SF mezzanine space for a county school bus transportation office and bus maintenance facility providing: 4 drive-thru maintenance bays (3 with lifts); drive-through "touchfree" wash bay; 4 single-staff offices; 2 breakrooms; and ADA compliant restrooms.

Fayette County Public Schools Central Office Renovation, Lexington, KY – Project Manager. Design for renovation in four phases of a public school system's 110,126 SF central office building re-purposed from a circa 1926 high school constructed of brick over concrete masonry and wood-framed roof. Initial phase involved masonry repair, repointing, built-in gutter repair, window repair/replacement, roof repair, painting, masonry sealing, enlarged column vent openings, and plaster column capital removal to create a mold for new plaster replacements.



YEARS OF EXPERIENCE: With GRW: 7 Total: 26

EDUCATION

M.S., Civil Engineering, 1996, University of Kentucky

B.S., Civil Engineering, 1995, University of Kentucky

REGISTRATION

Professional Engineer/Structural Engineer: KY

Professional Engineer: KY, WV, IN, TN, GA, NY, NC, WA, OH, AZ, TX, NM, KS

NCEES Member allows reciprocity with other states

Jon Marcum, PE, SE GRW Structural Engineer

RELEVANT PROJECT EXPERIENCE

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – Structural 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.

Berea College Edwards Building Renovation, Berea, KY – Structural Engineer. Preliminary design for renovation of three-story 27,000 SF administrative and residential services building to house offices for fund raising activities, as well as to provide space for offices related to media production. Vertical circulation consists of one open stairway and two exterior fire escapes. Preliminary design proposed new interior stairs, elevator, public restrooms on each floor, open floor plan suites, and lobby gallery space.

Berea College Facilities Maintenance and Auxiliary Maintenance Buildings, Berea, KY – Structural 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 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.

Comprehend Medical Office Building, Maysville, KY – Structural Engineer. Design and construction phase services for new 26,000 SF addition to provide space for clinical and administrative functions. Key design factors incorporated: welcoming, secure environment; brand and identity promotion; large open atrium; public circulation space; easy wayfinding; connection to existing clinic; clearly defined public, clinical, and administrative zones. Building responds to a complex, steeply sloped site by incorporating expanded parking into lower level adjacent to primary public and staff entrances. **Pulaski County Schools Area Technology Center Renovation, Somerset, KY** – Structural Engineer. Design for 6,000 SF renovation of approximately 38,000 SF facility. Spaces include industrial technology classroom, robotics tech lab, hydraulics tech lab, weld tech lab, electronics tech lab, and support spaces.

Berea College Seabury Center Renovation, Berea, KY – Structural Engineer. Design services to renovate two existing racquetball courts into office suites for coaches. Proposed design involved addition of flooring/ceiling system to create two-story office suite, as well as enclosure of portion of lobby with aluminum/glass wall at lower level to create reception space.

Crane NSA Building 2736 Renovation, Crane NSWC, IN – Structural Engineer. Design-build renovation of existing building into new air compressor facility to serve adjacent facilities. Building upgraded to meet energy, life safety code, new primary structure and façade elements, mechanical, and electrical systems to support one new air compressor system, and accommodations to expand to second.

Crane NSA Building 2781 New Lunchroom/Breakroom, Crane NSWC, IN – Structural Engineer. For 1,000-SF design-build project, provided architectural design, and mechanical/plumbing, electrical, and structural engineering services, as well as construction administration. Project involved demolition of existing building 2781 and replacement with new pre-engineered metal building to be used as lunchroom/breakroom.

Kentucky Department of Juvenile Justice Jefferson County Youth Detention Center Renovation, Louisville, KY – Structural Engineer. Renovation of facility to house functions for high security youth population that is intended to provide adequate space for functions of 64-bed highsecurity 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. Approximately 50,000 square feet of facility is affected by project scope involving basement and first two floors.

Frankfort Plant Board Administration Building, Frankfort, KY – QA/QC. New three-level, 46,000 SF administration building on 30-acre site providing consolidated facility for administrative offices (accounting, human resources, management, IT, dispatch, customer service), as well as exterior drive through tellers, board/community room and designated shelter area. Building construction includes primarily architectural precast concrete panels with design elements such as structural silicone glazing systems and aluminum panels.

Northpoint Training Center Boiler Building Plumbing Replacement, Burgin, KY – Structural Engineer. Provided design documents to correct existing plumbing issues from previous project that was designed and installed by design-builder.

FibroTex Manufacturing Facility Renovation and Expansion, Stearns, KY – Structural Engineer. Design-build project including addition/renovation of approximately 80,000 SF to textile manufacturing facility.

