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Header 1

List View

General Information | [Contact](#) | [Default Values](#) | [Discount](#) | [Document Information](#) | [Clarification Request](#)

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Procurement Type: Central Purchase Order

Vendor ID: 000000218570

Legal Name: GRW ENGINEERS INC

Alias/DBA:

Total Bid: \$0.00

Response Date: 05/16/2022

Response Time: 16:43

Responded By User ID: Igodshall

First Name: Louise

Last Name: Godshall

Email: info@grwinc.com

Phone: 859-223-3999

SO Doc Code: CEOI

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Solicitation Description: Volkstone Perimeter Fence-Design Camp Dawson

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

State of West Virginia
Solicitation Response

Proc Folder: 1039817
Solicitation Description: Volkstone Perimeter Fence-Design Camp Dawson
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2022-05-17 13:30	SR 0603 ESR05162200000007182	1

VENDOR
000000218570
GRW ENGINEERS INC

Solicitation Number: CEOI 0603 ADJ2200000013

Total Bid: 0 **Response Date:** 2022-05-16 **Response Time:** 16:43:56

Comments:

FOR INFORMATION CONTACT THE BUYER

David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor Signature X	FEIN#	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Volkstone Perimeter Fence- Design Camp Dawson				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments: GRW
 Ben Fister, Project Manager
 bfister@grwinc.com
 info@grwinc.com

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



EXPRESSION OF INTEREST

Volkstone Perimeter Fence Design - Camp Dawson

West Virginia Purchasing
Division and West Virginia
Army National Guard
CEOI 0603 ADJ22000000013
May 17, 2022



engineering | architecture | geospatial



GRW | engineering | architecture | geospatial

801 Corporate Drive | Lexington, KY 40503

859.223.3999 | www.grwinc.com

May 17, 2022

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

**RE: Volkstone Perimeter Fence – Design Camp Dawson
CEOI 0603 ADJ2200000013**

Dear Mr. Pauline and Selection Committee Members:

Achieving the goals for the Volkstone training area perimeter fence project will improve your ability to secure the West Virginia Army National Guard's facilities. GRW would like to work with you on this project – and we believe we offer you the right experience and expertise to successfully delivery the results you require.

Experience and Familiarity. GRW is a full-service A/E design consulting firm that has been working with clients like you on similar projects throughout the region for more than 57 years. Our project team's experience with the National Guard in West Virginia is substantial and ranges from projects at Volkstone and Camp Dawson to Martinsburg. **See Sections 1.0, and 2.0.**

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

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

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

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

Respectfully submitted,

GRW Project Manager / Chairman of the Board

859-223-3999, ext. 234

bfister@grwinc.com



Expression of Interest

Engineering Services

Volkstone Perimeter Fence Design – Camp Dawson

CEOI 0603 ADJ2200000013

WV Department of Administration WV Army National Guard

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SECTION 1.0 | GRW Introduction



1.0 GRW Introduction

About GRW

Founded more than 57 years ago, GRW is an employee-owned architectural, engineering, and geospatial services firm with approximately 200 employees.

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

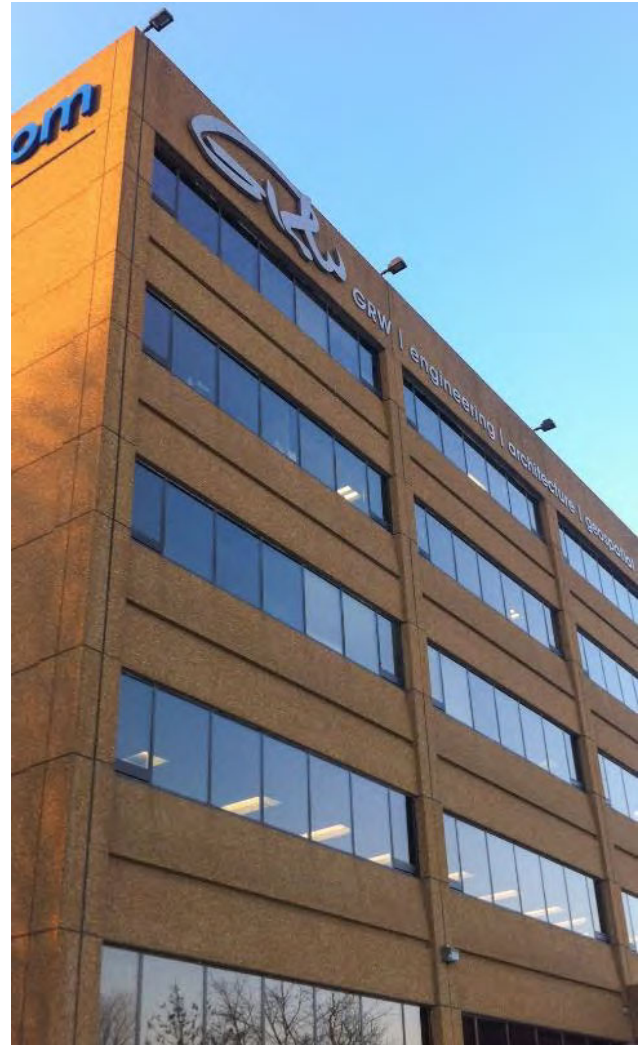
Among our achievements, GRW is listed in *Building Design and Construction's* *Giants 300* report as one of the nation's top Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.



Our Corporate Culture

Our corporate culture is one of close collaboration with an approach that gives our project managers and their project teams the ability to work with clients more easily, 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
OCONUS Locations: Kadena Air Base, Okinawa, Japan, and Camp Lemonnier, Djibouti

GRW's Experience with WV Army & Air National Guard | Partial List

GRW has a long history of experience with the West Virginia Army and Air National Guard. Examples of many of these projects are shown on these pages.

West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV

– Expansion of sewer (1,996 LF), water (1,996 LF) and electric (1,797 LF) to all existing and future buildings, unit training equipment site (UTES) and wash rack locations. Also 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 Relocation of Camp Dawson Electrical Power and Communications Lines, Kingwood, WV

– Study and design for 4-phase construction program to relocate overhead electrical power lines and communications lines (telephone, data, etc) to underground duct banks in order to eliminate historic problems associated with overhead services. Phase 1: 3000 LF of power line relocation to new underground duct banks, with the associated replacement of pole-mounted transformers with pad-mounted transformers (1000 KVA to 50 KVA). Phase 2: Relocation of communications service to new underground duct banks along Phase 1 route. Phases 3 & 4: Relocation of approximately 2000 LF of overhead power lines and overhead communications lines to new duct banks, respectively.

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

– 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 Camp Dawson Live Fire Exercise Shoot House, Kingwood, WV

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

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

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

West Virginia ANG Yeager Airport Pavement Design, Charleston, WV

– 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 JFHQ TAG Wing Renovation, Charleston, WV

– Work includes renovations of office areas, complete restroom renovations, and new interior LED lighting for these areas.

West Virginia ANG 130th Airlift Wing Building 107 Consolidation Study, Charleston, WV

– Consolidation Study for historic hangar which will be renovated in phases to house Aero-Medical Evacuation Squadron, new Aerial Port Facility and Deployment Processing Center, and mobility storage for Security Forces Squadron. Work included floor plans for each phase as well as final floor plan and construction cost estimate. Major challenge involved consolidation of organizations with a total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions were allowed. AT/FP, energy and ADA accessibility measures were incorporated, as well as current ANG guidelines.

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

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Complete architectural and engineering Type A, B and C services for \$2 million renovation

of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project (MILCON/SRM split funded) increases space and improves mission performance and operational efficiency for command and administrative functions in ways that are energy efficient, code compliant and in accordance with current ANG policies. Project meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

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

West Virginia ANG 130th Airlift Wing Communications Facility Code / Criteria Review, Charleston, WV – Code/Criteria Review and LEED Update Report for facility designed to 65% three years prior under separate GRW/NGB contract then put on hold pending funding. Twofold

project goal included: 1) identify and delineate known codes/criteria that are either new or updated since 65% Design Submittal; and 2) describe revised LEED 3.0 criteria now in effect for project and outline points for LEED Silver certification, compared to LEED Silver 2.2 criteria in effect at the 65% design stage.

