



**GRW** | engineering | architecture | geospatial

200 Sixth Avenue | St. Albans, WV 25177

304.727.5501 | www.grwinc.com

August 14, 2017

Ms. Crystal Rink, Senior Buyer  
Purchasing Division  
West Virginia Department of Administration  
2019 Washington Street, East  
Charleston, WV 25305-0130

**RE: Architecture & Engineering Services for Camp Dawson STF Buildings A & B | ADJ 1800000001**

Dear Ms. Rink and Selection Committee Members:

Achieving the goals established for the design and construction of your new buildings at Camp Dawson are greatly dependent upon selecting the right A/E design partner. GRW would like to work with you on your project. Our team offers you the right experience and expertise to successfully complete your project. We are committed to meeting your needs.

**Experience.** GRW is a full-service A/E design consulting firm that has been working with clients like you on similar projects throughout the region and locations nationwide for more than 50 years. Our military and National Guard experience ranges from the completion of projects at Camp Dawson to similar facilities at other National Guard and military campuses in the region. (See Section 3.0)

**Familiarity.** In addition to our work at Camp Dawson, we have completed in recent years numerous projects for the **West Virginia Air National Guard** and the **West Virginia Division of Corrections** Lakin Correctional Center Lightning Protection Improvements in West Columbia, WV. Our firm also designed the **Gilmer Federal Correctional Institution** and Satellite Camp in Glenville, WV, and the **Marshall University Weisberg Family Engineering Laboratory**, as well as numerous projects the **WV Department of Parks** and **WV Division of Highways**.

Our team's local knowledge and capacity is strengthened by GRW's acquisition of Chapman Technical Group, a West Virginia-based firm.

**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. From our extensive federal, state and local government experience, GRW is skilled at delivering designs that maximize the potential of the site, and integrate the architectural and engineered features of the building in relation to its environment, eliminating the need for redesigns and re-bids to bring the cost within budget.

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.

Thank you for your consideration and for the opportunity to work with the West Virginia Department of Administration, and Army National Guard Construction and Facilities Management office. 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.

Respectfully submitted,

Shane Lyle, AIA, LEED AP BD+C  
GRW Vice President

(859) 223-3999, ext. 251  
slyle@grwinc.com

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Purchasing Division



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## Expression of Interest

# Camp Dawson STF Buildings A and B Architecture & Engineering Services ADJ 1800000001

WV Department of Administration  
WV Army National Guard

## Table of Contents

<b>Section 1.0</b>	Introduction
<b>Section 2.0</b>	Understanding and Project Management
<b>Section 3.0</b>	Relevant Past Projects
<b>Section 4.0</b>	Staff Qualifications
<b>Section 5.0</b>	Quality & Cost Control
<b>Section 6.0</b>	References
<b>Section 7.0</b>	West Virginia EOI Forms

# 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 have the ability to 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.

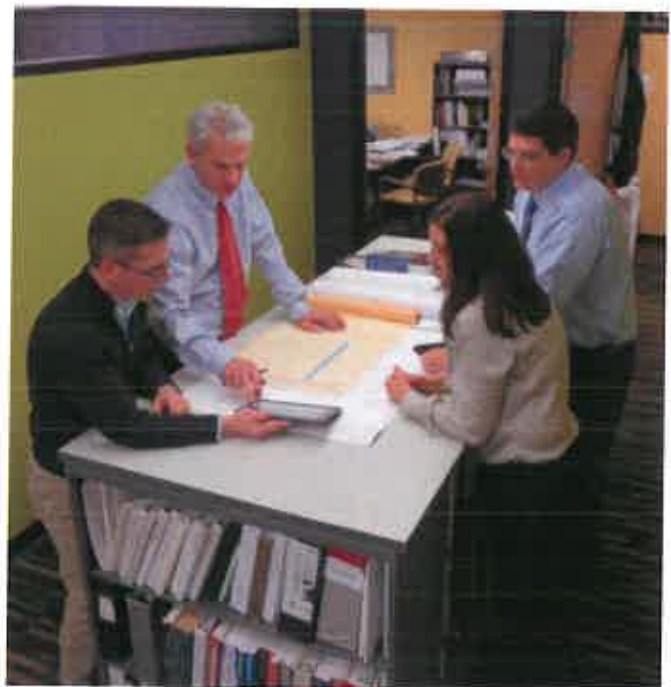


Among our achievements, GRW is listed in *Building Design and Construction's Giants 300* report as one of the nation's top Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.

## 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 wide ranging 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.



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

Kentucky ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop, Paducah, KY  
83,300 SF | LEED Silver Design Criteria | Design-Build

## Design Build Delivery

Since the early 1990s, GRW has been involved in design-build projects as both the Owner's representative/design criteria consultant or the designer of record.

Our design-build project experience includes over \$2 billion in construction value of facilities ranging from federal prisons to DoD facilities to multimillion-dollar infrastructure projects.

Through this experience and as a founding member of the Ohio Valley Region Chapter of the Design-Build Institute of America, we have built strong relationships with many contractors to produce award-winning projects such as the Kentucky Army National Guard Joint Armed Forces Reserve Centers and Field Maintenance Shops in Paducah and Richmond, KY; the Derek R. Guthrie Water Quality Treatment Center Expansion (30 MGD) in Louisville, KY, and the U.S. Penitentiary and Satellite Camp in Yazoo City, MS.

## Sustainable Design

GRW understands the desire for energy efficiency and the option to incorporate sustainable design features. Whether planning for a Net-Zero or Net-Zero-Ready building, "designing to standards of" or achieving recognition from agencies such as Energy Star, LEED, or Green Globes, GRW can help to attain your sustainability goals using interactive design processes that include approaches such as building information modeling (BIM), building simulation, energy modeling, sound analyses, comfort analyses, and life-cycle costing or other comparative economic analyses.

Energy modeling software / building simulation will be used early in the process to evaluate various combinations and alternatives



## **SECTION 2.0 | Understanding and Project Management**

## 2.0 Understanding and Project Management

### Understanding

GRW understands your proposed project, Camp Dawson STF Buildings A and B, involves the following key items:

**Building A:** an open bay building, 40- by 60-foot in size, to be designed to 10 percent at this time. Conception drawings are all that are being contracted for at this time. Ultimately the building would be used mainly as a workout facility for troop training. Special features desired in the building include:

- Energy efficiency (must be well insulated)
- HVAC system and heating with natural gas
- No windows on outside walls
- One wall made of concrete or CMU that is rigid enough to bounce medicine balls
- The ceiling will have multiple hard points so climbing ropes can be connected
- Polished concrete floor
- Electrical outlets around the perimeter and recessed in the floor, every 6 inches
- Front door should be designed to allow equipment to be moved in and out of the building
- One man door on the right side of the building should align with the man door on the adjacent building
- A walkway, covered and to protect from weather, will be provided between buildings

**Building B:** a mixed used, 120- by 60-foot building divided into two sections, to be designed to 100% construction documents.

- A 54- by 60-foot section is unconditioned storage (no HVAC)
- A 66- by 60-foot section (CIF) will be energy efficient and well-insulated. It also will have:
  - ✓ 12- by 14-foot interview rooms with man doors and windows
  - ✓ Walls of drywall
  - ✓ Finished floors and 8-foot high ceilings
  - ✓ Double-bowl sink with counter, a washer and dryer, and floor receptacles for three sewing machines (to be included)
  - ✓ Steel caging, 4- to 6 feet from the wall, with four, double, 4-foot doors



## Project Management

Our approach to managing your project is straightforward: assemble the best and brightest design talent with knowledge about Camp Dawson and/or national guard/military projects; bring an open mind and fresh perspectives; and remain accountable to you throughout the process for cost control/budget.

The relationship between you and your chosen design consultant is critically important. The cornerstone of the GRW design approach is collaboration.

Communicating in an open dialog, where ideas can be freely explored and considered, helps to vest everyone in the project's success, and is a vital prerequisite to ensuring buy-in from all project stakeholders.

Our project management plan will generally involve several key steps. For Building A, we understand we will work through approximately the *Schematic Design phase shown below*. For Building B, we understand design is expected to 100 percent, including construction documents.

### Kickoff/Charrette:

We will have an initial meeting with you and the primary project stakeholders to define in detail your project goals, discuss possible options for accomplishing those goals, and identify the required budget and schedule for the work. Following this meeting, we will issue a written record of our discussions.

### Existing Conditions:

We will take stock of the existing building, through an examination of existing documentation and field research.

We will identify existing conditions that are not in compliance with current codes and standards, including, but not limited to, ADA compliance, life-safety compliance, and state/federal juvenile facility requirements.

At the conclusions of this step we will create a report to share with you that outlines the condition of the existing building components and systems that will be affected by the work of this project.

### Schematic Design:

Using the information from the Kickoff/Charrette and the subsequent analysis of existing conditions, we will proceed with developing an initial concept design showing the incorporation of the various desired security upgrades.

We will present this concept to you through the use of drawings, product cut sheets, written narratives and an initial cost estimate. After your review of the material, we will meet together to go over the design, 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.

During Schematic Design, we will discuss with you options and ideas for minimizing the impact of construction on your day to day operations. This might include phasing the construction, or planning the sequence of work around times when certain spaces are normally unoccupied. We will document each step of the process with thorough meeting minutes.

### Construction Documents:

Using the approved schematic design documents as our basis, the design team will proceed with preparation of construction documents ready for bidding.

At the 65% completion point, we will double-check the budget/estimate against the drawings, to make sure that the work remains within your budget. We will also meet with you to get any final decisions that are needed with regard to materials, equipment, and finishes.

We will incorporate a phasing plan into the final drawings and specifications that minimizes the impact of construction on your day-to-day operations.

The final construction documents will consist of drawings, specifications, and instructions to bidders. The documents will be complete and ready for bidding.



