



ENGINEERING
ARCHITECTURE
FIELD SERVICES

RECEIVED

2019 JAN 24 AM 9:47

WV PURCHASING
DIVISION

January 25, 2019

Attn: Stephanie Gale, Senior Buyer
2019 Washington Street East
Charleston, WV 25305

RE: West Virginia Army National Guard Wheeling AASF#2 Rotary Wing Aircraft Hangar Addition

Dear Ms. Gale and Selection Committee Members:

The West Virginia Army National Guard is in need of assistance to design, fund, bid, and construct a new hangar at the Wheeling Army Aviation Support Facility #2. This type of project requires a host of resources, experience, and personnel to accomplish, with a full team of experts on your side - the Thrasher Group has put together that team.

Thrasher, a full-service architecture, engineering, and field services firm, has a wide variety of services that will speak to your needs. Our staff can work as your partner through this project, not only providing the design services you're looking for, but assisting in obtaining funding and bids and providing construction administration so this hangar design can become a reality.

In addition to Thrasher's expertise, we have opted to team with H.F. Lenz and Allegheny Design Group. These two firms bring another level of experience to the table, with H.F. Lenz providing a mechanical and electrical background and Allegheny Design Group bringing a resume of structural projects. Both firms have a strong background in their respective industries and a strong relationship with Thrasher.

We appreciate the opportunity to present our qualifications and look forward to further showing you how this team can make your project a success.

Sincerely,
THE THRASHER GROUP, INC.

Ashley Lyons
Project Manager

MISSION

To improve the communities where we live and work by driving infrastructure development.

CORE PRINCIPLES

Quality
Safety
Adaptability
Integrity



9

OFFICES

in six states:

West Virginia
Virginia
Pennsylvania
Ohio
Maryland
Kentucky



580

EMPLOYEES

35 Licensed Professional Engineers

20 Licensed Professional Surveyors

6 Licensed Professional Architects



35

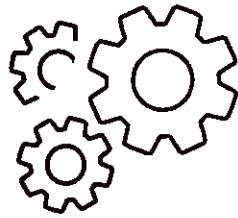
YEARS

of delivering successful projects

Main Point of Contact

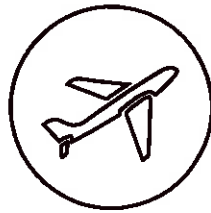
Ashley Lyons
Project Manager
alyons@thethrashergroup.com
304-326-6367

Thrasher has worked with airports across West Virginia, performing various upgrades, extensions, renovations, and acquisitions to enhance the day-to-day experiences of travelers and employees. We have the staff, knowledge, and resources to take your project from concept to completion.



SERVICES

- > Architecture
- > Survey
- > Engineering
- > Construction Management
- > Environmental
- > Materials Testing and Inspection



AIRPORT SERVICES

- > Hangar Design
- > Apron Construction
- > Runway Pavement Rehabilitation
- > Terminal Rehabilitation
- > Procurement of Snow Equipment
- > Security Facilities
- > Environmental Clearances
- > Runway Expansions
- > Procurement of Operations Equipment
- > Master Planning
- > De-Icing Facilities
- > Navigational Aids
- > Run-Up Pads
- > Funding Application Assistance

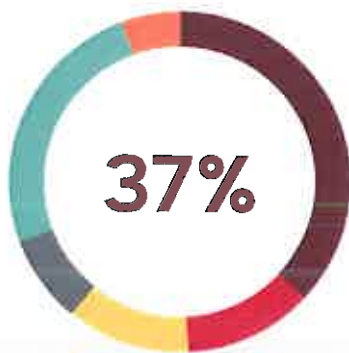
OFFICE LOCATIONS

- > Bridgeport, WV
- > Charleston, WV
- > Beckley, WV
- > Burton, WV
- > Fredericksburg, VA
- > Canonsburg, PA
- > Canton, OH
- > Oakland, MD
- > Lexington, KY



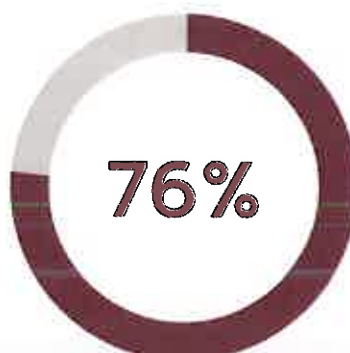
With offices across the Mid-Atlantic region, we have the knowledge, experience, and personnel to make your project a success.