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV – Scope of work included design services (LEED Silver design criteria) for two separately funded (MILCON/SRM) sub-projects to repurpose existing unoccupied hangar into space for the Aeromedical Evacuation Squadron (AES). Repairs and building repurposing 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 ATEP 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 Communications Duct, Charleston, WV – Concept Development Report to select a preferred concept for a new duct system for routing the base's communications network to a new Communications Facility. New fiber optic cable for base network will consist of two ITNs (Information Transfer Nodes);

ITN-1 in the new Communications Facility and ITN-2 in new hangar, Building 407. Duct bank will carry fiber optic lines, television and coaxial cabling; allows looping of current system; and provides redundancy of assets. A 4-duct and a 12-duct PVC conduit system with inter-duct is proposed.

West Virginia ANG 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility, Charleston, WV – 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 ARNG Readiness Center Commissioning Projects, WV – LEED Fundamental Commissioning for four building construction projects: Buckhannon AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost; Morgantown Readiness Center, 58,520 SF and \$20,500,888 construction cost; Moorefield Readiness Center, 57,256 SF and \$17,725,351 construction cost; and Logan Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost. Scope included all commissioning, coordination and documentation required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems.

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

Preparation of a Program Planning Document Charrette (PPDC) for replacement of two local armories and a USAR center with aging facilities and site limitations, with a new, \$17 million Joint Armed Forces Reserve Center and support facilities on a 94-acre site. Resulting plans include an Armed Forces Reserve Center (60,927 SF), unheated storage (6,000 SF), area maintenance support (4,500 SF) and helipad.

West Virginia ANG 130th Airlift Wing LOX Storage Relocation, Charleston, WV – Type A and B design and construction administration services to relocate LOX function to south end of flight line to meet operational and installation development plan requirements. Facility includes covered storage facility with adjacent tank storage canopy; elevated pads and spill containment structure for storage tanks; paved entry road; protective fencing; and utilities (electric and communications).

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

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

– Fast-track design of fuel cell hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

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

– Fast-track design of corrosion control hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

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

Engineering consulting for preparation of a Web-Enabled Master Plan Update and GeoBase Common Installation Picture (CIP) for the 130th Airlift Wing in Charleston to evaluate benefits and impacts associated with acquiring additional airfield property for aircraft parking, operations, and maintenance facilities to meet current and future proposed missions. Identified constraints and opportunities that apply to the 130th AW aircraft parking, operations and maintenance areas, including Anti-Terrorism/Force Protection (AT/FP) measures; quantified existing and required airfield facilities; developed new alternatives for long- and short-range plans; and created plan tabs that depict constraints and opportunities, long- and short-range development plans, land use and circulation plan, real estate plan, and facility utilization plan.

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

Planning, design and construction administration services for replacement of sanitary sewer system, circa 1954. Pipe included combination of various construction materials including vitrified clay pipe (VCP) with dilapidated sections allowing high rates of inflow and infiltration during storm events.

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

Concept Development Report for C-5 aircraft complex which requires electrical modifications to meet needs of current occupants' activities, and investigation/ resolution of temperature control in numerous locations. Report included detailed discussion of current electrical, architectural and HVAC system problems; recommendations to resolve large-system problems, as well as particular solutions for small areas; conceptual level drawings; conceptual level outline specification; and construction cost estimate.

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

Fast-track design of composite material shop to the existing corrosion control hangar required to meet 167AW's change in mission from C-5 to C-17 aircraft.

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

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

SECTION 2.0 | Project Experience



2.0 Project Experience



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. The new complex was designed to match the architecture of the nearby Ohio ANG structures; both the ARNG and ANG facilities are located within the secure perimeter of the Springfield-Beckley Municipal Airport.

Features of the complex include

- 60,902 SF administrative/training complex
- 24,963 SF field maintenance shop
- Emergency power generator
- Occupancy sensor controlled interior lights throughout
- T5 low mercury, high-efficiency fluorescent lamps and electronic ballasts

- Full cutoff luminaires for site lighting to eliminate light trespass
- Energy submetering connected to building management system (DDC)
- Geothermal system for heating and cooling of the facilities
- Military and POV parking, wash platform, loading dock, access roads and ramps
- **Site AT/FP measures, security card readers, security lighting, security fencing,** utilities and landscaping

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.

Client Contact: George McCann, Project Manager, Ohio Army National Guard, (614) 336-7413, george.c.mccann@us.army.mil

Waynesboro Readiness Center Parking Area Improvements

Tennessee Army National Guard | Nashville, TN

The State of Tennessee/Tennessee Army National Guard hired GRW to provide engineering services for improvements and expansions needed at two parking areas at the Waynesboro Readiness Center: up to 6,850 square yards (SY) of surface area at the Military Vehicle Staging Area (MVSA) and up to 2,625 square yards (SY) of surface area at the Privately Owned Vehicle (POV) parking area. **Fencing** and solar LED lighting, as well as ADA-compliant sidewalks and driveway/access improvements were included.

The Waynesboro Readiness Center, constructed in 1984, is located on approximately 17.8 acres at 106 Industrial Drive, Waynesboro, TN.

Client Contact: Greg Steck, Architect, Tennessee Army National Guard, (615) 313-0826, gregory.l.steck.nfg@mail.mil



Aliceville Federal Correctional Institution and Satellite Camp

Federal Bureau of Prisons | Washington, DC

GRW led the design team, in conjunction with Caddell/Yates JV, for the design-build of a women's medium-security Federal Correctional Institution and minimum-security Federal Prison Camp located near Aliceville, Alabama. This \$196 million, LEED Silver certified, project has a gross building area of approximately 665,889 SF, and can house approximately 1,790 inmates. The FCI campus plan places the three, 4-story housing units, and program and multipurpose functions in a semi-circular campus layout enclosing a central secure compound.

The prison is surrounded by **more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence**. A **sallyport** with 22-ft high fencing was provided for secure entrance to facility.

Client Contact: Judah Organic, Design Compliance Programs Manager, Federal Bureau of Prisons, (202) 514-9566, jorganic@bop.gov



Yazoo City U.S. Penitentiary and Satellite Camp

Federal Bureau of Prisons | Washington, DC

GRW led the design team, in conjunction with Yates/Caddell JV, for the design/build of a certified LEED Gold, men's high-security United States Penitentiary (USP) and minimum-security Federal Prison Camp (FPC) located in Yazoo City, Mississippi. This \$182,000,000 project has a gross building area of 780,000 SF, and can house approximately 1,200 inmates. The USP campus plan places six, 2-story housing units, a secure housing unit, and program and multipurpose functions in a rectangular campus layout enclosing a central secure compound. The FPC comprises a camp housing building and a camp core building. Other support buildings include a warehouse building, utility building, wastewater building and guard towers.

The prison is surrounded by **more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence. Also included are non-lethal / lethal electrified fence** and taut wire intrusion detection fences. A **sallyport** with 22-ft high fencing was provided for secure entrance to facility. Concrete grade beams were included to mitigate tunneling. Guard towers and perimeter patrol roads provide unobstructed views of all areas along the fence.

Client Contact: Judah Organic, Design Compliance Programs Manager, Federal Bureau of Prisons, (202) 514-9566, jorganic@bop.gov

Camp Dawson Volkstone Training Area Utility Upgrade

West Virginia Army National Guard | Charleston, WV

Camp Dawson training complex near Kingwood, West Virginia. Volkstone is located west of the Camp Dawson main cantonment area and across the Cheat River. The WV ARNG hired GRW to design the extension to current and future areas of the Volkstone training facility.

The scope included sewer (1,996 LF), water (1,751 LF), and electric (1,797 LF) 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.

Design of water and sewer to the following:

- Existing Search and Extraction Building
- Existing Bath House
- Existing DPW Storage Building
- Future Barracks FOB Shower House

Water service is provided by extending the existing 6" water main, located near the Search and Extraction Building, to the edge of the CERF-P area and terminate at a fire hydrant there. Service lines for other areas will be extended off this main line.

Water supply is provided to the FOB Shower House planning for 60 people at a time. Based on industry standards for this type of facility it is expected each person will use an average of 40 gallons per day (GPD). This is an average daily usage of at least 2,400 GPD.

Sewer service is provided by extending the existing sewer mains when possible. This main is located near the Search and Extraction building. The addition of a new pump station to serve the areas will be considered if the existing system is not capable of servicing the expanded areas. The scope of the sewer main work terminates at a stub-up near the buildings with new water and sewer service.