## Additional GRW Project Management Expectations

### Special Design Considerations

GRW will deliver a facility that is safe, ADA compliant, and environmentally friendly. Our experienced design experts understand the unique challenges presented in a military environment, and we will offer innovative solutions based upon our technological know-how and past experiences.

### Meetings

GRW will meet with you as often as necessary to arrive at an agreed-upon project approach. These meetings will be held at your offices, and will be open to any stakeholders that you would wish to include in the process. We encourage open and frank communication during these meetings, so that no issue is left hanging. Key meetings during design:

- Initial kickoff/charrette
- Schematic design review
- 65% construction documents review
- 95%-100% construction documents review
- Other design meetings as needed to clarify project approach and/or to review the budget/estimate.

Shortly after the conclusion of these meetings, GRW will issue minutes that thoroughly document the topics and decisions of each of the discussion items.

### Weekly Teleconferences

We will have weekly conference calls with you to discuss current issues that arise. These calls will include the Project Manager, along with all the necessary supporting project design team members.

### Internal Design Team Meetings

GRW will conduct internal design team meetings regularly throughout the design of this project, to review project issues, and to ensure compliance with project deadlines. These internal meetings also serve to eliminate miscommunication and foster agreement by the group on common goals for the week. The Project Manager runs these meetings, and as a result of feedback received, he can make additional staff assignments, or arrange other company resources as needed to help meet your project goals.

### Communication During Construction Phase

The same Project Manager you worked with throughout design continues as your point of contact through the entire course of construction. At GRW, we do not hand off construction administration to junior staff or part-time inspectors. During construction, we deliver our services with the same experienced group of architects and engineers that were responsible for the project design.

We maintain clear and open communication throughout the construction phase. Using the Newforma software ensures that the process is transparent to all parties. GRW manages and tracks our construction administration responsibilities using Newforma® Project Center, a project information management software system. It has built-in modules specifically developed for the A/E industry. **Using this system, Owners, Design Team, and Contractor/GC all have access to real-time logs showing the current status of all construction-related activities.**

The A/E team will not approve any change that affects project cost or quality without your approval, and then only after a thorough discussion of the reasons for the change. Contractor cost proposals are carefully reviewed to insure that the proposed costs are fair and reasonable. If they seem unreasonable, then we negotiate on your behalf until everyone is satisfied with the negotiated solution.

## Flexibility

These procedures are not set in stone, as GRW prides itself on being an organization without a lot of bureaucratic, administrative procedures that stifle creative people. Sometimes these procedures are streamlined for smaller projects, and sometimes they are more formalized for larger projects. At all times they remain flexible to accommodate the blending of procedures with those of our client organizations. We want you to be happy with the quality of our work: the bottom line is that GRW cares a great deal about performing repeat business with our clients.

## **SECTION 3.0 | Relevant Past Projects**

## 3.0 Relevant Past Projects

Your Camp Dawson STF Buildings A and B Project is similar in nature to many of other facilities completed by GRW, at Camp Dawson, as well as other National Guard and military campuses in the region.

The projects we've selected help demonstrate our firm's experience with design and/or improvements similar to those you plan to incorporate into your new buildings. They also help demonstrate our familiarity with Camp Dawson, West Virginia, the National Guard, and other similar clients. Details about these projects are provided on the following pages.

### Specific Experience with Relevant Features

- Multipurpose buildings
- Experience in a campus-type setting
- Doors and building openings of all types/ sizes)
- Walkways between buildings
- Concrete walls and special structural features
- Heated/unheated spaces
- Laundry areas
- Floor receptacles of all types, including for sewing machines
- Military type interview spaces

### Organization

We've grouped our projects as follows:

- A. Projects at Camp Dawson
- B. Projects with Similar Features
- C. Additional West Virginia National Guard Projects
- D. Additional Projects of Interest



## A. Projects at Camp Dawson

### Camp Dawson Live Fire Exercise Shoot House Complex

West Virginia Army National Guard | Charleston, WV

GRW provided full architecture and engineering services for the design and construction of a \$2 million Live Fire Exercise Shoot House (LFSH) complex. This project was completed as a combination design-build and design-bid-build program. Primary facilities include a LFSH (1,600 SF), an Operations/Storage facility (1,163 SF), an After Action Review (AAR) facility (1,362 SF) and an Ammunition Breakdown facility (593 SF), totaling approximately 4,720 SF.

The West Virginia ARNG acquired property, a former industrial complex adjacent to Camp Dawson, which included several vacant buildings. The project's first phase involved an on-site Project Planning Document Charrette (PPDC) which enabled the GRW design team to collect information about the vacant buildings and site, interview user groups, develop conceptual floor and site plans, and validate the project DD 1391.

Following the PPDC, GRW developed a conceptual design package for the re-purposing of an

abandoned metal warehouse into the 1,600 SF LFSH. This package included drawings and specifications that formed the basis of a design-build RFP. Final design and construction of the LFSH unit was completed by the selected vendor, under the supervision of GRW and the WV ARNG.

After completion of the LFSH, GRW prepared the design package for the remaining support facilities, which included the Operations/Storage, AAR and Ammo Breakdown facilities; renovation of an existing restroom in the warehouse; and access road, parking area and site utilities. GRW also provided construction administration services for this part of the project which utilized the traditional design-bid-build project approach.

This project was designed in accordance with: TC 25-8 Training Ranges (8 December 2000), CEHNC 1110-1-23 Design Guide for the Sustainable Range Program (for LFSH), NG PAM 415-5 ARNG Military Construction Program Execution, and DA PAM 385-63 DA Guidance on Range Safety.

**Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

### Camp Dawson Training Ranges at Briery Mountain

West Virginia Army National Guard | Charleston, WV

The scope of work for this project includes the design and construction of a new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range at the Briery Mountain Training area to conform the site to government standard Breach Range Design Requirements. The project required construction of an 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 a parking area.

The project design schedule was nine months, including the design charrette, document development submittals and government reviews, one of which was on-site with user group representatives. The project was divided into seven additive bid options to enable the government to maximize the construction to available funds, avoid rebidding and as a hedge against an unpredictable construction market. Once bid, the construction schedule was developed to avoid disruption of an endangered species nesting cycle.

**Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

## Camp Dawson Volkstone Training Area Utility Upgrade

West Virginia Army National Guard | Charleston, WV

GRW provided design services for the expansion of sewer, water and electric to all existing and future buildings, unit training equipment site (UTES) and wash rack locations.

This project also includes 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

## Relocation of Camp Dawson Electrical Power and Communications Lines

West Virginia Army National Guard | Charleston, WV

The WV ARNG retained GRW to develop a phased design for the relocation of the overhead electrical power lines and communications lines to underground duct banks. Following a study that established the scope of each phase of the relocation project, GRW prepared plans and specifications for a 4-phase construction program to eliminate the historic problems associated with overhead services. These phases were based on funding limitations that precluded a single, large construction project.

Phase 1 provided for relocating approximately 3000

LF of power lines to new underground duct banks, with the associated replacement of pole-mounted transformers with pad-mounted transformers. The transformers ranged in capacity from 1000 KVA to 50 KVA. Phase 2 included relocating the communications service to new underground duct banks along the same 3000 LF route. The third and fourth phases included the relocation of approximately 2000 LF of overhead power lines and overhead communications lines to new duct banks, respectively. Vacuum interrupters were added to improve selective coordination between various circuits.

**Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil



## B. Projects With Similar Features

### Northpoint Training Center Warehouse Replacement

Commonwealth of Kentucky Division of Engineering & Contract Administration | Frankfort, KY

GRW provided design and construction oversight services for renovation of existing 3,000 SF unheated warehouse for use as climate controlled storage, housekeeping supply distribution, sign making area, sewing area, and housekeeping laundry.

**Client Contact:** Guntant Shah, PE, Project Engineer, (502) 564-2094 x227, Shah@ky.gov

### Bluegrass Army Depot Personnel Support Facility

U.S. Army Corps of Engineers, Louisville District | Richmond, KY

Located near Richmond, KY, The Blue Grass Army Depot (BGAD) encompasses approximately 14,600 acres, and is primarily involved with industrial and related activities associated with the storage and maintenance of conventional and chemical munitions. The Blue Grass Chemical Activity (BGCA), a tenant organization of the BGAD, is responsible for the safe, secure storage of the stored chemical weapons stockpile, which comprises 523 tons of nerve agents GB and VX, and mustard agent in projectiles, warheads and rockets.

As the lead A/E firm, GRW provided architectural

design, and mechanical, electrical and site/civil engineering services, as well as quality control and project management for this BGAD design-build project. The building is a personnel support facility (PSF) for the BGCA.

**The facility supports user functions including field office activities, conference room areas, locker and changing areas, and laundry and storage space. Approximately 7,500 SF is dedicated to these functions. The construction is a pre-engineered metal building with functional design and materials.**

**Client Contact:** Terry Stroschein, U.S. Army Corps of Engineers, Louisville District, (859) 625-1257, terry.e.stroschein.civ@mail.mil



## 122nd Fighter Wing Security Forces Operations and Training Facility

Indiana Air National Guard | Fort Wayne, IN

GRW was selected by the 122nd FW to provide Type A and Type C A/E services for the design-build of a new 18,494 SF Security Forces Operations and Training Facility, including a Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, in Ft. Wayne, IN. This facility includes offices for the Flight Chief, **open office area for the base security forces, classrooms, workout room, locker room, weapons simulator room and weapons storage areas.** The demolition of a 3,000 SF building was also included in the project.

The Security Forces Operations and Training Facility is connected to a base-wide Energy Management Control System. The Security Forces facility includes the Central Security Control (CSC) system for the entire base. The Security Forces and CATS/CATM facilities are wired for communications, security monitoring, intrusion detection systems, LAN, intercom, CCTV, and CATV. The CATS/CATM houses a Weapons Simulator for security forces training.