Throughout the years, Thrasher has mastered the art of funding projects. Our Project Managers understand the importance of finding the most cost effective and cost efficient funding for our clients' projects. More importantly, we know that securing funding is competitive. As a service to our clients, we work closely with the Regional Planning and Development Councils, as well as project administrators and the various funding agencies. We attend every WV Infrastructure and Jobs Development Council meeting to ensure that our clients' projects are given every consideration. By doing so, we are able to move projects forward as quickly as possible.



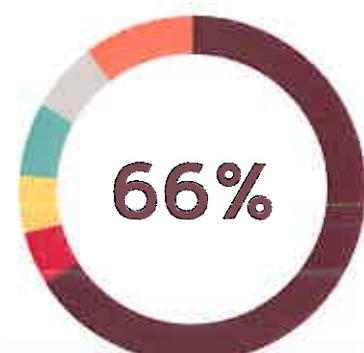
**SMALL CITIES BLOCK GRANT
2015**

- 37% Thrasher
- 25% EL Robinson
- 12% B&N
- 12% Stafford
- 8% Dunn
- 6% Hildreth



**WVIJDC FUNDING
2015**

- 76% Thrasher
- 24% Others



**USDA RUS FUNDING
2015**

- 66% Thrasher
- 10% GRW
- 8% EL Robinson
- 8% Others
- 4% Stafford
- 4% GGJ



ARCHITECTURE

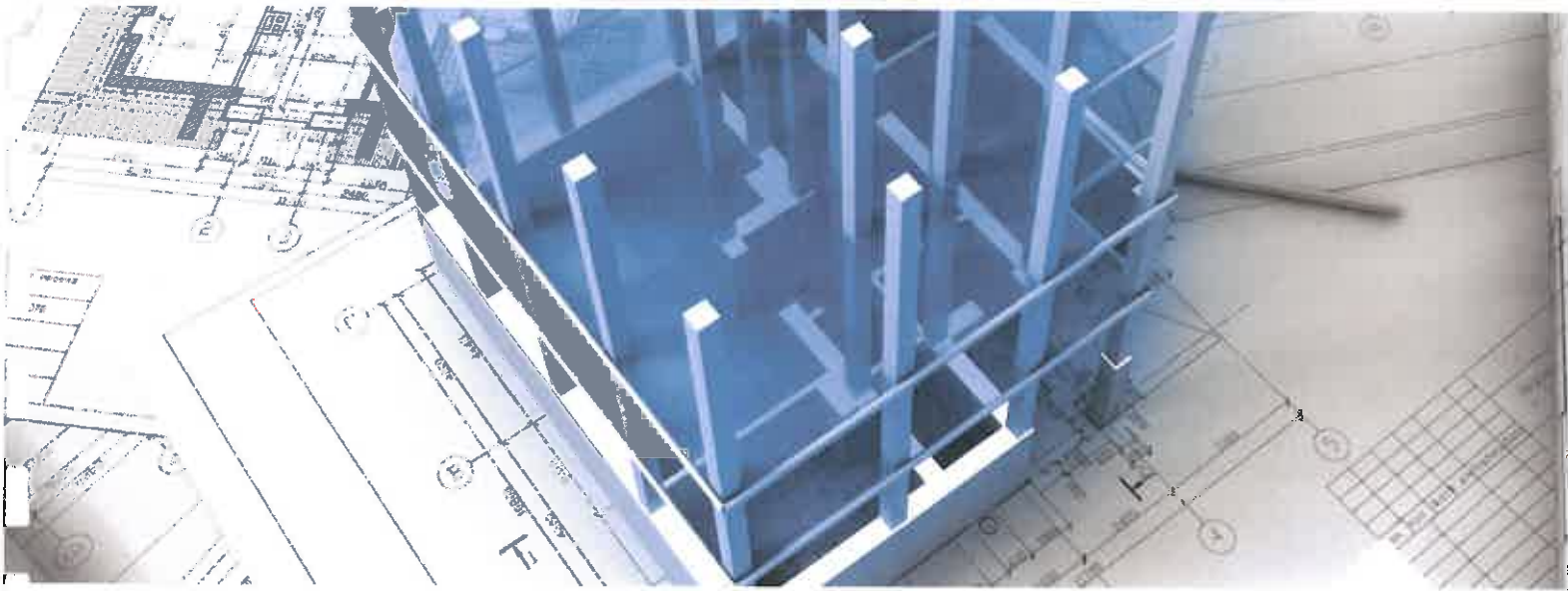
Thrasher offers a broad range of architecture and building design services to suit the needs of each individual client. Our approach to understand our clients' goals and challenges makes us sought after in a variety of markets: educational facilities, commercial and retail spaces, healthcare facilities, government buildings, banking and financial institutions, and industrial warehouses to name a few.