The existing three phase underground Volkstone power distribution system was expanded to accommodate all existing and future structures and training areas including:

- Existing Search and Extraction Building
- Future FOB Headquarters Building
- Future FOB Barracks
- Future FOB Shower House
- New wastewater pump station

Provisions for power to a future automated front gate will be installed in the future. All services will be either 240/120 volt or 208/120 volt single phase except the Search and Extraction Building which will be 480/277 volt, three phase and the DPW Storage Building which has an existing 208/120 volt, three phase service. The design complies with current West Virginia State codes.

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

Quality: Exceptional/Outstanding Overall Job

Schedule: Exceptional/Outstanding Overall Job

Cost Control: Exceptional/Outstanding Overall Job

Management: Exceptional/Outstanding Overall Job

Regulatory Compliance: Exceptional/Outstanding Overall Job

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

Camp Dawson Ranges at Briery Mountain

West Virginia Army National Guard |
Charleston, WV

The scope of work for this project included 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.

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

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

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

Camp Dawson Live Fire Exercise Shoot House

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.

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

- **Quality: Exceptional**
- **Schedule: Exceptional**
- **Cost Control: Exceptional**
- **Management: Exceptional**
- **Utilization of Small Business: Exceptional**
- **Regulatory Compliance: Exceptional**

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

**Appalachian Regional Airport Hangars
and Aviation Fuel Farm**

**Mingo County Airport Authority |
Williamson, WV**

Chapman Technical Group, a division of GRW, designed the Appalachian Regional Airport, which was constructed on a reclaimed surface mine site. This general aviation facility replaced the Mingo County Airport located in Williamson, WV. The initial design included a 5,000-foot long runway, designated Runway 8-26. Subsequent projects involved a partial parallel taxiway, a 175,000 SF main aircraft parking apron, complete airfield lighting system, and a **perimeter security fence**.

Client Contact: Denver Stacy, Chairman, Mingo
County Airport Authority, (304) 784-6925,
jennascrane@hotmail.com

**Visitor Control Center and Battlefield
Memorial Highway Revisions**

Blue Grass Army Depot | Richmond, KY

For this design-build project, GRW provided design and construction administration for revisions to the Visitor Control Center (VCC) and Battlefield Memorial Highway (US 421) at Blue Grass Army Depot (BGAD), Richmond, KY.

The VCC intersection was relocated to the current entrance to the Armed Forces Reserve Center parking lot and incorporated that entrance into the design.

The existing Main Gate Entrance intersection was permanently removed and closed.

The project also included widening US 421 to three lanes from US 25 south to the KYARNG Field Maintenance Shop (FMS) (approximately 1.5 miles) in coordination with the Kentucky Transportation Cabinet (KYTC).

The widening project included turn lanes and acceleration lanes on US 421 as required by KYTC, new traffic signals, warning signals, revised highway signage, and changes required for ECF structures, signage, **fencing**, utilities to include curbing, storm drainage, erosion control, clearing and grubbing, pavement striping, and pedestrian walkways and crossings.

A new architectural marquee gateway structure to the depot was included as part of the project, as well as the new visitors center and parking lot.

Client Contact: Patsy Brown, Blue Grass Army
Depot, (859) 779-6942



**Additional Inmate Programming at
Coffee and Wheeler Facilities**

CoreCivic | Nashville, TN

CoreCivic selected the Caddell/GRW team to design and construct additional inmate program facilities at two state prisons in Georgia: the Wheeler Correctional Facility in Alamo and the Coffee Correctional Facility in Nicholls. The scope of work for each fast-track project was identical, and included design for a 9,000 SF inmate program building and a new greenhouse facility. The inmate program building was for certification in diesel mechanics and welding. The scope of work included

shop fit up, site utilities, **fencing**, site cameras and gate controls.

The Wheeler Correctional Facility is medium security and can house 3,028 males. Also medium security, the Coffee Correctional Facility has a capacity of 3,032 male inmates.

CoreCivic – a founder of the private corrections management industry – provides design,

construction, expansion and management services for prisons, jails and detention facilities and operates over 70 facilities across the United States, two of which are operational in Kentucky.

Client Contact: Tim Aebie, AIA, Sr. Director, Project Dev. - Real Estate Dev., CoreCivic, (615) 263-6707, Timothy.Aebie@cca.com

H.L. Spurlock Station Site Security Improvements

East Kentucky Power Cooperative | Winchester, KY



This fast-track assignment included physical site security improvements encompassing **fencing, gates and turnstiles**; security camera systems; traffic and personnel monitoring equipment; controls and hardware; and utilities at the two entrances (Gate 1 and Gate 2) to the East Kentucky Power Cooperative's H.L. Spurlock Station in Maysville.

Gate 1 serves employees and visitors. The existing two lane entrance/exit was expanded to four lanes to allow greater efficiency during shift changes and the ability to change the direction of traffic entering/exiting the campus during peak times. A canopy was designed for Gate 1 to provide weather protection for the security guards. LED signs to alert drivers as to which lanes are open or closed are mounted on the canopy. Heavy duty barrier arm guards designed to stop a speeding truck are placed at each entrance lane, and a sliding gate can be closed when the plant is shut down. Card readers at each entrance lane allow for easy entry/exit.

Gate 2 serves as the delivery and contractor entrance. A paved road was designed to direct contractors to the upper parking lot. Two turnstiles with card access allow the contractors to enter into the secure side of the perimeter. A new sidewalk directs the contractors to the areas in which they will be working. The existing two-lane road at the truck entrance was expanded to three lanes for better efficiency, and a truck turnaround area was created prior to the gates. **The heavy-duty barrier arm guards and sliding gate were also added at Gate 2.**

Client Contact: Matt Clark, PE, Senior Engineer - Production, East Kentucky Power Cooperative, (859) 745-9275, Matt.Clark@ekpc.coop



Headend Telecommunications Facility Frankfort Plant Board | Frankfort, KY

For the Frankfort Plant Board, GRW provided programming, planning, design, and construction administration services for a new 6,725 SF telecommunications headend building. The building site is on existing FPB land, and the new structure is located in relative proximity to the existing facilities headend building and associated communications equipment. The telecommunications portion of the facility has been designed to receive signals for the processing and distribution of the FPB's cable, internet, and telephone telecommunications systems to the City of Frankfort and surrounding community. The administrative area of the facility includes dedicated offices, shared workstations, conference/break room, and associated accessory spaces.

In addition, the new headend building was designed to accommodate forces from natural disasters, such as earthquakes and tornadoes, while maintaining crucial services to this state capital city. The design required a hardened structure, including cast concrete, reinforced walls and roof assemblies for the telecommunications area. Utility services for the building have been provided with mechanical and electrical system redundancy, including a backup



generator, UPS and DC plant to maintain the facilities operations during an emergency event. Security features such as access control and CCTV systems were used.

To support the new structure, site features including a private drive, **perimeter security fencing and masonry pilasters**, parking, retaining walls, stormwater management and utility pads have been provided. GRW designed the concrete pads and utility distribution for the satellite dishes, pads and utility boxes. The owner determined the satellite dish layout.

Client Contact: Adam Hellard, Security / Broadband Technology Manager, Frankfort Plant Board, (502) 352-4325, ahellard@fewpb.com



Luther Luckett Correctional Complex Security Fence

Kentucky Department of Corrections |
Frankfort, KY

GRW provided A/E design and construction phase services for security improvements at the Luther Luckett Correctional Complex. Improvements included:

- **Installation of interior security fence adjacent** to the existing security perimeter fencing at the east and south of existing Segregation Unit
- **Replacement of the fence** west and north that separates the segregation unit from the rest of the complex
- **Addition of razor wire**
- Repair of concrete walkway

Client Contact: Alan Watt, Construction Superintendent II, Kentucky Department of Corrections, (502) 229-4043, Alan.Watt@ky.gov

McCreary U.S. Penitentiary and Satellite Camp

Federal Bureau of Prisons | Washington, DC

GRW led the design team, in conjunction with the contractor, for the design-build of this new \$124,000,000 prison in McCreary County, KY. Situated on a 430-acre site, the 533,000 SF prison complex includes 21 separate buildings. The main facility is an ADA-compliant maximum-security penitentiary housing 960 general population inmates and 120 segregation unit inmates. The campus plan places the six, 2-story housing units, and program and multipurpose functions in a rectangular campus layout enclosing a centralized soccer, softball and basketball field/court area.