**"It is with pleasure that I highly recommend GRW. Your construction documents are always of the highest quality and you have met our budget and schedule needs, even at times when it has been necessary to make adjustments to our own funding and schedule requirements. Whether you have been tasked with planning services, design or construction administration, GRW has exceeded our expectations by continuously providing the expertise and guidance we have needed."**

**Lt Col James W. Starnes, INANG,  
Base Civil Engineer**

The design-build Bridging Documents were prepared so that the actual construction cost (Base Amount plus Additive Bid Items), did not exceed the MCC. The construction cost estimate separately identified the Base Bid Amount and each ABI. Each ABI was described on the drawings and listed in priority order so that they could be added to the project if the total cost remained within the MCC.

**Client Contact:** Lt Col James Starnes, Defense Logistics Agency, (269) 961-5661, James.Starnes@dla.mil



## 76th Brigade Combat Team Readiness Center

Indiana Army National Guard | Indianapolis, IN

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

### Relevant spaces and features of interest:

- Spaces for the future installation of a simulator or indoor range
- Heated unit storage rooms, facility maintenance, arms vault, unheated storage building
- Private offices and administrative common spaces
- Assembly hall with fully functional kitchen and chair and table storage
- Locker rooms, medical section room
- RAPIDS, family support and recruiting offices
- HVAC, plumbing and fire protection systems
- Emergency power generator
- Stormwater bio-retention pond

**"I want to take this opportunity to express my appreciation and gratitude to your and your team for what we feel will be a highly successful design of our Lawrence Readiness Center. The design process that your team led us through has been extremely productive and efficient. Their effectiveness was due in large part to the highly professional team you assembled for this project, and their willingness to meet the owner's requirements and timeline. We are anxious to see the project through to completion and the continued work with your staff throughout the process. Again thank you and the team at GRW for the hard work and professional approach to this design." - Steven Hines, Facilities Management Officer, Indiana ARNG**

**Client Contact:** Major Chris Purtell, Contracting Officer, IN ARNG, (317) 247-3514, [chris.purtell@us.army.mil](mailto:chris.purtell@us.army.mil)





## Fort Campbell Fire Fighting and Rescue Training Facility

U.S. Army Corps of Engineers, Louisville District | Fort Campbell, KY

To provide training in fire-fighting and rescue operations, the U.S Army installation at Fort Campbell, KY, constructed a Fire Fighting and Rescue Training Facility.

The 3.45-acre site includes a multi-purpose helicopter trainer known as the A-500 Chinook Fire Trainer, a three-story control building, and a 200,000 gallon liquid propane tank.

GRW served as the contractor's lead designer for this design-build project. Engineering services included the design of a concrete pad for the helicopter; a concrete foundation for the training building; and a large staging area, including two fire hydrants and vehicle parking vehicles. GRW also has designed two small infiltration basins to assist in reducing the volume of stormwater in the area.

**Client Contact:** Jerry Chandler, PE, Project Manager, USACE, Louisville District, (270) 798-9465

**"The Fort Campbell Fire Department, USACE, and the contractor all worked well with each other in making timely decisions to quickly resolve any issues that arose. This project was excellent. It couldn't have been completed were it not for the efforts of all persons involved." Jerry Chandler, U.S. Army COE Project Manager**

**The pre-fabricated control building includes rappel anchors, stairs, ladders, exterior doors and windows, an access hatch to mimic a residential attic, and sprinklers.** Due to the facility's multi-story construction, users are able to fight fires in a one, two or three-story fire scenario under various scenarios. The Fort Campbell Fire Fighting and Rescue Training Facility was constructed 43 days ahead of schedule.



## Joint Armed Forces Reserve Center and Field Maintenance Shop Complex

Ohio Army National Guard | Columbus, OH

GRW provided full-discipline A/E services for planning, design and construction of a new LEED Silver Certified 85,865 SF Joint Armed Forces Readiness Center (AFRC) and Field Maintenance Shop (FMS) for the OH Army National Guard (ARNG) and the US Army Reserves in Springfield, Ohio. These facilities are designed to match the architecture of the facilities on an adjacent site occupied by the Ohio ANG.

### Relevant spaces and features of interest:

- **Physical fitness area**
- **Gymnasium-type multipurpose assembly hall** with fully functional kitchen
- **Heated and unheated storage areas**
- Private offices and administrative common spaces
- Full cutoff luminaires for site lighting to eliminate light trespass
- T5 low mercury, high-efficiency fluorescent lamps and electronic ballasts
- Energy submetering connected to building management system (DDC)

- Site anti-terrorism/force protection measures, security lighting, utilities and landscaping
- Miscellaneous items include special exhaust systems, gas and electric heaters and heating/ventilating units, gas infrared heaters and a dedicated air-cooled computer room unit.

Using innovative design methods and alternative construction materials, GRW was able to optimize this project so that it was bid at \$13,938,000, approximately \$9.5 million less than the original budget determined by the government.

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

**Client Contact:** George McCann, Project Manager, OH ARNG, (614) 336-7413, george.c.mccann@us.army.mil



## C. Additional West Virginia National Guard Projects

### 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion (#3910-09)

West Virginia Air National Guard | 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.

#### A few relevant spaces and features include:

- Expanded command/administrative space
- Arms vault
- Training rooms
- SIPRNet

This project will meet LEED Silver measures for sustainable design.

"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, WV ANG, (304) 341-6649, Harry.Netzer@ang.af.mil

### Joint Armed Forces Reserve Center and Area Maintenance Support Activity

West Virginia Army National Guard | Charleston, WV

GRW participated in the Program Planning Document Charrette (PPDC) for WVARNG's Armed Forces Readiness Center (AFRC) in Ripley, WV. A three-day Planning Charrette was conducted in order to understand the needs of the end users of the AFRC. The AFRC will replace two local armories and a USAR center. The Eastern Star property in Jackson County, WV was selected as the preferred site for the AFRC. The site for the AFRC will be on the western portion of the property.

The Charrette Team evaluated site constructability issues. In addition, the Team assessed utilities, traffic issues, outdoor lighting, parking, AT/FP issues, and space planning. The end work product outlined two alternative overall site layouts and floor plans. A parametric cost estimate was prepared and a revised DD Form 1390/1391 was developed for a 60,927 SF AFRC and a 4,500 SF unheated storage facility.

#### Relevant spaces and features in the preliminary plans for the complex include:

- **Physical fitness area**
- Unit storage co-located within the AFRC will house **caging, arms vault, and private offices.**
- **Unheated storage 6,000 SF will provide additional caged storage areas** for the unit's users.
- Administrative areas: Private office suites, administrative common spaces, recruiting offices, family support offices
- Assembly hall with a full kitchen and chair and table storage, break room and vending area

A separate **Area Maintenance Support Activity (AMSA) 4,500 SF** provides vehicle bays, flammable storage, controlled waste storage; battery room, parts storage room, tool rooms, supply rooms, and offices and supporting facilities

**Client Contact:** MG Melvin Burch, WV ARNG, (304) 561-6458, melvin.burch@us.army.mil

## 130th Airlift Wing Building 107 Renovation

West Virginia Air National Guard | 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 ATPF compliance

- Construction of new interior spaces and renovation of existing shop areas to create necessary office, training, and support spaces

**The completed building includes the following programmed spaces:**

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

**Client Contact:** Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, Harry.Netzer@ang.af.mil



## 167th Airlift Wing C-17 Hangar Modifications

West Virginia Air National Guard | Martinsburg, WV

The West Virginia Air National Guard selected GRW to design modifications to the 167 Air Wing's 79,421 SF Corrosion Control Hangar, 80,700 SF Fuel Cell Hangar, and 80,751 SF Maintenance Hangar to support its mission change from C-5 to C-17 aircraft.

- **Corrosion Control Hangar** To adequately perform aircraft wash activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. The foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force (AF) and ANG fire suppression criteria.
- **Fuel Cell Hangar** To adequately perform maintenance activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. The foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force (AF) and ANG fire suppression criteria.
- **Maintenance Hangar** To adequately perform general purpose maintenance activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. The foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force (AF) and ANG fire suppression criteria.

**Client Contact:** LtCol John Poland, Base Civil Engineer, WV ANG, (304) 616-5198, john.poland@ang.af.mil

## 167th Airlift Wing C-5 Apron Repair

West Virginia Air National Guard | Martinsburg, WV

GRW was selected to provide evaluation and design services to repair the C-5 apron for the 167th Airlift Wing of the West Virginia Air National Guard located in Martinsburg. Due to suspected poorly draining base and sub base, moisture is being retained causing the concrete section to fracture and heave to the point that FOD (foreign object debris) is being produced, and plowing snow is causing damage to equipment and injuring personnel.

Investigative services will include a core drill of the area to ascertain the depth of excavation needed, and the amount and size of needed drainage improvements. The pavement repair of approximately 1,755 SY includes 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 will also be included.

**Client Contact:** LtCol John Poland, Base Civil Engineer, WV ANG, (304) 616-5198, john.poland@ang.af.mil

## 130th Airlift Wing Communications Duct

West Virginia Air National Guard | Charleston, WV

This project is scheduled as a FY11 Sustainment, Restoration and Modernization (SRM) project for the 130th AW, with a project budget of \$610,000. In July 2010, the 130th AW selected GRW to provide design and construction administration services for this project. A Concept Development Report was initially prepared as the first step in the design phase for this project and it represents the collaborative efforts to date by the 130th Design Working Group (DWG) and GRW to select a preferred concept for a new duct system for routing the base's communications network to a new Communications Facility.

With the construction of a new aircraft hangar and the planned future construction of a new communications building, the fiber optic cable for the base network will consist of two ITNs (Information Transfer Nodes). ITN-1 will be located in the new Communications Facility and ITN-2 will be located in the new hangar, Building 407. All fiber optic cables from the mid- and lower-level base buildings will be

routed to the new Communications Facility, which is to be built at the lower level, and all fiber optic cables from the upper area buildings will be routed to Building 407. The duct bank will carry fiber optic lines, television and coaxial cabling. The extended duct system will allow the current system to be looped and allow redundancy of assets.