We have experience in numerous delivery systems, including design-build, design-bid-build, and have worked with owners to develop preliminary packages for alternative selection.

At Thrasher, we pride ourselves on exemplary aesthetic design while keeping our roots firmly planted in accurate cost estimating, budget control, and sustainability. Fulfilling our clients' needs in a responsible and innovative way has earned our firm recognition throughout the Mid-Atlantic region.

Architectural Expertise:

- > Public and Private Office Buildings
- > Healthcare Facilities
- > Educational Facilities
- > Financial Institutions
- > Building Additions and Renovations
- > Recreational Facilities
- > Public Safety Buildings
- > Single Family Residential Units
- > Multiple Family Residential Units
- > Historical Preservation
- > LEED Certification



BUILDING INFORMATION MODELING

Thrasher uses the components of BIM on every architectural project we undertake because of the benefits it provides during design process for construction and the advantage it gives to our clients with the finished product. Thrasher has developed a unique set of BIM standards that are utilized on every project from design through construction. Thrasher uses programs such as Revit for architectural, structural, mechanical, electrical and plumbing design, and 3D visual design; Autodesk 3Ds Max for realistic visualization; Autodesk Civil 3D 2015 for civil and site work; Autodesk Navisworks for additional coordination efforts before a project has been bid; and TimeLiner to develop a simulated construction schedule that may be analyzed and improved throughout the project. Thrasher recognizes the importance of each program to the cohesion of the final product, and understands that our integrated approach to using BIM results in successful, timely, and budget-friendly projects for our clients.

Why Thrasher Utilizes BIM:

- > **Accuracy:** BIM technology delivers exceedingly accurate construction documents at any given phase of the building design, enhancing project cohesion.
- > **Cost Savings:** This technology examines how a completed building comes together in the end, which reduces the amount of change orders during construction.
- > **Quality:** BIM delivers incredibly realistic renderings within the construction documents, thus, ensuring a higher quality end product for the client.



INTERIOR DESIGN

Thrasher offers a broad range of interior design services to meet the needs of each project. Our interior design staff specializes in taking your space from average to spectacular. We take time to listen to our clients and learn their vision for the space. If visualization isn't your strong suit, our designers will come up with multiple schemes for you to choose from to ensure we give you a space of which you can be proud.

Whether you prefer bright and bold or more traditional finishes, our team is sure to come up with a design that works for you. All of our designs utilize environmentally-friendly materials, but if you prefer to obtain LEED certification, our interior design team holds the esteemed LEED certified Interiors accreditation. No matter whether your interior design needs are large or small, our team of professionals will be there to guide you every step of the way.

Interior Design Expertise:

- > Tenant Fit-Outs
- > Public and Private Office Buildings
- > Healthcare Facilities
- > Educational Facilities
- > Financial Institutions
- > Building Additions and Renovations
- > Recreational Facilities
- > Public Safety Buildings
- > Single Family Residential Units
- > Multiple Family Residential Units
- > Historical Preservation
- > LEED Certification



SITE DEVELOPMENT

Engineering for site development is far from a "one size fits all" approach. Every project is unique and requires a blend of technical expertise, planning principals, efficient design, market realities, and the flexibility to seize opportunities. With our diverse staff, Thrasher has a winning combination of talent to take projects from design to reality.

At Thrasher, we understand that the design of a successful site development project must factor in economic landscape, political implications, and strategic planning that takes projects beyond engineering. The Thrasher team possesses expertise in every facet of development, including site selection and planning, grading, storm water management, erosion and sediment control, permitting, and infrastructure design.

We pride ourselves on being a partner in projects that improve the quality of life for residents and provide economic sustainability to communities.