Site Development/Utilities

Site work involved earthwork, roadways and parking, building pads, and utilities for the 45-acre penitentiary and 30-acre satellite camp and support facilities. The project necessitated an early site work package in order to keep the project on schedule. The site work and building pad preparation were completed in time for the building phases to be completed ahead of schedule. Site development tasks included **construction of double security fencing**.

**Merit Award | Design-
Build Institute of
America**

**Marvin M. Black
Partnering Award |
Associated General
Contractors of
America**

**Engineering
Excellence Honor
Award | American
Council of Engineering
Companies of Kentucky**



Client Contact: Judah Organic, Design Compliance Programs Manager, Federal Bureau of Prisons, (202) 514-9566, jorganic@bop.gov

Northpoint Training Center Replacement

Kentucky Department of Corrections | Frankfort, KY

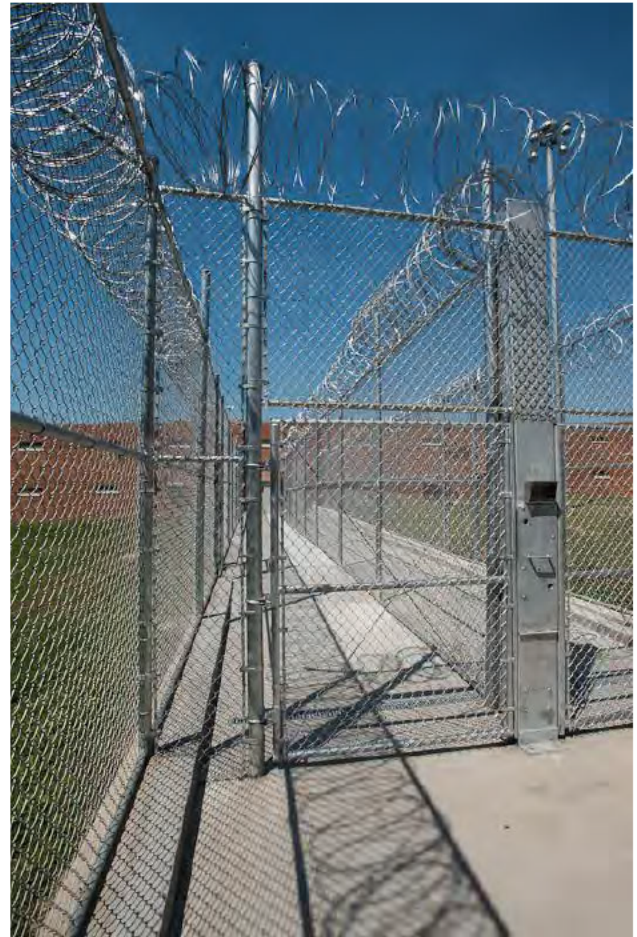
GRW provided A/E design and construction oversight services for this fast-track project to rebuild prison facilities at the Northpoint Training Center in Burgin, KY. Originally a 1940's psychiatric hospital, the campus was later converted into a state corrections facility. The institution operates as a medium-security institution with a capacity of approximately 1,200 inmates.

In 2009, a fire rendered five buildings at the site complete losses. Following a week-long programming charrette with GRW and the Kentucky Department of Corrections and Division of Engineering & Contract Administration, the 41,646-SF project program (two new buildings, renovation of seven buildings, as well as the 1,900 SF addition/renovation of the control building) was defined and preliminary building placement locations were determined. Meeting LEED Certified Design Criteria, the two new buildings include:

- 40,000 SF Program Building
- 6,400 SF Visitation Building

The electrical scope included the addition of a 2 megawatt central auxiliary power generator (12.47 KV) and power distribution system for the entire prison. HVAC systems use the existing central steam plant, as well as high-efficiency geothermal heat pumps and heat pump energy recovery units, connected to a field of 120 well bores outside the security fencing. The entire project was required to meet the criteria of KRS HB2, requiring a minimum 7 LEED EA1 points for compliance with energy use standards.

The renovation work involved new security electronics (500 +/- cameras total), and egress stairwell interior / exterior door replacement at six, existing, two-story dormitories. **Site renovation included fencing design that created segregated recreation yard areas for each dorm within the existing secure perimeter fencing.** The central control building received an addition and renovation



to include a new control center room and enlarged security electronics room. This building includes the gate entrance controls, communications equipment and a 300 SF area dedicated to security, control and recording equipment, which is now protected by a clean agent (NOVEC 1230) fire suppression system. The tanks, controls and release panel are located in an adjacent room, which is also protected by a separate zone of the clean agent system. An existing 100 kilowatt generator at the facility was relocated and connected to the central control building.

Client Contact: Gunvant Shah, PE, Branch Manager, Kentucky Department of Corrections, (502) 564-2094 x227, Gunvant.Shah@ky.gov

Northpoint Vehicular Sallyport Gate Replacement

Kentucky Department of Corrections | Frankfort, KY

GRW provided architectural design and electrical engineering services for the replacement of the existing vehicular sallyport gate panels and refurbishment of gate operators at the Northpoint Training Facility near Danville, KY. The existing system was designed and constructed in the early 1980s.

For the client, the Commonwealth of Kentucky, Division of Corrections, GRW developed two Phase A design options.

- Option One proposed **refurbishing the existing sliding fence gate** leaving the existing foundations, support posts, and overhead structural slide beam. Under this option the gate panels, locking column, operator, and moving parts would be replaced. The concrete sill would be repaired and resurfaced. The gate sill guides would be repaired and repainted. Electrical conductors, control wires, and control switches would be replaced in existing conduit. Shaker wire also would be reinstalled.
- Option Two proposed replacing the existing sally port gate, operator, and structural support system with one of three sliding fence gate models presented by three manufacturers.

Ultimately refurbishment of the existing system was selected. Design also included **replacement of gate control switches in the guard tower adjacent to the existing sally port.**

Previous work performed by GRW at Northpoint includes the A/E design and construction oversight services a fast-track project to rebuild the prison facilities, as well as structural analysis of existing buildings.

Client Contact: Gunvant Shah, PE, Branch Manager, Kentucky Department of Corrections, (502) 564-2094 x227, Gunvant.Shah@ky.gov





Roederer Correctional Complex Security Upgrades

Kentucky Department of Corrections |
Frankfort, KY

Located in Oldham County, KY, the Roederer Correctional Complex houses 172 permanent inmates at full capacity. Depending on classification, inmates provide support services in areas such as maintenance, kitchen, laundry, legal office, grievance office, etc. Minimum custody inmates help maintain the 3,000 acre farm. The complex also includes a 200-bed intensive in-patient substance abuse treatment unit.

For this project, GRW's multidiscipline in-house team designed a security perimeter around the Unit 5 Building which houses 225 occupants. The upgraded medium security facility will be used to segregate drug offenders from the regular population.

Improvements included:

- **Approximately 1,450 LF of perimeter fencing**
- **Sallyport for personnel and inmates**
- 1,000 LF of gravel perimeter drive
- **Vehicular sally port**
- Exterior security lighting
- Exterior security cameras
- Electrical improvements including routing existing overhead power underground at fencing

Client Contact: Alan Watt, Construction Superintendent II, Kentucky Department of Corrections, (502) 229-4043, Alan.Watt@ky.gov

147th Reconnaissance Wing Munitions Maintenance Shop

Texas Air National Guard | Houston, TX

GRW designed a 3,100 square foot maintenance shop to provide for munitions maintenance and inspection (Category Code 216-624). This \$1.5 million shop meets the mission requirements of the 147th and provides a replacement area for activities that were performed in a bay of another building which did not meet explosive safety requirements.

GRW led a Charrette to review the facility requirements with all user groups and other key stakeholders to confirm the authorized functional space requirements of all activities in the facility, develop alternative floor plans that satisfy space needs, and validate the government's construction cost estimate. A Concept Proposal Report and a Concept Development Report were prepared following the Charrette.

The selected alternative, designed by GRW, is a heavily reinforced concrete structure with two feet of earth on the roof and in between double concrete exterior walls. All exterior doors were designed as blast doors. The interior includes a 1,800 SF maintenance bay, electrical, communications, and mechanical rooms, a rest room and an office equipped for SIPERNET. The facility was designed to meet the ANG Sustainable Design Criteria and EPA 2005 energy efficiency standards for an industrial facility. Exterior features include **a secure fenced perimeter**, access road, parking lot and gates, and new utility services. GRW also provided construction administration, including shop drawing review, commissioning and inspection services.