A 4-duct and a 12-duct PVC conduit system with inter-duct, appropriately sized pre-cast manholes with reinforced foundation, is proposed. Sumps for drainage of infiltration will be installed in the manholes. The manhole lids will be lockable for security of the ducts. Once the ducts are constructed, the fiber optic cables will be installed by the Communications Squadron.

*After the Concept Development Report was completed, the base decided to transfer further design work to the Communications Squadron for execution of this project under the design-build project delivery approach.*

## 130th Airlift Wing Communications Facility

West Virginia Air National Guard | Charleston, WV

GRW provided Type A and Type B design services for a new \$3.6 million Communications Facility at Yeager Airport in Charleston, WV. This 13,100 SF (1,217 SM) **LEED Silver** facility was designed to provide a centrally located common user communications system for both intra-base and off-base communications. Various types of cable from the base transmitter and receiver as well as other base communications systems will be normally fed through this structure. Ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.) may be exercised from this facility.

### **A few relevant spaces and features include:**

- **Administrative Functions.** Includes office space for communications officer and assistants, intra-base radio management, the base message distribution center, crypto storage vault, crypto accounting, commercial communications offices, storage space.

- **Maintenance Functions.** Includes space for the chiefs of maintenance and systems (COM/COS), training of system/support flight personnel, training of maintenance and operations personnel and programming personnel.

The design of this facility also included AT/FP measures, fire detection and alarm, ADA compliance, landscaping, utilities (water, sewer, gas, electric, etc), special hazardous materials storage spaces, parking areas and exterior signage and lighting.

*The design was stopped at 65% complete at the convenience of the government due to the need to update the base's master plan and re-prioritize new capital improvements.*

**Client Contact:** LtCol Rick Thomas, Base Civil Engineer, West Virginia Air National Guard

## Readiness Center Commissioning Projects

### U.S. Property & Fiscal Office for West Virginia | Buckhannon, WV

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

The scope of services includes all commissioning required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems, including coordination with providing contractors, documentation of all installations and testing, coordination of owner training and assistance with LEED submittals. GRW has also proposed additional architectural and engineering construction oversight services on an as-needed basis.

**Client Contact:** Lieutenant Colonel John Knabenshue, (304) 473-5253, john.knabenshue@us.army.mil

## Basewide Sewer Line Repair

### West Virginia Air National Guard | Martinsburg, WV

GRW provided design and construction administration services for this FY12 Sustainment, Restoration and Modernization (SRM) project for the 167th AW. A Concept Development Report was the first step in the design phase, and represented the collaborative efforts of the Design Working Group (DWG) and GRW to select a preferred design concept for the sanitary sewer system replacement. The report provided the basis of design for the replacement sewer system, including conceptual drawings, a project schedule and a construction cost estimate. An innovative approach – filling abandoned lines with

lightweight concrete – was developed to reduce project costs, compared to the traditional method of removing the lines and site restoration.

GRW completed Type B design services to prepare detailed plans and specifications for the replacement of the existing failing sewers, and provide adequate sewage lines to support the base's mission for 10 PAA C-5 aircraft. Construction administration services, including shop drawing reviews and inspections, was also provided by GRW.

**Client Contact:** Col Rodney Neely, MSG Commander, West Virginia Air National Guard, (304) 616-5198

## 167th Airlift Wing C-17 Composite Material Shop

### West Virginia Air National Guard | Martinsburg, WV

The West Virginia Air National Guard selected GRW to design modifications to the 167 Air Wing's 2,744 SF Composite Material Shop to support its mission change from C-5 to C-17 aircraft.

technologies and environmental controls to meet the sensitive temperature requirements and reduce microscopic airborne fibers associated with carbon fiber.

The existing facility is designed to repair fiberglass and aluminum parts. The new C-17 is composed of carbon fiber materials, and the shop requires new

The following systems will also be modified or upgraded: HVAC, electrical, lighting, communications, security, and sprinklers.

**Client Contact:** LtCol John Poland, Base Civil Engineer, WV ANG, (304) 616-5198, john.poland@ang.af.mil

## 130th Airlift Wing Master Plan Update and CIP

West Virginia Air National Guard | Charleston, WV

GRW prepared a Web-Enabled Master Plan Update for the 130th Airlift Wing in Charleston. A GeoBase Common Installation Picture (CIP) was also provided. The Master Plan evaluated benefits and impacts associated with acquiring airfield property and helped determine the best use of additional property for aircraft parking, operations, and maintenance facilities.

*"It's been a real pleasure working with you... What a difference it makes working with someone who knows how our side of the deal works vs. someone who doesn't. Thanks."*

– MSgt. Tina Kubic, 130th AW/MSC

**Client Contact:** Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, Harry.Netzer@ang.af.mil

## 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility

West Virginia Air National Guard | Charleston, WV

GRW provided multi-discipline A/E design services for a new \$227,500 aboveground fuel station for the installation's government-owned vehicles. Two new

aboveground tanks (1 diesel, 1 unleaded gasoline) and a new dispensing system replaced an older fuel station that included underground fuel storage tanks.

**Client Contact:** LtCol Rick Thomas, Base Civil Engineer, West Virginia Air National Guard

## 130th Airlift Wing Squadron Operations Facility Repair

West Virginia Air National Guard | 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.

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

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

The design was stopped at 65% complete at the convenience of the government and to finalize funding which will be split between MILCON/SRM sources.

**Client Contact:** Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, Harry.Netzer@ang.af.mil



## 167th Airlift Wing Maintenance Mall (Building 307) Repair

West Virginia Air National Guard | Martinsburg, WV

Scheduled as a FY12 Sustainment, Restoration and Modernization (SRM) project for the 167th AW, this building repair project has a budget of \$300,000. Selected to provide design and construction administration services, GRW initially met with the Design Working Group and Base Civil Engineer to define the scope of the project. A Concept Development Report was subsequently submitted as the first step in the project design phase. The report represents the collaborative efforts to date by the Design Working Group (DWG) and GRW to select a preferred concept for the facility renovations.

Built in 2007 as part of the base's new C-5 aircraft complex, the Maintenance Mall requires electrical modifications to the original system in order to meet the needs of the current occupants' activities. In addition, since the building was occupied, aircraft maintenance personnel have experienced problems with temperature control in numerous locations. The primary goal of this project is to troubleshoot these issues, develop corrective designs and support resultant construction activities.

The Concept Development Report summarized A/E Type A-1 and A-2 services performed by GRW. The

report included a detailed discussion of the current electrical, architectural and HVAC system problems and recommendations to resolve large system problems, as well as particular solutions for small areas. Conceptual level drawings were provided to locate work areas and illustrate these recommendations. The conceptual level outline specification and construction cost estimate were also provided in the report.

Upon receipt of NTP for A/E Type B services, and further definition of the scope, GRW will prepare construction plans and specifications for final review by the BCE, and more rigorous cost estimating will be performed. The schedule for the project is drawn out somewhat by approval and delivery time for major pieces of equipment. The 167th CES intends to have the project bid in the open market, which will lengthen the process somewhat as well.

At this time, the NGB has placed this project on hold pending receipt of additional construction funds to complete all of the recommended renovations, and due to the possibility that aircraft type for this facility could be changing.

**Client Contact:** Col Rodney Neely, MSG Commander, West Virginia Air National Guard, (304) 616-5198

## D. Additional Projects of Interest

### West Virginia Division of Corrections Lakin Correctional Center Lightning Protection Improvements

#### West Virginia Division of Corrections | Charleston, WV

GRW was selected to complete a lightning protection system ground study and improvements at the Lakin Correctional Center, a medium-security correctional facility in West Columbia, WV.

Lakin is one of more than a dozen prisons and related facilities operated by the West Virginia Division of Corrections; it is the only all-female prison in the state and has a current capacity of 462 inmates.

Since 2006, lack of adequate lightning protection and an inadequate grounding system at Lakin have resulted in low operational efficiency and more than \$400,000 in damages from lightning strikes.

GRW's services will include electrical engineering design and construction administration activities for the following scope items at the 166,000 SF prison:

- Installation of a UL Master Labeled air terminal system
- Study deficiencies in the facility power distribution system: power quality, power factor, noise susceptibility, NEC violations, other recommendations
- Perform soil resistivity analysis at both utility power service entrance points (services provided by subconsultant)
- Perform an overall grounding study
- Installation of an improved grounding system for the facility
- Installation of facility-wide surge protection devices
- Installation of an active lightning protection device to shut off mission critical equipment on an impending storm event

**Client Contact:** Philip Farley, II, Director of Engineering and Construction, West Virginia Division of Corrections, (304) 558-2036 x53463, Philip.K.Farley@wv.gov

### Campus Master Plan

#### West Virginia Division of Highways | Charleston, WV

Chapman Technical Group worked with the West Virginia Division of Highways team to create the master plan for the redevelopment of its District 1 campus in downtown Charleston. The firm's architects evaluated several existing buildings and determined which ones could be renovated and which were beyond their useful lives and should be demolished. They also provided all of the necessary documentation to the State Historic Preservation Office for the historic structures.

Chapman Technical Group then developed a phased development plan to prioritize demolition projects, new building construction and renovations. All activities had to be planned so that the operations of the District could continue uninterrupted.

As part of the infrastructure upgrades, the team designed all parking and vehicular circulation, as well as all of the utility upgrades. A stormwater detention system was designed to help alleviate flooding.

The final phase of the project will be the design of a streetscape including underground utilities, decorative paving and site amenities. Chapman Technical Group initiated coordination with the City of Charleston which resulted in a cooperative effort to provide a comprehensive streetscape (entire block of Smith Street from Morris Street to Ruffner Street) beyond the boundaries of the District 1 campus project.