Site Development Expertise:

- > Industrial and Business Parks
- > Mixed-Use Developments
- > Athletic Facilities
- > Federal Correctional Facilities
- > Streetscapes and Sidewalk Planning
- > Commercial Developments
- > Single and Multi-Family Residential Development
- > Primary, Secondary, and Higher Education Facilities
- > Recreational Resorts and Guest Lodging
- > Shopping Plazas



SURVEY AND MAPPING SERVICES

Thrasher employs one of the largest survey departments in the Mid-Atlantic region and offers a wide range of land surveying and related services for federal, state, and private clients. We are committed to evolving our techniques and equipment to best serve our clients and their growing needs.

At Thrasher, we are able to provide both surveying and engineering services which provide a distinct advantage over survey-only companies. The combination of these two services provide our surveyors with a better understanding of what engineers and architects require to develop an appropriate design for different types of projects. Our field and survey personnel offer extensive experience, certified training, and flexibility to meet our clients' unique project schedules.

Route Location Surveys:

- > Transmission Lines
- > Natural Gas Pipelines
- > Wind Turbine
- > Roadway, Railway, and Rec Trails

GPS Surveys:

- > Geodetic Control Networks
- > Ground Control for Aerial Mapping
- > Telecommunications
- > FAA 1A and 2C Letters

General Survey Services:

- > Large-Scale Boundary Work
- > Topographic Survey and Mapping
- > ALTA/ACSM Survey and Mapping
- > Lake and River Soundings
- > Accident Reconstruction Survey & Mapping
- > Drug-free Zone Mapping
- > Expert Witness Testimony
- > Construction Layout
- > Permanent Project GPS Base Stations
- > Building Control and Layout
- > Road/Bridge Alignment and Staking
- > Sewer/Water/Pipeline
- > Site Layout
- > Quality Assurance Surveying
- > Volume/Quantity Surveys
- > As-Built Surveys

Coal and Energy Surveys:

- > Pre and Post Mining Blast Surveys
- > Water Quality Monitoring Plan
- > Construction Layout
- > Emergency Control Survey/Plans



REMOTE SENSING

Thrasher is fully licensed with the Federal Aviation Authority to fly unmanned aerial systems, or UAS. In addition to our full survey and GIS departments, we offer our clients the most cutting edge aerial imagery for mapping, monitoring, and site updates. The use of remote sensing technology has allowed us to deliver the most accurate and up-to-date project information to our clients.

UAS can accomplish tasks in less time and with fewer safety hazards than traditional ground-based methods. Thrasher utilizes both fixed-wing and multi-rotor Unmanned Aerial Systems to meet the needs of a diverse range of projects. At Thrasher, we work with our clients to ensure that their vision is met.

Remote Sensing Services:

- > Mapping
- > Videography
- > Pre- and Post-Construction Documentation
- > Construction Progress Analysis
- > Building Inspection
- > Mixed Reality Imagery
- > LIDAR
- > Thermal Imagry

Remote Sensing Markets:

- > Municipal
- > Energy
- > Telecommunications
- > Real Estate
- > Transportation
- > Emergency Services
- > Environmental
- > Architecture



**Federal Aviation
Administration**
Approved Section 333





ENVIRONMENTAL PERMITTING

The Environmental Division of the Thrasher Group provides permitting, consulting, and assessment services to a multitude of clients spanning the Mid-Atlantic region. With a combined 40 years of permitting experience, Thrasher's Environmental Scientists, Permitting Leads, and Project Managers are able to take even the most complex and time restrictive projects and provide clients with cost effective and timely solutions.

Federal Permitting

- > Federal Aviation Administration Environmental Permitting
- > CATEX
- > Short Form Environmental Assessments
- > Environmental Assessments
- > National Preservation Act - Section 106 Consultation
 - > *State Historic Preservation Office or Division of Culture and History*
- > Endangered Species Act – Section 7 and Section 9 Consultations
 - > *United States Fish and Wildlife Service*
- > Clean Water Act – Section 404 Permits
 - > *United States Army Corps of Engineers*

- > National Environmental Policy Act – Categorical Exclusions, Environmental Assessments, and Short Environmental Assessment Forms

- > *United States Army Corps of Engineers; Federal Aviation Administration; Division of Transportation; and Federal Communications Commission*

State and Local Permitting

- > State Responsible Regulations of the Clean Water Act – Section 401 and 402 Permits
- > State Level Rare, Threatened, or Endangered Species Consultations
- > State Level Aquatic Resource Encroachment and Impact Permits
- > State Level Roadway Encroachment, Crossing, and Occupancy Permits
- > State Level Industrial Waste Discharge Permits
- > Local Level Floodplain or Building Permits



MS4 CONSULTING AND COMPLIANCE

Ever increasing Federal EPA requirements, State DEP regulations, and a renewed focus on the downstream effects impact on the Clean Water Act are pushing municipal separate storm sewer separation (MS4) to the forefront. Working with an experienced MS4 Consultant like Thrasher gives municipalities and private clients innovative and cost-effective solutions to stormwater management issues.