The new shop meets the requirements of ANG, USAF and DOD Explosive Safety Boards and does not restrict the types of munitions that can be maintained and inspected by the weapons maintenance staff. These agencies had previously approved the location for the new facility based on quantity distance (QD) safety restrictions and the characteristics of the explosives in the facility.

Client Contact: Lt.Col. Gary L. Kerr, Base Civil Engineer, Texas Air National Guard, (281) 929-2638

Martinsburg Secure Facility

West Virginia Army National Guard |
Charleston, WV

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

- Demolition of existing interior finishes and other improvements within the renovation area
- Complete replacement of the existing non-operational HVAC system with a new energy-efficient system. New system consists of water source heat pumps (WSHP) connected to a new boiler and closed loop fluid cooler. A new water-cooled dedicated outside air unit with heat recovery was designed for required outside air to the building.
- Redundant HVAC systems for secure IT room and non-secure IT room. Each room is served by the WSHP system as well as ductless split systems.
- New DDC control system for all new equipment
- New interior finishes throughout the areas, including raised access flooring throughout the renovated areas
- New structural roof deck and roofing system
- New elevator and fire stairs
- **New site security fencing**, sliding vehicular security gates, exterior parking, walkways, site utility improvements, and storm drainage improvements
- New building security and cameras

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

Vehicle Maintenance and Equipment Shops Building

West Virginia Department of Transportation
| Charleston, WV

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

Key components of the 35,000 SF facility include:

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

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

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

As a safety concern, special attention was paid to separate pedestrian and vehicle paths. **The facility is secured with perimeter fencing and keycard**

entry systems. A generator was provided for the facility to keep operations functional, which is critical for heavy snow emergency situations. A separate streetscape project is providing underground utilities to the site, which will further enhance the dependability of the facility.

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

West Virginia State Capitol East Campus Warehouse/Grounds Building West Virginia Department of Administration | Charleston, WV

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

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

- One heavy vehicle repair bay
- One large welding hood with curtains for multiple welding applications
- Air compressor and air compressor reels throughout shops
- Wash bay
- Woodworking shop
- Parts storage
- Offices

- Support facilities
- Sloped Concrete floor with floor drains
- Oil/water separator
- Emergency generator

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

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

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

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



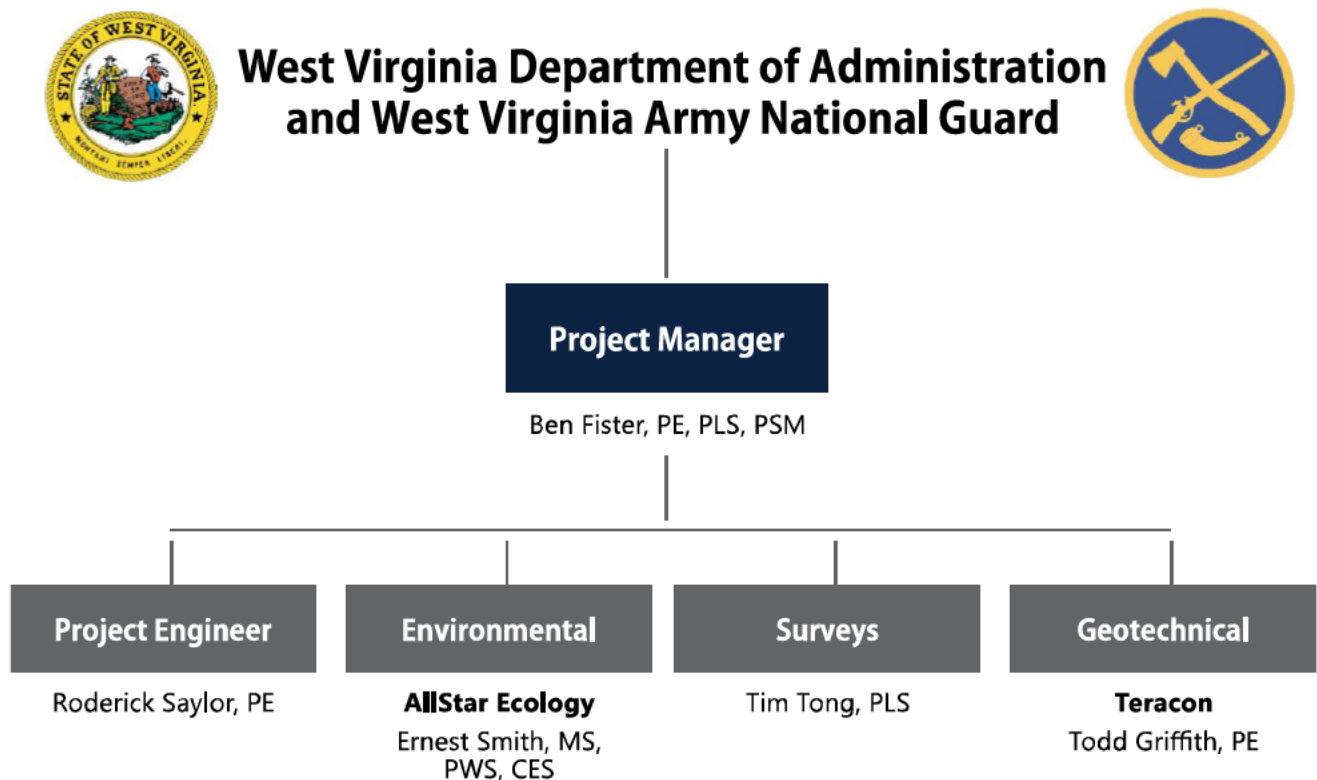
SECTION 3.0 | Staff Qualifications

3.0 Staff Qualifications

By choosing GRW, you have access to some of the most qualified and knowledgeable military design consultants in the region. From aviation planning and design – construction phase services, our team members are experts in their fields.

Ben Fister, PE, PLS, PSM, will serve as your Project Manager. He has been involved with the fencing projects for the U.S. Customs and Border Protection,

Federal Bureau of Prisons, and the Air National Guard. He regularly provides project leadership for civil/site development projects. **Roderick Saylor, PE** will be the Lead Project Engineer and directly involved with you through every stage of the project. His experience includes more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence for two Federal Bureau of Prisons facilities.



Ben Fister, PE, PLS, PSM | GRW Project Manager



YEARS OF EXPERIENCE:

With GRW: 50

Total: 54

EDUCATION

B.A., Physics, 1966, Villa Madonna College

B.S., Civil Engineering, 1968, University of Kentucky

M.S., Civil/Environmental Engineering, 1972, University of Kentucky

REGISTRATION

PE: KY, AL, FL, GA, IL, IN, KS, LA, MO, MN, MS, NC, OH, OK, SC, TN, TX, VA, WI, WV (# [REDACTED])

PLS: KY, AL, IL, LA, MD, MS, NC, TN, GA, WV (# [REDACTED])

PSM: FL

SP: VA

PROFESSIONAL AFFILIATIONS AND TRAINING

American Society of Photogrammetry & Remote Sensing
Kentucky Society of Professional Engineers
Kentucky Association of Professional Surveyors
National Society of Professional Engineers
Water Pollution Control Federation

Ben has more than four decades of master planning and engineering design experience. Highlights of his career include the management of major stormwater projects for the U.S. Army Corps of Engineers (USACE); dozens of fencing, roadway, bridge and aviation projects throughout Kentucky; and more than 25 master planning projects for the U.S. Army, Air Force and Air National Guard. Prior to his career at GRW, Ben served in the USACE as an instructor and construction manager for airfields and highways.

RELEVANT PROJECT EXPERIENCE

U.S. Customs and Border Protection North Laredo Border Wall, Laredo, TX – GRW Project Manager. Design-build of approximately 14 miles of border wall including roads, bridges, drainage, foundations, electrical, electronic security and telecommunications.

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Technical Advisor. 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). The prison is surrounded by more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence. A sallyport with 22-ft high fencing was provided for secure entrance to facility.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – Technical Advisor. Design services for design-build delivery of certified LEED Gold, \$182 million medium-security main complex (USP) and minimum-security prison camp (FPC). The prison is surrounded by more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence. Also included are non-lethal / lethal electrified fence and taut wire intrusion detection fences. A sallyport with 22-ft high fencing was provided for secure entrance to facility. Concrete grade beams were included to mitigate tunneling. Guard towers and perimeter patrol roads provide unobstructed views of all areas along the fence.