SECTION 4.0

Anticipated Concepts & Methods of Approach

4.0 Approach & Methodology for Meeting Goals & Objectives

The West Virginia Department of Administration along with the West Virginia ARNG are embarking on an HVAC system renovation project at the WVARNG Child Development Center in Charleston, WV. It's an important project because it will help ensure the current/outdated HVAC system is properly updated and replaced – and will ensure it meets all mechanical system building codes. This project supports elements of the WVARNG by providing child development services for personnel. GRW will use its military experience as well as its educational experience to provide a design to meet all of your needs.

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

- Engineering and architectural design services.
- Ensuring key design elements focus on using energy-efficient, economically sustainable, and maintenance-friendly equipment.
- Researching and investigating existing HVAC equipment and provide drawings/specifications for replacement of the equipment, while meeting required codes and coordination, as directed by owner/agency/authority.

We also understand we will be responsible for:

- Submitting drawings at 35%, 65%, 95% and 100%, as well as revising and submitting costs estimates at each phase, and divided into sustainment, restoration, and modernization categories.
- Construction administration and bidding services.

An Approach Based on Respect & Clarity

Our approach to accomplishing these goals and objectives for your project is straightforward: 1) assemble the best and brightest design talent with knowledge of the national guard/military projects; 2) bring an open mind and fresh perspectives; and 3) remain accountable to you throughout the process for cost control/budget.

The cornerstone of the GRW design approach is collaboration. Communicating in an open dialog helps to vest everyone in the project's success and is a prerequisite to ensuring buy-in from all.

A Project Team You Can Count On



Our assigned project manager is key to our approach. Leading you and our team as our project manager will be the director of GRW's mechanical engineering division, **Cory Sharrard**. She brings more than 25 years of experience

with a variety of similar projects. We believe you will find her a knowledgeable engineer, skilled leader, and a valuable partner throughout your upcoming project.

Cory's logical and methodical approach will provide a steady hand guiding the team and the WVARNG through the design process to a successful conclusion.

Closely supporting Cory to ensure efficiency, effectiveness, and code compliance of the HVAC systems will be Chris Boggs and Jon Sheppard. Our electrical engineer Patrick Baisden will evaluate the electrical systems in the building to ensure code compliance and ensure we provide power required for any HVAC upgrades. All are experienced engineers accustomed to working on complex, systems-oriented, codeoriented projects for the military including WVARNG projects. Monty Maynard, a GRW vice president and our firm's most senior electrical engineer, brings to the team a high familiarity with the West Virginia Army National Guard and other military projects. He will support Cory offering additional quality assurance/quality control, as well as technical advice. Our



in-house architect, **Shane Lyle** – who has worked on more than a dozen West Virginia ANG and ARNG projects – and our in-house structural engineer, **Jon Marcum**, are prepared to offer the support needed for those disciplines.



Kickoff/Charrette | A1 Design | 10%

As part of the first phase of the project, we'll hold an initial meeting with you and the primary project stakeholders to discuss in detail your project goals, options for accomplishing those goals, and budget and schedule requirements for the work. Following this meeting, we issue a written record of our discussions.

Existing Conditions

After we gain a full understanding of your desires and goals through the kickoff, we also will complete an examination of the existing conditions. We will take stock of the existing equipment, reviewing existing documentation and making field observations.

For your HVAC project we will also:

- Consider & identify equipment lifespan and functions.
- Identify existing conditions that are not in compliance with current codes and standards.
- Look at the performance of the systems and utility costs for an established time period.
- Ensure new equipment meets current force protection standards, and current building code.
- Formulate how they relate to all required, current codes and efficiencies

At the conclusions of this step, we will create a report that outlines the condition of the existing building components and systems that will be affected by the work of this project. This information will include the identification of existing hazardous materials.

Again, we will meet with you to determine likes, dislikes, what working, and what's not. This will give us a foundation as we move forward.

We'll use all information we collect to begin an outline for recommendations – including initial cost estimates – divided into sustainment, restoration, and modernization categories – for your new, upgrade systems.

SECTION 5.0

Construction Management & Contract Administration

5.0 Project Management & Quality/Cost Control

Project Management

Our straightforward approach continues throughout the management of the entire project.

Design Submittals | A1 & A2 | 10% & 35%

Using the information from the Kickoff/Charrette and analysis of existing conditions, we continue through the A1/10% phase – and move into the A2/35% design phase. At this time we 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 minutes.

Design Dev., Pre-final & Final Construction Documents |B1, B2 & B3 | 65%, 95% & 100%

Using the approved **schematic design** documents, the design team will proceed with **design development** docs which likewise, are issued for Owner/User review and approval before proceeding to **pre-final construction documents** and completion of final construction documents for bidding.

The **estimate of probable cost** is updated at each design review submittal to check the estimate against the drawings and specs, to make sure the work

Construction Bid Services | Construction Phase

The same Project Manager you worked with throughout design continues as your point of contact through the entire 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. remains within budget. We will also reconfirm final decisions on materials, equipment, and finishes.

If needed, we will incorporate a phasing plan into the final documents to minimize the impact of construction on the facility's day-to-day operations.