Our complete system approach means that we gain a full understanding of our clients' needs and can incorporate specialized project management expertise to achieve a smooth, seamless design. Thrasher has a long and successful history of working with regulatory agencies, public utility clients, and private developers to find sustainable and innovative solutions to small municipal storm sewer systems management issues.

Small MS4 Management Expertise:

- > Permit Compliance
- > Program Consulting and Mentoring
- > Watershed Study
- > Stormwater Conveyance Mapping
- > Geographic Information Systems (GIS)
- > Best Management Practices (BMP's) Evaluation And Design
- > BMP Tracking Documentation
- > Erosion And Sediment Control Plans Review
- > Site Inspection
- > City Ordinance Review
- > MS4 Training
- > Separated Storm Sewer Conveyance Systems Evaluation and Design
- > Evaluation and Development of Funding Scenarios
- > Industrial Facilities and Good Housekeeping Practices Evaluation and Design



CONSTRUCTION ADMINISTRATION

Effective management of our projects ensures that both clients and contractors work in an efficient and safe manner. From pre-construction activities - such as bid conferences and surveys - to inspections, job progress reviews, and on through final completion, our goal is work that proceeds in accordance with plans and specifications.

At Thrasher, we inspect and manage a wide variety of projects designed by our firm in addition to projects for contractors and other designers. We have certified project representatives responsible for overseeing every element of design integrity. Our methods have earned the respect of not only our clients, but contractors and project owners alike.

Construction Inspection Services:

- > Construction Materials
- > Pipelines
- > Structural Steel & Concrete
- > Paving
- > Drainage
- > Embankments
- > Work Zone Safety & Traffic Control
- > Erosion and Soil Control

Quality Control and Assurance Methods:

- > Regularly Scheduled Planning and Progress Meetings
- > Engineering During Construction
- > Daily Logs and Progress Sheets
- > Cut Sheets
- > Quantity Tracking

The Thrasher Group has worked on small- and large-scale projects at airports across West Virginia. We have experience on a variety of project types, from hangars to terminal upgrades and everything in between. Our multi-functional team allows us to handle not only architectural components of airport work, but site, survey, aerial imagery, and construction administration work as well.

Some of these services include, but are not limited to, the following:

- > Taxiway widening
- > Runway extension
- > New taxiway
- > Apron expansion
- > Acquisition of snow equipment
- > Security upgrade
- > Materials testing for runway extension
- > Parking lot paving
- > Airport master planning
- > Terminal design and upgrades
- > Construction and demolition of hangars
- > Industrial park
- > Access road
- > Perimeter fencing
- > Cost estimates
- > FAA regulations
- > Permitting

	Runway Rehab	Architecture	Construction Administration	Roof Replacement	Terminal Upgrades	Taxiway Upgrade
Yeager Airport		X		X		
North Central WV Airport	X	X	X	X	X	X
Raleigh County Memorial Airport	X	X	X		X	X
Huntington Tri-State Airport		X	X			





Thrasher has completed the design of several airport hangars in West Virginia, for both the North Central West Virginia Airport (CKB) and the Raleigh County Memorial Airport. While only one of these structures was built, the others were all designed and bid out by the Thrasher team.

Design-Bid-Build

Thrasher's Architecture and Site Divisions worked together to create a 20,000 square foot hangar at North Central West Virginia Airport. This project, designed to house an airplane, included basic lighting, insulation, a man door, and rolling hangar door. It also included the addition of ramp space and a taxiway to access the hangar.



Design-Bid

After the success with the first hangar build, CKB had Thrasher design two more hangars – a 20,000 square foot structure and a 10,000 square foot structure. These designs were put out to bid and received strong response, but were ultimately not built because of leasing issues. Along the same lines, the Raleigh County Memorial Airport commissioned Thrasher to develop conceptual plans and environmental documents for a 40,000 square foot hangar. Thrasher's team had plans cleared with both the FAA and environmental groups and built a taxiway for the planned maintenance and repair facility, but ultimately did not end up constructing the building because of leasing issues.