McCreary U.S. Penitentiary and Satellite Camp, McCreary County, KY – Technical Advisor. Design-build of a new, \$124 million prison complex on a 430-acre site. Included double security fencing.

Blue Grass Airport Improvements, Lexington, KY – Principal-in-Charge. Major expansion included perimeter fencing.

Georgia ANG 116th Wing B-1B Bomber Composite Aircraft Maintenance Hangar Complex, Robins AFB, GA – Principal. Fast-track design for a new 76,000 SF B-1B bomber hangar complex. As this facility is on the flight line, access is controlled by fence, with an electrically latched turnstile which is released by a card reader. Parking is set back to meet anti-terrorist force protection (ATFP) guidelines.

Air National Guard Installation Development Plans – Project Engineer. Master planning and mapping services for numerous locations. Included ATFP fencing and entrance control facilities.

Roderick Saylor, PE | GRW Project Engineer



YEARS OF EXPERIENCE:

With GRW: 17

Total: 17

EDUCATION

B.S., Civil Engineering, 2006,
University of Kentucky

REGISTRATION

Professional Engineer: KY, FL,
IN, OH, KS, MD, NY, NE,
WV (Reciprocity pending)
NCEES Member

Roderick's engineering experience includes planning and design for a variety of roadway, drainage, and site development projects for commercial and municipal clients. His experience includes work on several master planning and design projects for both the Air National Guard and the Army National Guard under GRW's indefinite delivery contract with the National Guard Bureau.

RELEVANT PROJECT EXPERIENCE

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Civil Engineer. 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. The prison is surrounded by more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence. A sallyport with 22-ft high fencing was provided for secure entrance to facility.

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

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. 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.

CoreCivic Additional Inmate Programming at Coffee and Wheeler Facilities, Alamo and Nicholls, GA – Civil Engineer. Scope of work for each fast-track, design-build project is identical, and includes design for inmate program building for diesel mechanics and welding training and certification, and greenhouse, as well as utilities, fencing, site cameras and gate controls.

Frankfort Plant Board Headend Telecommunications Facility, Frankfort, KY – Civil Engineer. New 6,725 SF telecommunications "headend" facility containing owners cable, internet and telephone communications systems servicing city. Site features including a private drive, perimeter security fencing and masonry pilasters, parking, retaining walls, stormwater management and utility pads have been provided.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – Civil Engineer. Design services for design-build delivery of certified LEED Gold, \$182 million medium-security main complex (USP) and minimum-security prison camp (FPC) with gross building area of 780,000 SF and housing approximately 1,200 inmates. The prison is surrounded by more than 5,500 feet of 12-ft high double chain link with barbed tape high-security perimeter fence. Also included are non-lethal / lethal electrified fence and taut wire intrusion detection fences. A sallyport with 22-ft high fencing was provided for secure entrance to facility. Concrete grade beams were included to mitigate tunneling. Guard towers and perimeter patrol roads provide unobstructed views of all areas along the fence.

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

Arizona ANG 162nd Fighter Wing Installation Development Plan, Tucson IAP, AZ – Civil Engineer. Development of web-based, geo-referenced Installation Development Plan for Arizona Air National Guard's 162nd Fighter Wing (F-18 squadrons and pilot training) to consider several mission planning factors, such as next generation of fighter aircraft, second weapons Mission Design Series (MDS), Consolidated Intermediate Repair Facility (CIRF) and acquisition of additional property to support expanded missions. Included ATEP fencing and entrance control facilities.

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

Kentucky ANG 123rd Airlift Wing Installation Development Plan and CIP, Louisville, KY – Civil Engineer. Provided Installation Development Plan that allowed base to undertake variety of future aircraft and mission options, and accommodated addition of contingency response mission. Developed Common Installation Picture (CIP) to integrate facility inventory system into base-wide GeoBase GIS, providing series of maps of base, infrastructure, and facilities. Included ATEP fencing and entrance control facilities.

North Dakota ANG 119th Fighter Wing Installation Development Plan, Fargo, ND – Civil Engineer. Updating Common Installation Plans (CIP), backbone of Master Plan, through web-based documents enabling installation staff to modify plans as missions change and facilities constructed. Included ATEP fencing and entrance control facilities.

Utah ANG 151st Air Refueling Wing Installation Development Plan, Salt Lake City IAP, UT – Civil Engineer. Master planning for Air National Guard unit co-located at Salt Lake City International Airport, with current mission of eight KC-135R primary assigned aircraft (PAA) and planning for increase to twelve KC-135 PAA. Included ATEP fencing and entrance control facilities.

Tim Tong, PLS | GRW Survey Manager



YEARS OF EXPERIENCE:

With GRW: 9

Total: 23

EDUCATION

Undergraduate studies, Land Surveying/Geomatics, 2008, Austin Community College

Undergraduate studies, Project Management, 2017, Regis University

Undergraduate studies, Land Surveying/Geomatics, 2004, University of Southern Indiana

REGISTRATION

Professional Land Surveyor: KY

PROFESSIONAL AFFILIATIONS AND TRAINING

Chair, Bluegrass Capital Chapter, Kentucky Association of Professional Surveyors (KAPS)

Member, Kentucky Geographic Information Advisory Council

RELEVANT PROJECT EXPERIENCE

Samuels Field/Bardstown Airport Runway Rehabilitation and Safety

Extension, Bardstown, KY – Survey Manager. Design and construction administration services for improvements to single paved lighted 5,000 x 75 foot runway including asphalt rehabilitation (asphalt crack repair, seal coating, and new markings) and safety area extension project involving grading and related activities. GRW also assisted with grant funding acquisition (FAA and KYTC) for these projects.

INDOT/Pendleton Interstate 69 and S.R. 38 Intersection Improvement in Madison County, Pendleton, IN

– Survey Manager. Modification of S.R. 38 and I-69 diamond interchange including replacement of at-grade signalized ramp intersections with roundabouts, leaving existing S.R. 38 overpass bridge in place and terminating roundabout approaches on each side of bridge. Work also includes replacement of existing at-grade three way intersection of Enterprise Drive and S.R. 38 (just east of the I-69 interchange) with roundabout, addition of pedestrian bridge over I-69 adjacent to south side of S.R. 38 bridge, and pedestrian trail connecting roundabouts. Services include survey, traffic analysis, complex roadway design, environmental, bridge design, geotechnical, and utility coordination.

Louisville District, USACE - Boundary Survey of Flowage Easement at Rough River, KY

– Supervisor. GRW was selected by the Louisville District, USACE, to provide surveying and mapping services along Rough River in Kentucky. Tasks for this project involved mapping portions of segments C, M and N. The project included major structures and roads, field location of the 534' elevation contour, and a graphic representation of the deeded flowage easement boundary lines.

Louisville District, USACE - Indiana Levees, Gibson County Indiana, , IN

– Supervisor. GRW completed field surveys and digital mapping for ten levee sites in Gibson County Indiana for USACE-Louisville District. The project required the development of 1/2' contour data, 1" = 20' planimetrics, and control data to support the mapping operations. Mapping of each levee site was expected to begin at the riverside toe of the levee, include the levee, and then continue 600' inland.

Louisville District, USACE - Mapping of Flowage Easement at Rough

River, KY – Supervisor. GRW completed geospatial services at Kentucky's Rough River for the Louisville District, USACE. The project involves compiling maps of the deeded flowage easement, major structures, and roads, with the contour established at 534' above mean sea level. The project involves portions of segments A, C, D, E, F, G, M and N. GRW is utilizing existing orthoimagery and LiDAR that was developed by GRW on a separate contract.

Nashville District, USACE - Center Hill Boundary Survey, , TN

– Survey Manager. GRW completed boundary retracement and creation of new boundary lines for two tracts for the Nashville District, USACE, adjacent to Saddle Dam of Center Hill Lake.



AllStar Ecology LLC

Ernest W. Smith, M.S., PWS, CES

-Stream and Wetland Restoration Specialist/ Project Manager



Ernie Smith is a Professional Wetland Scientist with AllStar Ecology leading projects in West Virginia, Virginia, Pennsylvania, Kentucky, and Ohio. Mr. Smith is experienced in stream and wetland delineation, functional assessments, as well as regulatory consulting with state and federal agencies. Mr. Smith is also competent in stream and wetland design/construction and leads stream/wetland contracting projects. Also, Mr. Smith conducts general bee surveys and other pollinator habitat enhancement services in West Virginia. His focus is on enhancing habitats for both aquatic and terrestrial species while promoting native species.