## **SECTION 4.0 | Staff Qualifications**

## 4.0 Staff Qualifications

When you work with a GRW team, you have access to some of the most reputable consultants in the industry, many with experience at Camp Dawson. From the design of personnel support facilities to warehouse buildings to buildings for AFRC complexes, and security forces operations and training centers, our team members are experts in their fields. Furthermore, our team's local knowledge and capacity has been strengthened by GRW's acquisition of West Virginia-based Chapman Technical Group.

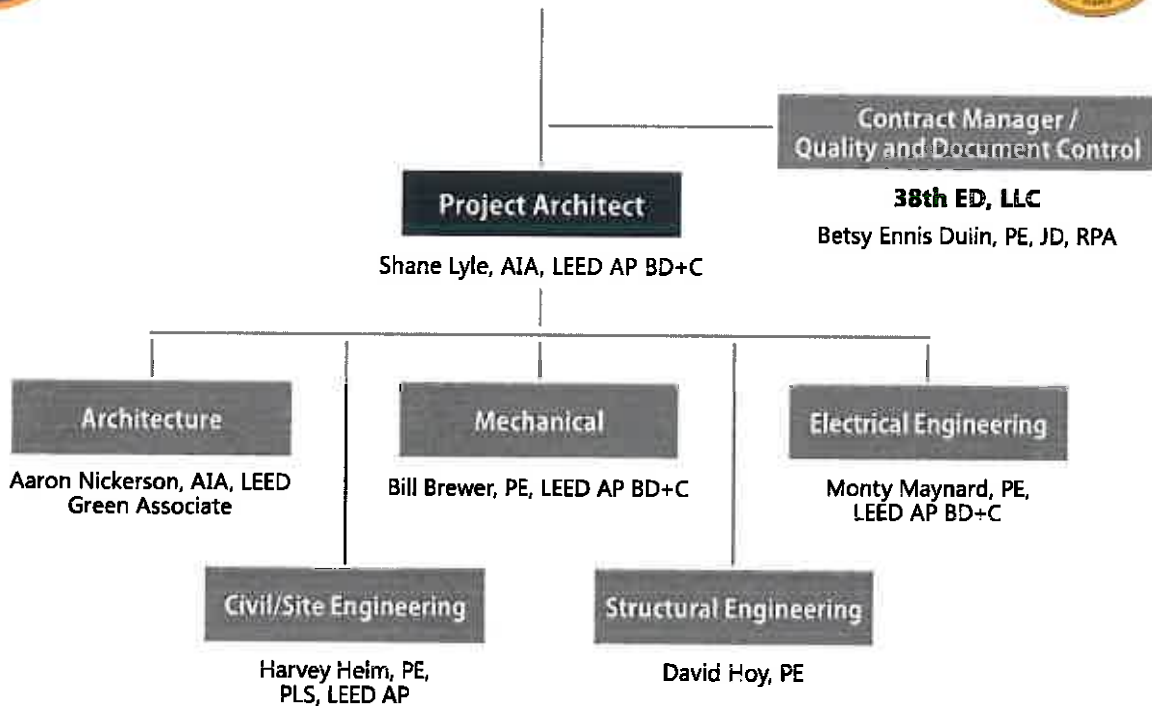
**Shane Lyle** will service as project architect and offers you experience on more than a dozen projects for the West Virginia National Guard. He is a highly successful project manager and team leader who knows West Virginia and understands military design.

Joining us on this team is **Betsy Ennis Dulin**. Betsy is a registered professional engineer with more than 25 years of experience in infrastructure engineering experience. Having her on the team

will be an asset to West Virginia and further ensure project success. She offers a strong record of experience with strategic and logistical planning, budget planning and management, and numerous additional related skills. She also brings significant skills in meeting facilitation, as well as experience with all project development and delivery methods.



### West Virginia Department of Administration and West Virginia Army National Guard



## Shane Lyle, AIA, LEED AP BD+C | GRW Project Architect



### YEARS OF EXPERIENCE:

With GRW: 28

Total: 34

### EDUCATION

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

### REGISTRATION

Registered Architect: KY, WV, TN, AL, GA, IN, TX, MS, SC, FL, MO, AZ, NM

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

Member / Past Officer - UK  
College of Architecture Alumni Association

Life Member - UK Alumni Association

Shane's architectural design and project management experience is extensive. He regularly takes primary responsibility for a wide range of projects for a diverse group of clients including universities, medical facilities, local and state governments, the U.S. Armed Forces, the Federal Bureau of Prisons, and private developers. His areas of responsibility typically include programming/planning, budget analysis, design, construction documents, client meetings, bidding/negotiation services, construction phase services, and code compliance.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV** – Principal. Expansion of sewer, water and electric 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, 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 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 ANG 167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV** – Project Manager. Fast-track design of corrosion control hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

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

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

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

**West Virginia ANG 167th Airlift Wing C-5 Apron Repair, Martinsburg, WV** – Principal. Evaluation and design services to repair fractured/heaved C-5 apron caused by poorly draining base and sub base. Pavement repair of approximately 1,755 SY includes 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 will also be included.

**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 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) will increase space and improve 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 will meet LEED Silver design criteria, and all AT/FP and ADAAG requirements.

**West Virginia ANG 130th Airlift Wing Building 107 Consolidation Study, Charleston, WV** – Principal. 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.

**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 Communications Facility, Charleston, WV** – Project Manager. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide a 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.

**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. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF, with a construction bid of \$14 million (\$9 million under the MCC of \$23 million) due in large part to innovative design and alternative construction materials. Functional spaces include administrative, educational, assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR).

**California ARNG Urban Assault Course, Camp Roberts, CA** – QA/QC. Design for a \$1.5 million 5-station Unit Assault Course for Camp Roberts, including Range Operations and Control Area totaling 800 SF (ROCA); Ammunition Breakdown Building (120 SF); Individual and Team Trainer (3-room 810 SF structure that includes 6 human urban targets); Squad and Platoon Trainer (4-building 741 SF structure that includes 10 human urban targets); Grenadier Gunnery Trainer (wooden facade that includes 6 stationary infantry targets and 7 non-precision facade targets); Urban Offense/Defense Trainer (2-story building with a basement that includes 10 human urban targets); and Underground Trainer (network of 2,550 LF of 4' and 3'-diameter pipe with no targetry).

**California ARNG Infantry Squad Battle Course, Camp Roberts, CA** – QA/QC. Design and engineering for a \$1.78 million infantry squad battle course for Camp Roberts, including Range Operations and Control Area (ROCA) and support facilities providing stationary and moving infantry and armor targets, machine gun observation bunkers, tactical trenching obstacles, mortar simulation devices in six separate obstacles, and targets using RF controls and battery power operation. Included Ammunition Breakdown Building for containerized ammunition and loading magazines.

**California ARNG Infantry Platoon Battle Course, Camp Roberts, CA** – QA/QC. Design for a new, \$2.7 million infantry platoon battle course providing stationary and moving infantry and armor targets (RF controls, battery power operation), machine gun observation bunkers, tactical trenching obstacles and mortar simulation devices in six separate obstacles. Range Operations and Control Area structures included: a cost-saving consolidated 2,400 SF Range Control Center; Ammunition Breakdown (120 SF) for breakdown of containerized ammunition and magazine loading for troop issue; multi-purpose 800 SF Mess Shelter; 600 SF troop instruction bleacher enclosure; and site support including parking, roads, and power plant.



Betsy Ennis Dulin, P.E., J.D.  
President and Owner

## QUALIFICATIONS



### EXPERIENCE HIGHLIGHTS

- ❖ **Over 25 years' experience in infrastructure engineering, including planning, financing, design, construction, environmental compliance, and dispute resolution; construction administrative, intellectual property, public finance and public contracting law; administrative procedure and agency operations; education, professional development and workforce development.**
- ❖ **Executive and managerial experience, including strategic and logistical planning, budget planning and management, personnel management, team-building, compliance/reporting, public communications, board and government relations.**
- ❖ **Work experience includes top 100 design firms, major industries, contractors, joint ventures, large government agencies, and federally and state-funded research centers.**
- ❖ **Experienced in all project development and delivery methods, including design-build and public-private partnerships, and all aspects of project planning, financing, development, construction, and implementation.**
- ❖ **Extensive technical writing portfolio, including planning and feasibility reports for government agencies, specifications, guidance documents, manuals, regulations, position papers, compliance reports, contract documents, dispute resolution findings, commission and task force reports, environmental audit reports, environmental assessments and impact statements, utility rate studies, and numerous publications on a variety of technical, regulatory, legal and professional issues.**
- ❖ **Project and risk management for engineering, institutional, and governmental projects and organizations.**
- ❖ **Experienced educator, meeting facilitator and public speaker; particular expertise in delivery of graduate courses, workshops, short courses, and training programs for working professionals; numerous public presentations on construction, risk management, project management, environmental regulation, design, safety, technology management, engineering education, professional responsibility/ethics, planning, and writing/communications.**

### PROFESSIONAL REGISTRATION AND LICENSURE

- ❖ **Registered Professional Engineer in Virginia and West Virginia; ability to quickly obtain registration in additional states through NCEES Record**
- ❖ **Licensed attorney in Virginia, West Virginia and Ohio**
- ❖ **Registered Patent Attorney/Agent, United States Patent and Trademark Office**



## EDUCATION

- ◆ Bachelor of Science, Civil Engineering, West Virginia University Institute of Technology, 1985
- ◆ Master of Science, Civil/Environmental Engineering, Virginia Polytechnic Institute & State University, 1986
- ◆ Juris Doctor, Washington & Lee University, 1992

## WORK SUMMARY

- ◆ Attorney – Construction, Public Contracting, Intellectual Property, and Design Liability – Coates & Davenport, P.C., Richmond, Virginia, 2015 – 2017.
- ◆ Consultant - Infrastructure Engineering, Project Management, Technical Writing, Professional Development, 1995 – 2017.
- ◆ Dean, Engineering Division Chair, and Professor of Engineering, Marshall University, College of Information Technology and Engineering, Huntington, West Virginia – 18 years.
- ◆ CDM Smith (Washington, DC area) and Woolpert Consultants (Dayton, Ohio) – 4 years.
- ◆ Squire Patton Boggs (Cleveland, Ohio) and Bowles Rice LLP (Charleston, West Virginia) – 5 years.
- ◆ Environmental and Transportation Research Centers, Marshall University – 4 years.
- ◆ Clients (through previous employers) have included federal and state agencies, major urban municipalities, public service districts, corporations and firms involved in engineering design and construction of large-scale transportation, environmental, and energy projects.