Thrasher has completed design for approximately 90,000 square feet of hangar space at West Virginia airports.

Glycol Recycle Tanks

Client Contact:

Mr. David Butler, Project Manager,
Dawn Incorporated
2861 Sferra Ave. NW | Warren, OH 44483
330-652-7711

The 171st Air Refueling Wing and the Air Reserve Station were in need of a new Glycol recycling tanks to ensure this substance was being disposed of properly. The Thrasher Group was hired as part of a team – along with Dawn Incorporated – to demolish the existing Glycol recycle tanks and design new systems.

The Thrasher-Dawn team worked closely to provide a project approach and two alternatives for the government to choose from with the project bids. After selection, the project managers from both companies were able to work together to not only meet the project timelines but come in under the project budgets as well. This was possible thanks to the constant communication between our team and the client: a design team kick-off meeting started the process, and design review meetings were held at 30%, 60%, and 90% to ensure plans were meeting expectations.

Once the plans were approved, the tanks were ordered to get a quick start on the new system. The structure that was ultimately put in place for these projects was designed to capture the used Glycol and water mixture and store it at a volume allowing the two bases to monitor each location and system to ensure they were functioning as intended. As the tanks reach their limits, the government will test the mixture to make sure it is acceptable for pumping and trucking off site. This system has gone through a Standard Operating Check and been put in place to serve the two installations respectively.



Thrasher provided these services for the US Air Force Reserves on two occasions - in 2014 and 2018, for the Pittsburgh International Air Reserve Station and 171st Air Refueling Wing respectively.



Hangar Heating

Hangars require heating systems capable of quick recovery. We have designed hangars with each hangar door segment opening individually, but generally huge amounts of cold outdoor air still enters the hangar when aircraft are towed in and out. Our most successful heating system application is the use of hot water radiant floor systems. Our design utilizes an 82 deg F floor surface temperature which provides excellent quick recovery, very little wasted energy due to air stratification and the system never "overheats." Being a low temperature radiant heating system (below human body temperature) and with automatic controls, when warm weather is encountered during the spring and fall, the system regulates itself since radiant energy is only transmitted based on the temperature difference between the concrete floor slab and the various building components. If warm outdoor air enters the hangar through open doors and heats walls and ceilings, then the system will radiate less heat. Regarding occupant comfort, the helicopter maintenance staff and crews are usually very satisfied with lower ambient indoor air temperatures achieved with radiant floor systems. Flexible plastic tubing would be embedded in the concrete floor slab with no fittings. Epoxy floor coatings are also an excellent surface finish working well with the radiant floor system. Another less expensive, but effective, heating system option is high temperature overhead radiation using direct-fired natural gas (such as co-ray-vac).

Hangar Amenities

We have incorporated many useful features into utility trenches and overhead for operational and maintenance staff needs. Compressed air, soap supply solution, hot water and cold water can be provided within utility trenches. Overhead power cord reels and compressed air hose reels are also provided. The hangar door tracks, embedded in the concrete slab, are always provided with an ice and snow melt system for dependable operation in the winter.

Hangar Fire Protection

Our recent experience in National Guard Hangars for helicopters has been with High Expansion Foam systems. We have also successfully designed AFFF using monitors, deluge heads and conventional sprinkler heads. In all cases strict attention must be given to draft curtains, head locations and automatic detection and activation. Also many times there is not sufficient water flow and duration capability at an existing base or new site. We have designed several on-site water storage systems (up to 250,000 gallons) and diesel-fired fire pump systems to meet DOD and NFPA requirements, when base or utility infrastructure is inadequate.

Hangar Fluid Discharge Provisions

Several contaminants exist on hangar floors which must be collected and stored for proper disposal. We are experienced in the design of interceptors for sand, oil and acids. Also, any fire protection discharge of AFFF or High Expansion Foam must be properly collected and disposed of properly.