Education

M.S. (2011): Biology (Plant Physiology), West Virginia University, Morgantown, WV.

B.A. (2007): Biology (emphasis in Ecology), West Virginia University, Morgantown, WV.

Experience

Stream and Wetland Restoration Specialist/Project Manager	2017-Present
Project Manager/Environmental Scientist II – AllStar Ecology, LLC	2013-2017
Environmental Scientist - AllStar Ecology, LLC	2012 -2013
Graduate Teaching Assistant - Department of Biology, West Virginia University	2009-2011
Laboratory Technician - West Virginia University Research Corporation	2008-2009

Professional Development

Society of Wetland Scientists: Professional Wetland Scientist Certification (██████████)
 Resource Institute, Inc: **River Morphology & Applications (Rosgen Training Level I)** 2016
 Resource Institute, Inc.: **Applied Fluvial Geomorphology (Rosgen Training Level II)** 2016
 Wildland Hydrology, Inc. **River Assessment and Monitoring (Rosgen Training Level III)** 2017
 Wildland Hydrology, Inc. **River Restoration and Natural Channel Design (Rosgen Training Level IV)** 2018
 WV Scientific Collection Permit for General Bee Surveys (#██████████)(#██████████)
 Thomas Biebighauser: **Elkins Wetland Restoration Workshop** (18 hour training course)
 360 Trainings: **Certified Environmental Specialist** (12 hour training course)
 USFWS: **ESA Section 7 Consultation Training** (Elkins, WV 2016)
 The Swamp School: **Wetland Delineation and Regional Supplements** (40 hour training course)
 The Swamp School: **Conducting Effective Ecological Risk Assessments** (12 hour training course)
 John Mack: **Ohio Rapid Assessment Method (ORAM) v 5.0**
 Midwest Biodiversity Institute: **Ohio Qualitative Habitat Evaluation Index (QHAI) Training**
 Midwest Biodiversity Institute: **Ohio Headwater Habitat Evaluation Index (HHAI) Training**
 American Heart Association: **CPR and First Aid Training**
 Bickerstaff Safety Consulting: **PEC Safeland Basic**
 360 Trainings: **OSHA 10 Hour Construction Outreach** (10 hour training course)

Todd A. Griffith, P.E.

DEPARTMENT MANAGER, GEOTECHNICAL SERVICES

PROFESSIONAL EXPERIENCE

Mr. Griffith currently serves as the Geotechnical Department Manager in Terracon's Charleston, West Virginia office. He is responsible for operational oversight of field and engineering activities in the Geotechnical (GEO) Department, mentoring staff, and management and analysis of geotechnical projects. He has over 13 years of geotechnical engineering experience working with public agencies such as WVDOH and USACE, working on projects involving site and subsurface investigations, design and construction of new or modified bridge foundations, cut slope analysis and design, fill slope analysis and design, the elevation and design of earth retainage structures (i.e., earthen dams, MSE walls, reinforced soil slopes), laboratory testing, and stream bank erosion mitigation.

He is proficient in the use of commercial software such as Sleep/W and Slope/W, SLIDE 7.0, Settle3D, ReSSA 3.0, MSEW 3.0, gINT Version 8, and DigiPro 2. He has worked on numerous projects and variety of clients in different areas including transportation, landslide remediation, landfill, power generation and transmission, oil and gas transmission, retail/commercial developments, local and state infrastructure, and retaining walls in multiple states.

PROJECT EXPERIENCE

Navy Operations Support Center (NOSC) Anti-Terrorism Force Protection (ATFP) Upgrades – Eleanor, WV

Mr. Griffith served as a project manager for the geotechnical exploration project for the ATFP upgrades at the NOSC in Eleanor, WV. The upgrades included additional gencing and a guard facility. Geotechnical recommendations included foundation recommendations for the building and fencing and recommendations for pavement design.

Mountaineer Challenge Academy – Camp Dawson

Mr. Griffith served as a staff geotechnical engineer and performed analyses and developed recommendations for a structure to house the Mountaineer Challenge Academy at the West Virginia Army National Guard's Camp Dawson Campus in Terra Alta, West Virginia. Recommendations for surcharging the site to allow settlement to occur and use of shallow foundations were provided. Alternatly, a deep foundation option of micropiles bearing in bedrock was provided.

I-64 Widening – Mall Road to GRB – Cabell County, WV

Served as the project manager and lead geotechnical engineer for the QAM (Quality Addurance Manager) team representing the WVDOH for the widening of I-64 from four lanes to six lanes between the Gyandotte River Bridge and Mall Road. Mr. Griffith developed the geotechnical project criteria, reviewed proposers' submissions, and reviewed conceptual, preliminary, and final designs for the winning design build team.

Wellsburg Bridge Public Private Partnership - Brooke County, WV

Served as the project manager and lead geotechnical engineer for the design-build team for the Wellsburg Bridge project for the West Virginia Department of Highways. Mr. Griffith developed and oversaw the subsurface investigation for the new Ohio River crossing which includes and alignment shift and retaining wall for WV State Route 2. Design work included retaining wall design in marginal rock and soil, abutment slope design, MSE wall abutment design, and foundation design for bridges.

US Route 35 Public Private Partnership - Putnam & Mason Counties, WV

Served as the project manager and lead geotechnical engineer for the design-build team for the final section of US Route 35 for the West Virginia Department of Highways. Mr. Griffith developed and oversaw the subsurface investigation for the 14.7-mile section of highway, including two bridges. Design work included cut slope design in marginal rock and soil, fill slope design, reinforced soil slope abutment design, and foundation design for the bridges. Engineering during construction included observation of subgrade for large diameter pipes, observing soil and rock material for usefulness in reinforced soil slope designs, and coming up with solutions to obstructions in geogrid layout for the reinforced soil slope abutments.

EDUCATION

M.S., Civil Engineering, Geotechnical Specialization, Virginia Tech, 2005

B.S., Civil Engineering
West Virginia University, 2004

REGISTRATIONS

Professional Engineer
West Virginia # [REDACTED]

Professional Engineer
Pennsylvania # [REDACTED]

Professional Engineer
Kentucky # [REDACTED]

Professional Engineer
Maryland # [REDACTED]

Professional Engineer
Ohio [REDACTED]

CERTIFICATIONS

OSHA 30-Hour Occupational Safety and Health Training

AFFILIATIONS

Member of American Society of Civil Engineers (ASCE)

Member of American Society of Civil Engineers (ASCE), West Virginia Section

American Society for Testing and Materials (ASTM)


WORK HISTORY

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

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

TRC Engineers
Office Practice Lead – Geotechnical Engineering
Charleston, West Virginia
2013-2019

* Work performed prior to joining Terracon.

 Todd A. Griffith, P.E.



SECTION 4.0

Approach & Methodology for Meeting Goals & Objectives

4.0 Approach & Methodology for Meeting Goals & Objectives

The West Virginia Department of Administration along with the West Virginia Army National Guard are embarking on an important security project at the Volkstone training site.

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

- Preliminary survey that locates all buildings on the site and delineates wetland areas near the site
- Geotechnical work to include soil borings
- Research and investigation of existing underground and above ground utilities
- A design that does not require alternate bid items
- A perimeter fence that meets all AFTP standards
- Protection of environmentally sensitive areas
- Drawings and specifications of all utility and road infrastructure as needed by owner, utility company
- Design of culvert

We also understand we will be responsible for:

- Submitting drawings at 35%, 65%, 95% and 100%, as well as revising and submitting costs estimates at each phase
- Providing construction bid services and administrative services

An Approach Based on Respect & Clarity

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

- 1) assemble the best and brightest design talent with **knowledge of the national guard/aviation projects**;
- 2) bring an **open mind** and **fresh perspectives**; and
- 3) **remain accountable** to you throughout the process for cost control/budget.

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

A Project Team You Can Count On



Leading our team will be GRW Vice President, **Ben Fister, PE, PLS, PSM**. He'll provide overall supervision for the team and be directly involved with you through every stage of the project. He regularly provides project leadership for civil/site development projects. We believe you will find him a knowledgeable engineer and a valuable partner. Ben's logical and methodical approach will provide a steady hand guiding the team and the WVARNG through the design process to a successful conclusion. He'll work to balance vision with a realistic and practical assessment of cost and schedule.