## PROFESSIONAL ASSOCIATIONS

- ◆ Board of Directors, Virginia Society of Professional Engineers (current)
- ◆ Board of Directors, Construction Specifications Institute, Richmond Chapter (current)
- ◆ Society of American Military Engineers, Hampton Roads, Peninsula and Central Virginia Posts (current)
- ◆ Accreditation Board for Engineering and Technology, Program Evaluator (current)
- ◆ Advisory Board, Via Department of Civil/Environmental Engineering, Virginia Tech (current)
- ◆ Previous board memberships: West Virginia American Water, Mid-Atlantic Technology Research and Innovation Institute (MATRIC); Chemical Alliance Zone, Marshall University Research Corporation, other technology/economic and workforce development non-profits

## PROFESSIONAL RECOGNITION

- ◆ 2017 Education Award, Mid-Atlantic Region of Construction Specifications Institute, for workshops, seminars, courses, and other professional development of individuals working in construction and engineering industries in five-state region.
- ◆ Academy of Distinguished Alumni, Virginia Tech, 2007.
- ◆ 2005 Spurgeon Award for Exceptional Leadership in Learning-for-Life's "Exploring" Program, for "Exploring Engineering" partnership projects, including STEM camp, with Society of American Military Engineers, Huntington Post.

## Aaron Nickerson, AIA, LEED Green Asc. | GRW Architect



### YEARS OF EXPERIENCE:

With GRW: 11

Total: 12

### EDUCATION

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

Master of Architecture, 2007, University of Kentucky

### REGISTRATION

Registered Architect: KY, TN, IN, WV, FL, NY

National Council of Architectural Registration Boards (NCARB) Certification

LEED Green Associate

Certified Interior Designer: Kentucky

### PROFESSIONAL AFFILIATIONS AND TRAINING

American Institute of Architects (AIA)

U.S. Green Building Council (USGBC)

Society of American Military Engineers (SAME)

Aaron is experienced with the full range of architectural services, including programming, schematic design, design development, code research, construction documents, and construction administration. He regularly provides architectural leadership for complex building projects; his increasingly responsible experience includes two federal prisons each with construction costs in excess of \$180 million.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Architectural Designer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide a 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 Personnel Support Facility, Richmond, KY** – Project Manager. Design-build project of approximately 7,500 SF, pre-engineered metal building including space for field office activities, conference rooms, locker and changing areas, and laundry and storage.

**Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH** – Architectural Designer. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Provided Joint Armed Forces Reserve Center (AFRC) totaling 60,902 SF, and Field Maintenance Shop (FMS) totaling 24,963 SF, with a construction bid of \$14 million (\$9 million under the MCC of \$23 million) due in large part to innovative design and alternative construction materials. Functional spaces include administrative, educational (classrooms, weapons simulator, distance learning, training-specific libraries, COMSEC), assembly hall and kitchen, general storage, flammable materials storage and controlled waste facilities, and 10 drive-through work bays (6 for ARNG, 4 for USAR).

**Frankfort Plant Board Headend Telecommunications Facility, Frankfort, KY** – Project Manager. New 6,725 SF telecommunications "headend" facility containing owners cable, internet and telephone communications systems servicing city. Designed to accommodate forces from natural disasters, facility is hardened structure, including reinforced walls and roof assemblies. Mechanical and electrical system redundancy included backup generator, UPS and DC plant to maintain facilities operations.

**Air Force Special Operations Command C-130 Hangar Complex, Cannon AFB, NM** – Architectural Designer. Concept design and Design-Build RFP to construct two of the first facilities supporting C-130 aircraft to be built at a new AFSOC base at Cannon AFB (NM), including a Corrosion Control Hangar (\$22 million, 57,700 SF) and a Fuel Cell Hangar (\$23 million, 31,100 SF), utility service, pavements and other site development features. Project designed to meet LEED Silver criteria.

**Northpoint Training Center Replacement, Burgin, KY** – Architectural Designer. Design and construction oversight services for fast-track project with multiple bid packages to rebuild prison facilities (41,646 SF total) following riot. Meeting LEED Certified Design Criteria, two new buildings include: Program Building (kitchen/dining, medical, canteen, multipurpose classrooms, library, and sanitation) and Visitation Building. Additional work involved security system renovation at six existing two-story dormitories, addition/renovation of the central control building, and a new campus emergency power generator.

**Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS** – Architectural Designer. Design services for design-build delivery of certified LEED Gold, \$182 million medium-security main complex (USP) and minimum-security prison camp (FPC) with a gross building area of 780,000 SF and housing approximately 1,200 inmates. USP includes six, 2-story housing units, a secure housing unit, and program and multipurpose functions in rectangular campus layout enclosing a central secure compound.

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

**Crane NSA Building 174 Complex Boiler Renovations, Crane NSWC, IN** – Architect. Mechanical and electrical design, and construction administration services for design/build replacement of heating systems at Building 174 and two other buildings.

**Crane NSA Building 3149 Mechanical Systems Renovation, Crane NSWC, IN** – Architect. A/E design and construction administration services for spot cooling and boiler replacements encompassing primarily mechanical and electrical engineering. Involved two, 20-ton, outdoor cooling-only units, using 100% outside air for spot cooling at numerous working stations. Hot water boiler and circulating pump also were replaced with new high-efficiency units.

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

## Bill Brewer, PE, LEED AP BD+C | GRW Mechanical Engineer



### YEARS OF EXPERIENCE:

With GRW: 18  
Total: 46

### EDUCATION

B.S., Mechanical Engineering,  
1967, Case Western Reserve  
University

### REGISTRATION

Professional Engineer: KY, CA,  
OH, NC, TN, NH, WV, IN, TX, MS,  
GA, VA, MI, PA, KS

NCEES Member, allows  
reciprocity with other states

LEED Accredited Professional,  
Building Design + Construction

### PROFESSIONAL AFFILIATIONS AND TRAINING

American Society of Mechanical  
Engineers

American Society of Heating,  
Refrigeration and Air  
Conditioning Engineers,  
Bluegrass Chapter

American Institute of  
Aeronautics and Astronautics

International Code Council

Society of Fire Protection  
Engineers

International Ground Source  
Heat Pump Association

U.S. Green Building Council

American Council of  
Engineering Companies

Certified Energy Auditor

Simplex-Grinnell Clean Agent

Training: "Clean and Green -  
Anslu Sapphire and Inergen Fire  
Suppression Agents"

Bill's vast engineering experience has involved the design, application and trouble-shooting of a wide range of environmental and process systems, particularly HVAC, plumbing and fire protection systems. His experience has encompassed mechanical engineering design for dozens of water and wastewater treatment plant systems, and pumping stations. Bill also regularly works on projects involving GRW's educational, municipal, state, and federal clients. He is a Certified Energy Auditor and has performed many energy audits. Bill has also been involved in the construction administration for most of his projects.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ARNG Readiness Center Commissioning Projects, WV** – Project Manager. LEED Fundamental Commissioning for four building construction projects: the Buckhannon, WV AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost, the Morgantown, WV Readiness Center, 58,520 SF and \$20,500,888 construction cost; the Moorefield, WV Readiness Center, 57,256 SF and \$17,725,351 construction cost, and Logan, WV Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost. Scope includes 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.

**Northpoint Training Center Warehouse Replacement, Burgin, KY** – Mechanical Engineer. Design and construction oversight services for renovation of existing **3,000 SF unheated warehouse** for use as climate controlled storage, housekeeping supply distribution, sign making area, sewing area, and housekeeping laundry.

**West Virginia ANG 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility, Charleston, WV** – Mechanical Engineer. Design for a new aboveground fuel station for the installation's government-owned 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.

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Mechanical 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 a 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.

**West Virginia ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV** – Mechanical Engineer. 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.

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

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

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

**West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair, Martinsburg, WV** – Project Manager. 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.

**California ARNG Infantry Platoon Battle Course, Camp Roberts, CA** – Mechanical Engineer. Design for a new, \$2.7 million infantry platoon battle course providing stationary and moving infantry and armor targets (RF controls, battery power operation), machine gun observation bunkers, tactical trenching obstacles and mortar simulation devices in six separate obstacles. Range Operations and Control Area structures included: a cost-saving consolidated 2,400 SF Range Control Center; Ammunition Breakdown (120 SF) for breakdown of containerized ammunition and magazine loading for troop issue; multi-purpose 800 SF Mess Shelter; 600 SF troop instruction bleacher enclosure; and site support including parking, roads, and power plant.

**California ARNG Infantry Squad Battle Course, Camp Roberts, CA** – Mechanical Engineer. Design and engineering for a \$1.78 million infantry squad battle course for Camp Roberts, including Range Operations and Control Area (ROCA) and support facilities providing stationary and moving infantry and armor targets, machine gun observation bunkers, tactical trenching obstacles, mortar simulation devices in six separate obstacles, and targets using RF controls and battery power operation.. Included Ammunition Breakdown Building for containerized ammunition and loading magazines for troop issue.