The **final construction documents** will consist of drawings, specifications, and instructions to bidders. The completed documents are then ready for bidding.



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

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. For many years, we have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state. The West Virginia Division of Highways (DOH) recently began working with the State's Purchasing Division for building projects, and our \$10 million equipment shop building for District One was the first project that the DOH bid through the WV Purchasing Division. 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 with regard to bidding projects, our experience with the West Virginia Purchasing Division will help ensure effective and efficient project delivery.

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 construction-related 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.

Changes

The GRW project team will not approve any change that affects project cost, time or quality without your approval, and then only after a thorough discussion and vetting of the reasons for the change. Contractor cost proposals are carefully reviewed to ensure the proposed costs are fair and reasonable. When needed, GRW will negotiate on your behalf to reach an equitable solution.

Flexibility

These procedures are not cast in concrete, as GRW prides itself on being an organization which seeks

to simplify and expedite procedures that can impede the work and stifle creative people. Sometimes these procedures are streamlined for smaller projects, and sometimes they are more formalized for larger projects but at all times they remain flexible to accommodate the needs of our client's organizations. We want you to be satisfied with the quality of your facility: the bottom line is that GRW cares a great deal about securing repeat business with our clients.

Quality & Cost Control

At GRW, cost control, scheduling and value engineering are daily components of design rigor. 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

Cory Sharrard, Project Manager, has primary responsibility for the daily management and coordination of the project team. With over 25 years of experience, she 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 both internally and externally.

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 the 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. Lines of communication and coordination will be established. 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 overthe-shoulder 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.

QUALITY ASSURANCE: A major advantage of providing all design disciplines within the same firm is the opportunity to streamline communication and work flow resulting in a well-coordinated set of construction documents. By close collaboration throughout the design stage, ideas can be quickly discussed and evaluated to understand impacts on cost, schedule and effectiveness. **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

MAJ Robert Kincaid, Jr. (304) 791-4459 robert.j.kincaid.mil@mail.mil

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

Matthew T. Reynolds (304) 561-6568c matthew.t.reynolds18nfg@mail.mil

West Virginia Air National Guard

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

Maj. Emerson C. Slack, Deputy BCE (304) 616-5233 emerson.c.slack.mil@mail.mil

West Virginia, General Services Division

Mark Crites Building Project Management Specialist (304) 957-7142 Mark.A.Crites@wv.gov

Fayette County Public Schools

Melinda Joseph-Dezarn, AIA, Director of Facility Design & Construction, (859) 381-3826, melinda.josephdezarn@fayette.kyschools.us

Morehead State University

Kim Oatman, PE, PLS Assistant Vice President Facilities Operations (606) 783-2066 k.oatman@moreheadstate.edu











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:	1434011	Reason for Modification:		
Doc Description:	WVARNG Child Developme	ent Center HVAC Renovations Design EOI		
		-		
Proc Type:	Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version	
2024-05-17	2024-06-04 13:30	CEOI 0603 ADJ240000002	1	
2024-05-17	2024-06-04 13:30	CEOI 0603 ADJ240000002	1	

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

VENDOR				
Vendor Customer Code:	00000218570			
Vendor Name :	GRW Engineers, Inc.			
Address :	801 Corporate Drive			
Street :				
City :	Lexington			
State :	Kentucky Country :	United States	Zip : 40503	
Principal Contact :	Cory Sharrard, PE, LEED A	P - GRW Director, Mec	hanical Engineering	
Vendor Contact Phone:	859-880-2346 (direct)	Extension:		

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

Vendor Signature X	FEIN#	61-0665036	DATE	6/4/2024	
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 renovation/replacement of the HVAC systems & equipment at the Child Development Center located at the WV Army National Guard Base (Coonskin Complex), located in Charleston, Kanawha County, WV, per the attached documentation.

INVOICE TO		SHIP TO	
ADJUTANT GEN 1707 COONSKIN	ERALS OFFICE I DR	ADJUTANT GENERALS 1740 COONSKIN DR	OFFICE
CHARLESTON US	WV 25311	CHARLESTON US	WV 25311
Line	Comm Ln Desc	Qty	Unit Issue
1	WVARNG Child Development Center HVAC Renovations Design EOI		
Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description:

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

SCHEDULE OF EVENTS

Event

Line

Event Date

ADDITIONAL TERMS AND CONDITIONS (Architectural and Engineering Contracts Only)

1. PLAN AND DRAWING DISTRIBUTION: All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.

2. PROJECT ADDENDA REQUIREMENTS: The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.

3. PRE-BID MEETING RESPONSIBILITIES: The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

4. AIA DOCUMENTS: All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

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)	
(Address)	
(Phone Number) / (Fax Number)	
(email address)	

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.

(Company) Con Shanand

(Signature of Authorized Representative)

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

(Phone Number) (Fax Number)

(Email Address)