Kickoff/Charrette

As part of the first phase of the project, we'll hold an initial meeting with you and the primary project stakeholders to discuss in detail your project goals,

options for accomplishing those goals, and budget and schedule requirements for the work. Following this meeting, we issue a written record of our discussions.



Existing Conditions

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

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

We'll use all information we collect to begin an outline for recommendations – including initial cost estimates

At the conclusions of this step we will create a report that outlines the condition of the existing conditions that will be affected by the work of this project.



SECTION 5.0

Project Management & Quality/Cost Control

5.0 Project Management & Quality/Cost Control

Project Management

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

Schematic Design | 35%

Using the information from the Kickoff/Charrette and analysis of existing conditions, we continue through the A1/10% phase – and move into the A2/35% design phase. At this time we present the **schematic design** concept to you through the use of drawings, product information sheets, written narratives and an initial cost estimate. After your review of the material, we will meet together to go over the design review comments, review the budget, and document any

desired revisions. We will repeat this process as needed to reach an acceptable solution that meets your goals and budget.

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

Design Development, Pre-final & Final Construction Documents | 65%, 95% & 100%

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

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

remains within budget. We will also reconfirm final decisions on materials, equipment, and finishes.

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

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

Construction Bid Services | Construction Phase

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



GRW manages and tracks our construction administration and resident inspection responsibilities using **Newforma® Project Center** (project information management software); this

GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) have extensive experience in developing projects through the WV Purchasing Division. For many years, we have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state. The West Virginia Division of Highways (DOH) recently began working with the State's Purchasing Division for building projects, and our \$10 million equipment shop building for District One was the first project that the DOH bid through the WV Purchasing Division. Our knowledge and experience of the State's purchasing procedures made this an easy transition for all stakeholders. Although every agency has its own particulars with regard to bidding projects, our experience with the West Virginia Purchasing Division will help ensure effective and efficient project delivery.

ensures that the process is transparent to all parties. Newforma has built-in modules specifically developed for the A/E industry. **Using this system, Owners, Design Team, and Contractor/GC all have access to real-time logs showing the current status of all construction-related activities.**

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

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

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

Our team performs semifinal inspections of the project and creates a list of work yet to complete prior to the final technical inspection. Upon completion, we will



provide a set of record drawings based on mark-ups from the contractor, to show field changes made during construction. These drawings are reviewed by the Project Manager and serve as the record drawings for the project and are suitable for facility management.

Changes

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

Flexibility

These procedures are not cast in concrete, as GRW prides itself on being an organization which seeks to simplify and expedite procedures that can impede the work and stifle creative people. Sometimes these procedures are streamlined for smaller projects, and sometimes they are more formalized for larger projects but at all times they remain flexible to accommodate the needs of our client's organizations. We want you to be satisfied with the quality of your facility: the bottom line is that GRW cares a great deal about securing repeat business with our clients.

Quality & Cost Control

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

Quality Control

Roderick Saylor, PE, Project Manager, has primary responsibility for the daily management and coordination of the project team. With over 17 years of experience, he has a clear understanding of the most effective methods for maintaining the programming, planning, and design schedule.

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

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

A key element in effective Quality Assurance/Quality Control (QA/QC) is the use of regularly scheduled progress meetings. A kickoff meeting between key members of GRW's proposed project team and your management and staff will be held to ensure a common understanding of the goals and objectives among all project partners. These issues will be

reviewed and the work plan will be discussed in detail. Regular meetings will then be scheduled throughout the project to report on project progress and to review technical issues. These meetings provide a forum for discussing concerns and ideas. The assigned Project Manager is the primary conduit for communication between you and the design team.

TEAM MANAGEMENT: QA/QC is enhanced at GRW since most design disciplines are in-house. Because of this, scheduling internal team meetings or over-the-shoulder reviews is greatly simplified. On this project, the Project Manager will conduct weekly team meetings with the design team members to facilitate coordination of design issues. Any design problems are identified along with a path for their correct resolution. A checklist managed by the Project Manager is used to track the resolution of issues from meeting-to-meeting.

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

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

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

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

Cost Control

PROJECT BUDGET ACCOUNTABILITY: Government officials are accountable to the public for the expenditure of public monies. The GRW team understands this obligation and develops a project design that is cost-effective and delivers an efficient and appropriate use of funds assigned to the military. Rarely do projects have sufficient budget to accommodate everything on the programmatic *wish list*. Reconciling the program against the project budget is done early and often in order to guide the

project to a successful conclusion. GRW approaches this process in a pragmatic and open manner. This subject will be on the agenda of every project meeting we have with you for open and frank discussion so that everyone is kept abreast of any potential concerns. Prioritizing the program relative to the budget can be a difficult task, with different stakeholders sometimes at odds over how to resolve differences of opinion. GRW excels at guiding this process and helping you to resolve these differences.

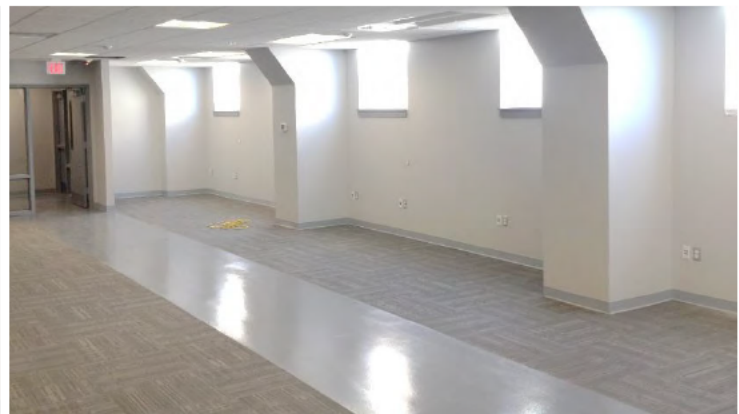
GRW has a strong history of successful estimating of projects, and our design experts will draw upon this knowledge during the development of our construction cost estimates.

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



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

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



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.

West Virginia Air National Guard

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

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

West Virginia Army National Guard

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

Federal Bureau of Prisons

Judah Organic, Design Compliance Programs
Manager
(202) 514-9566
jorganic@bop.gov

East Kentucky Power Cooperative

Matt Clark, PE, Senior Engineer – Production
(859) 745-9275
Matt.Clark@ekpc.coop

Commonwealth of Kentucky Department of Corrections

Gurvant Shah, PE, Branch Manager
(502) 564-2094 x227
Gurvant.Shah@ky.gov

Appalachian Regional Airport Mingo County Airport Authority

P.O. Box 1408
Williamson, WV 225661
Mr. Denver Stacy, Chairman (304) 784-6925
jennascrane@hotmail.com
Leigh Ann Wells-Ray, Airport Assistant (304) 235-0338
lwells@mingocountywv.com

SECTION 7.0 | West Virginia EOI Forms





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

State of West Virginia
Centralized Expression of Interest

Proc Folder: 1039817

Doc Description: Volkstone Perimeter Fence-Design Camp Dawson

Reason for Modification:

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2022-05-03	2022-05-17 13:30	CEOI 0603 ADJ2200000013	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: 000000218570

Vendor Name : GRW

Address : 801 Corporate Drive

Street :

City : Lexington

State : KY

Country : USA

Zip : 40503

Principal Contact : Roderick Saylor, PE

Vendor Contact Phone: (859) 223-3999

Extension: 208

FOR INFORMATION CONTACT THE BUYER

David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor
Signature X

FEIN# 61-0665036

DATE May 16, 2022

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

**ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)**

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

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

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

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

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to 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 individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Ben O Fister Chairman of the Board
(Name, Title)
Ben Fister, Chairman of the Board
(Printed Name and Title)
801 Corporate Drive
(Address)
Lexington, KY 40503
(Phone Number) / (Fax Number)
bfister@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.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

GRW
(Company)
Ben O Fister Ben Fister, Chairman of the Board
(Authorized Signature) (Representative Name, Title)

Ben Fister, Chairman of the Board
(Printed Name and Title of Authorized Representative)

May 16, 2022
(Date)

859-223-3999 / 859-223-8917
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

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

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

DEFINITIONS:

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

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

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

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: GRW

Authorized Signature: Ben O. Fister Date: May 16, 2022

State of Kentucky

County of Fayette, to-wit:

Taken, subscribed, and sworn to before me this 16 day of May, 2022.

My Commission expires August 1, 2022.

AFFIX SEAL HERE



NOTARY PUBLIC

Louise Godshall

Purchasing Affidavit (Revised 01/19/2018)