**California ARNG Urban Assault Course, Camp Roberts, CA** – Mechanical Engineer. Design for a \$1.5 million 5-station Unit Assault Course for Camp Roberts, including Range Operations and Control Area totaling 800 SF (ROCA); Ammunition Breakdown Building (120 SF); Individual and Team Trainer (3-room 810 SF structure that includes 6 human urban targets); Squad and Platoon Trainer (4-building 741 SF structure that includes 10 human urban targets); Grenadier Gunnery Trainer (wooden facade that includes 6 stationary infantry targets and 7 non-precision facade targets); Urban Offense/Defense Trainer (2-story building with a basement that includes 10 human urban targets); and Underground Trainer (network of 2,550 LF of 4' -and 3'-diameter pipe with no targetry).

## Monty Maynard, PE, LEED AP BD+C | GRW Electrical Engineer



### YEARS OF EXPERIENCE:

With GRW: 21

Total: 40

### 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  
Certified Healthcare Contractor

### PROFESSIONAL AFFILIATIONS AND TRAINING

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's experience with electrical design, process instrumentation and control design, and project management is extensive. He has been involved with the design of building systems for more than 300 projects with total construction values as high as \$984 million. His areas of technical expertise include electrical power distribution, substation design, alarm systems, communications, lighting, lightning protection, power quality, energy efficiency and code compliance.

### RELEVANT PROJECT EXPERIENCE

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

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 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 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). 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 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 a 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.

#### **California ARNG Infantry Squad Battle Course, Camp Roberts, CA –**

**Electrical Engineer.** Design and engineering for a \$1.78 million infantry squad battle course for Camp Roberts, including Range Operations and Control Area (ROCA) and support facilities providing stationary and moving infantry and armor targets, machine gun observation bunkers, tactical trenching obstacles, mortar simulation devices in six separate obstacles, and targets using RF controls and battery power operation.

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

**California ARNG Infantry Platoon Battle Course, Camp Roberts, CA** – Electrical Engineer. Design for a new, \$2.7 million infantry platoon battle course providing stationary and moving infantry and armor targets (RF controls, battery power operation), machine gun observation bunkers, tactical trenching obstacles and mortar simulation devices in six separate obstacles. Range Operations and Control Area structures included: a cost-saving consolidated 2,400 SF Range Control Center; Ammunition Breakdown (120 SF) for breakdown of containerized ammunition and magazine loading for troop issue; multi-purpose 800 SF Mess Shelter; 600 SF troop instruction bleacher enclosure; and site support including parking, roads, and power plant.

**California ARNG Urban Assault Course, Camp Roberts, CA** – Electrical Engineer. Design for a \$1.5 million 5-station Unit Assault Course for Camp Roberts, including Range Operations and Control Area totaling 800 SF (ROCA); Ammunition Breakdown Building (120 SF); Individual and Team Trainer (3-room 810 SF structure that includes 6 human urban targets); Squad and Platoon Trainer (4-building 741 SF structure that includes 10 human urban targets); Grenadier Gunnery Trainer (wooden facade that includes 6 stationary infantry targets and 7 non-precision facade targets); Urban Offense/Defense Trainer (2-story building with a basement that includes 10 human urban targets); and Underground Trainer (network of 2,550 LF of 4' -and 3'-diameter pipe with no targetry).

**Indiana ARNG Combined Arms Collective Training Facility Project, Planning Design Charrette, Muscatatuck, IN** – Electrical Engineer. Design and engineering consulting to conduct a multi-agency collaborative Project Planning Document Charrette (PPDC), for development of a Combined Arms Collective Training Facility (Muscatatuck CACTF) and to validate a \$16.1 million project award estimate. Confirmed project development cost and facilities needs and recommended major renovation / conversion of 23 of 70 existing buildings and new construction.

**Northpoint Training Center Replacement, Burgin, KY** – Electrical Engineer. Design and construction oversight services for fast-track project with multiple bid packages to rebuild prison facilities (41,646 SF total) following riot. Meeting LEED Certified Design Criteria, two new buildings include: Program Building (kitchen/dining, medical, canteen, multipurpose classrooms, library, and sanitation) and Visitation Building. Additional work involved security system renovation at six existing two-story dormitories, addition/renovation of the central control building, and a new campus emergency power generator.

## David Hoy, PE | GRW Structural Engineer



### YEARS OF EXPERIENCE:

With GRW: 10

Total: 10

### EDUCATION

B.S., Civil Engineering, 2006,  
West Virginia University

### REGISTRATION

Professional Engineer: WV, KY

### PROFESSIONAL AFFILIATIONS AND TRAINING

American Society of Civil  
Engineers

David has completed the investigation, analysis, and design of various building structures, including foundation design. In addition to building structures, David also has experience with water/wastewater projects involving the design of below grade concrete structures and elevated structural slabs. He also reviews shop drawings and performs periodic site visits.

### RELEVANT PROJECT EXPERIENCE

**Canaan Valley Resort State Park Improvements, Canaan Valley, WV –** Structural Engineer. Upgrades include new tubing park featuring 12-lane tube run in excess of 800 feet long with vertical drop of 90 feet; tubing lodge with wood-burning fireplace, restrooms, concession stand, and outdoor patio; storage building; new beginners slope and ski school area; renovations at main ski lodge (Bear Paw Lodge); and wobble clay shooting range.

**McHenry Fire Station, McHenry, KY –** Structural Designer. Planning, design, and construction phase services for one-story, 3,500 SF fire station that has three truck bays with overhead doors, as well as gear storage, lockers, a shower room, restrooms, and a multi-purpose room with an adjacent kitchen.

**West Virginia ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV –** Structural Engineer. 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.

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

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

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

**Saint Albans Fire/Police Station, Saint Albans, WV –** Structural Engineer

**Coal Heritage Trail Authority: Historic Building Restoration/Renovation, Mt. Hope, WV –** Structural Engineer

**Canaan Valley State Park: Ski Area Improvements, Tube Park/Lodge, Canaan Valley, WV –** Structural Engineer

**WV DOH Rest Areas and Welcome Centers: New Construction, Various locations throughout WV –** Structural Engineer



## Harvey Helm, PE, LEED AP, PLS | GRW Civil Engineer



### YEARS OF EXPERIENCE:

With GRW: 43

Total: 43

### EDUCATION

B.S., Civil Engineering, 1977,  
University of Kentucky

### REGISTRATION

Professional Engineer: KY, KS,  
TN, IN, OH, MS, GA, NC, AL, AR,  
WV, NY, VA

LEED Accredited Professional

Professional Land Surveyor: KY

### PROFESSIONAL AFFILIATIONS AND TRAINING

National Society of Professional  
Engineers

Kentucky Society of Professional  
Engineers

Soil and Water Conservation  
Society

Harvey's experience as a civil engineer is broad and encompasses land surveying, drainage facilities, streets and roads, site development and site utilities. He is very proficient in the technical elements that make up civil engineering projects of all sizes and has the management skills to produce quality and efficient projects. Harvey's federal government experience includes site development for projects in excess of \$180 million, as well as small task orders under indefinite delivery/indefinite quantity contracts. Harvey has completed more than 50 projects for the U.S. Army Corps of Engineers, Bureau of Prisons, National Guard Bureau and the U.S. Air Force.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Civil 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 a 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.

**West Virginia ANG 167th Airlift Wing C-5 Apron Repair, Martinsburg, WV** – Project Manager. 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 includes 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 will also be included.

**West Virginia ANG C-17 Munitions Storage, Martinsburg, WV** – Project Manager.

**West Virginia ANG Yeager Airport Pavement Design, Charleston, WV** – Project Manager. Pavement investigation/analysis, subsurface investigation, and design for grade, drain and surfacing construction plans for all air base pavements. Work included replacement of approximately 9,000 SY of taxiway and 33,000 SY of apron pavement; 27,000 SY of new perimeter taxiway for future expansion as an aircraft apron; and 10,600 SY of new apron/holding pad capable of providing two C-130 H aircraft for preflight check operations.

**West Virginia ARNG Camp Dawson Ranges, Kingwood, WV** – Civil Engineer. 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.

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

**California ARNG Urban Assault Course, Camp Roberts, CA** – Civil Engineer. Design for a \$1.5 million 5-station Unit Assault Course for Camp Roberts, including Range Operations and Control Area totaling 800 SF (ROCA); Ammunition Breakdown Building (120 SF); Individual and Team Trainer (3-room 810 SF structure that includes 6 human urban targets); Squad and Platoon Trainer (4-building 741 SF structure that includes 10 human urban targets); Grenadier Gunnery Trainer (wooden facade that includes 6 stationary infantry targets and 7 non-precision facade targets); Urban Offense/Defense Trainer (2-story building with a basement that includes 10 human urban targets); and Underground Trainer (network of 2,550 LF of 4' -and 3'-diameter pipe with no targetry).

**Indiana ANG 122nd Fighter Wing Security Forces Operations and Training Facility, Fort Wayne, IN** – Civil Engineer. Conceptual design for design-build bridging document for a new \$3.86 million (FY07), 18,494 SF Security Forces Operations and Training Facility, including a Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, providing offices for the Flight Chief, open office area for the base security forces, classrooms, workout room, locker room, weapons simulator room and weapons storage areas. Site work included grading, drainage and stormwater controls, new utilities, roads and parking areas and AT/FP measures.

**Blue Grass Army Depot Main Entry Control Facility and Battlefield Memorial Highway Revisions, Richmond, KY** – Principal. Design and construction administration services for design-build project at main entry control facility (ECF). Revisions at main ECF involve removing, closing, and relocating it to current parking lot entrance, as well as widening and providing KYTC-required improvements, such as new traffic signals, warning signals, and revised signage to U.S. 421 at new entrance. ECF structures, signage, fencing, utilities, pavement, and pedestrian facilities improvements are also included.

**Blue Grass Army Depot Personnel Support Facility, Richmond, KY** – Civil Engineer. Design-build project of approximately 7,500 SF, pre-engineered metal building including space for field office activities, conference rooms, locker and changing areas, and laundry and storage.

## **SECTION 5.0 | Quality & Cost Control**

## 5.0 Quality & Cost Control

At GRW, cost control, scheduling and value engineering are daily components of design rigor. The impact of our decisions regarding project planning, design and construction are assessed in weekly project meetings with all A/E disciplines to assure that budgets and schedules are met. The Project Manager communicates individually and as a group with leaders of each design discipline. During these sessions, project status is discussed to

determine adequate resources are directed to meet the project schedule. The issues tracking list we create is reviewed to ensure all problems are resolved before they can affect the schedule or budget. Our vision as your full-service architectural and engineering design firm is to offer services that simplify the design and construction process. We will partner with you each step of the way.

### Quality Control

Shane Lyle, our Project Architect, will have primary responsibility for the daily management and coordination of the project team. With over 25 years of experience, he has a clear understanding of the most effective methods for maintaining the programming, planning, and design schedule. He will work closely with Betsy Dulin, our Contract Manager/Quality Document and Control, along with our communications/interactions with you.

**COMMUNICATION:** At GRW, our highest project-management priority is focused on maintaining clear and effective communication throughout the entire course of the project. This focus includes our communication with you and your stakeholders, with the Construction Manager, 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 ARCHITECT:** Our process begins initially with the assignment of an experienced Project Architect 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 Architect has the ultimate authority over the project at all times.

A key element in effective 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 will provide a forum for discussion regarding any concerns or ideas. The assigned Project Architect will be the primary conduit for communication between you and the design team.

**TEAM MANAGEMENT:** QA/QC is enhanced at GRW since most design disciplines are in-house. Because of this, scheduling internal team meetings or over-the-shoulder reviews is greatly simplified. On this project, the Project Architect 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 correction and resolution. A checklist controlled by the Project Architect is used to track the resolution of issues from meeting-to-meeting.

**SCHEDULE MANAGEMENT:** No QA/QC process can

succeed with allocating sufficient time for internal review. The Project Architect will develop a proposed internal design schedule at the beginning of the project that incorporates appropriate time for internal review. These internal reviews will typically occur at the normal design submittal stages for the project (typically 15%, 35%, 65% and 90% of design completion).

**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 daily basis within the company. Impromptu meetings to discuss specific issues take place almost daily, and are typically facilitated by the Project Architect. Scheduled reviews that take place before each interim design submittal. The peer review personnel are determined by the Project Architect at the beginning of the project, and remain consistent throughout the course of the project.

## Cost Control

### Project Budget Accountability

As public officials, you are accountable to the public for the expenditure of public monies. The GRW team understands your obligation and stands prepared to help deliver a project design that is cost-effective and that represents an efficient and appropriate use of public funds. Rarely do projects have sufficient budget to accommodate everything on the programmatic *wish list*. Assessing the project budget relative to the program must be 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, and it will be discussed openly and frankly so that everyone is kept abreast of any potential concerns. Prioritizing the program relative to the

**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 leveraging close collaboration early in the design stage, options can be quickly developed and evaluated to understand design impacts on cost and effectiveness.

**PROGRAMMATIC OVERSIGHT:** The Project Architect 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 Architect takes a step back, and looks at the project in broad terms to insure that the design is progressing in accordance with those original criteria.

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 for projects in West Virginia. GRW's design experts will draw upon this local knowledge during the development of our construction cost estimates.

We can also develop a list of possible value-engineering revisions to help further reduce the construction cost and give you the most construction value for your dollar.

## **SECTION 6.0 | References**

## 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.

### **Federal Bureau of Prisons**

Design and Construction Branch  
500 First St. NW | Washington, DC

Mitch Miskimins, Deputy Chief  
(202) 514-9582  
mmiskimins@bop.gov

### **West Virginia**

#### **Air National Guard**

130th Airlift Wing  
1679 Coonskin Dr. | Charleston, WV

Capt. Harry Netzer, Deputy BCE  
(304) 341-6649  
Harry.Netzer@ang.af.mil

167<sup>th</sup> Airlift Wing CES  
222 Sabre Jet Blvd. | Martinsburg, WV

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

### **West Virginia**

#### **Division of Corrections**

1409 Greenbrier St. | Charleston, WV

Philip Farley, II, Director of Engineering  
and Construction  
(304) 558-2036  
Philip.K.Farley@wv.gov

### **Ohio Army National Guard**

Ohio Army National Guard  
Adjutant General's Department  
2825 W. Dublin-Granville Road  
Columbus, OH

George McCann, Project Manager,  
(614) 336-7413,  
george.c.mccann@us.army.mil

## **SECTION 7.0 | West Virginia EOI Forms**





Purchasing Division  
 2018 Washington Street East  
 Post Office Box 80130  
 Charleston, WV 25305-0130

State of West Virginia  
 Centralized Expression of Interest  
 02 - Architect/Engr

Proc Folder: 356210

Doc Description: STF BUILDINGS CAMP DAWSON EOI DESIGN

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No		Version
2017-07-20	2017-08-15 13:30:00	CEOI	0603 ADJ1800000001	1

**BID RECEIVING LOCATION**

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

**VENDOR**

Vendor Name, Address and Telephone Number:

Shane Lyle  
 GRW  
 801 Corporate Drive  
 Lexington, KY 40503  
 859-223-3999

**FOR INFORMATION CONTACT THE BUYER**

Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

Signature X

FEIN# 61-0665036

DATE 8/11/2017

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

**ADDITIONAL INFORMATION**  
**EXPRESSION OF INTEREST**

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 DESIGN SERVICES TO DEVELOP CONSTRUCTION DOCUMENTS TO PROVIDE FOR THE CONSTRUCTION OF TWO NEW TRAINING BUILDINGS, DESIGNER WILL BE DEVELOPING TWO SEPARATE SETS OF CONSTRUCTION BID DOCUMENTS, AT CAMP DAWSON IN KINGWOOD, WV, PER THE ATTACHED DOCUMENTATION.

\* ONLINE SUBMISSIONS ARE PROHIBITED FOR EXPRESSION OF INTEREST SOLICITATION RESPONSES \*

STATE FINANCE ADJUTANT GENERALS OFFICE 1703 COONSKIN DR  CHARLESTON WV25311-1085  US		FACILITY MAINTENANCE MANAGER CAMP DAWSON ARMY TRAINING SITE 240 ARMY RD  KINGWOOD WV 26537-1077  US	
--	--	---	--

Line	Comm Ln Desc	Qty	Unit Issue
1	STF Buildings at Camp Dawson		

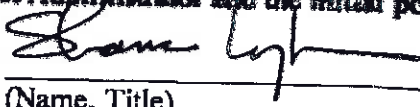
Comm Code	Manufacturer	Specification	Model #
81101508			

**Extended Description :**  
**STF Buildings at Camp Dawson**

**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 AIA A101-2007 and A201-2007 or the A107-2007 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.
- 4A. PROHIBITION AGAINST GENERAL CONDITIONS:** Notwithstanding anything contained in the AIA Documents or the Supplementary Conditions, the State of West Virginia will not pay for general conditions, or winter conditions, or any other condition representing a delay in the contract. The Vendor is expected to mitigate delay costs to the greatest extent possible and any costs associated with Delays must be specifically and concretely identified. The state will not consider an average daily rate multiplied by the number of days extended to be an acceptable charge.
- 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 July 1, 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 initial  
Contract Administrator and the initial point of contact:



(Name, Title)

Shane Lyle, GRW Vice President / Principal Architect

(Printed Name and Title)

801 Corporate Drive, Lexington, KY 40503

(Address)

859-223-3999 / 859-223-8917

(Phone Number) / (Fax Number)

style@grwinc.com

(email address)

**CERTIFICATION AND SIGNATURE:** By signing through wvOASIS, I certify that I have reviewed this Solicitation, the requirements, terms and conditions, and other information. My offer or proposal constitutes an offer to the State that can be accepted for the product or service proposed meets the mandatory requirements and conditions contained in the Solicitation, unless otherwise stated herein; that I am authorized to bind the vendor in a contractual relationship; that I am submitting this bid, offer or proposal for review and consideration; that I am submitting this bid, offer, or proposal, or any documents, in full knowledge, the vendor has properly registered with any applicable state registration.

GRW

(Company)



(Authorized Signature) (Representative Name, Title)

Brad Montgomery, President

(Printed Name and Title of Authorized Representative)

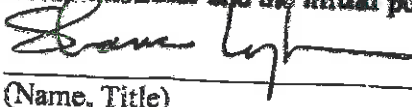
8/11/2017

(Date)

859-223-3999 / 859-223-8917

(Phone Number) (Fax Number)

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



(Name, Title)

Shane Lyle, GRW Vice President / Principal Architect

(Printed Name and Title)

801 Corporate Drive, Lexington, KY 40503

(Address)

859-223-3999 / 859-223-8917

(Phone Number) / (Fax Number)

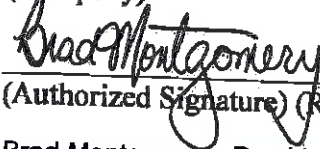
style@grwinc.com

(email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

GRW

(Company)



(Authorized Signature) (Representative Name, Title)

Brad Montgomery, President

(Printed Name and Title of Authorized Representative)

8/11/2017

(Date)

859-223-3999 / 859-223-8917

(Phone Number) (Fax Number)

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: GE01 ADJ1800300001**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

*(Check the box next to each addendum received)*

Not Applicable / No Addenda Issued

- |   |  |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

\_\_\_\_\_  
Company

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.

STATE OF WEST VIRGINIA  
Purchasing Division  
**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §81-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: GRW

Authorized Signature: *Brad Montgomery* Date: 08/15/2017

State of WEST VIRGINIA

County of KANAWHA, to-wit:

Taken, subscribed, and sworn to before me this 15 day of AUGUST, 2017.

My Commission expires FEB. 10, 2020

**AFFIX SEAL HERE**

**NOTARY PUBLIC**

*[Signature]*  
Purchasing Affidavit (Revised 07/01/2012)