Ohio National Guard Akron-Canton Regional Airport

Client Contact:

Mr. George McCann, Ohio Adjutant General's Department
2825 West Dublin-Granville Road | Columbus, OH 43235
614-336-7413

Expansion and Alterations to the Army Aviation Support Facility Hangar

H.F. Lenz Company provided the mechanical, electrical, plumbing, fire protection, and structural engineering services for the expansion and alteration of the existing Army Aviation Support Facility (AASF) hangar. The existing hangar, originally constructed in 1986, did not have adequate capacity to house the newly assigned CH-47 helicopters at the facility. The existing facility was also not equipped with a fire suppression system. The requirements of the project included partial demolition, expansion of the foundation and floor area of the existing hangar by 11,088 sq.ft., a new fire suppression system, modifications to the existing security systems and various interior improvements. The expanded facility is now able to accommodate three CH-47 helicopters.

The project also included the design of a new 26,400 sq.ft. aircraft storage facility.

Key elements of the design included:

- > Design of FAA lighting
- > Fuel/water separator systems
- > Fixed foam fire suppression systems
- > Structural supports
- > Tie downs

Project Cost: \$6,700,000

Project design was complete in 2008.





New Helicopter Support Facility

The H.F. Lenz Company provided mechanical, electrical, and fire protection engineering; site development; and surveying services for the planning and development of a new U.S. Army Reserve Center and Aviation Support Facility located at the Johnstown Municipal Airport. The project consisted of a 120,000 sq.ft. multi-building complex located on a 75-acre site and includes:

- > A U.S. Army Reserve. Aviation Maintenance Shop with administrative offices, conference areas, classrooms, tool and parts storage, battery storage and charging room, flammable storage, 31,000 sq.ft four aircraft maintenance hangar bays, special shop areas, a wash bay, and military aircraft and vehicle parking.
 - > Hangar floor area of 330' x 94' with a safety corridor around the perimeter is comprised of flexible work bays and a wash bay.
 - > Individually motorized operation sliding doors.

US Army Aviation Facility

Johnstown, Pennsylvania

- > A 5-ton crane with a 40 foot span serves the entire hangar.
- > A foam water fire suppression system is provided along with a detention area.
- > The project included extensive shop areas and aircraft related spaces.
 - > Administrative spaces include offices and common administration area, classrooms, legal, medical, computer work area and reserve facilities.
 - > Common spaces include lobby, break room, toilets & locker rooms.
 - > Access road, utilities, taxiways, hangar apron areas, compass rose, associated aircraft and taxiway lighting, and site storm drainage collection and retention.
 - > An Armed Forces Reserve Center with administrative areas, unit common space, an education facility with assembly hall, classrooms, learning center, library, and flight simulator.
 - > Van pad with support facilities.
 - > Cost estimates using the M-CACES software.
 - > Life cycle cost analysis (LCCA).
 - > The project included design of hot water radiant floor, fuel/water separator systems, fixed foam fire suppression systems, elevators, structural supports, and tie downs and a new fire pump house and water distribution loop serving the entire site.



HFL provided design services for the 911 Airlift Group on a two-year indefinite delivery A/E contract. On all projects, operations of the Base were maintained during construction. Major projects included:

Alter Hangar Building 129: HVAC, plumbing, electrical, fire protection and structural engineering design services for the renovations to Hangar Building 129. Electrical system design included new underground electrical service. A manhole and a load interrupter switches were installed and the new service was routed to a pad mounted, liquid-filled transformer. New underground secondary service was extended from the pad mounted transformer to the main distribution panel located within the Building. Other Electrical Systems for the Hangar addition included the installation of receptacles, lighting fixtures, emergency lighting and exit signs and the 28 Volt DC power system. The fire alarm system for the Hangar was also extended to service the addition. A high expansion foam fire protection system was added.

US Air Force, 911th Airlift Group/CE
Greater Pittsburgh International Airport
Coraopolis, Pennsylvania

Aircraft Maintenance Hangar, Building 416: Modified existing wet pipe sprinkler system and provided new automatic wet fire sprinkler system for building addition.

Repair/Add to/Alter Building 332: Designed a new vehicle wash building including radiant heating and vehicle carbon-monoxide monitoring and exhaust system with new state-of-the-art fuel delivery system with leak detection and monitoring system.

Apron Paving Repairs

Alter Pharmacy, Building 319: Replaced existing roof and provided a canopy over the loading dock. Removed and relocated all exterior lighting. The entire building was considered hazardous storage.

New Parking Lot: along Defense Avenue

Maintain/Repair/Alter Building 300 (Base Exchange): Three new vestibules were added to the building.

Repair Base Fire/Security Alarm System: Replaced existing fire and security alarm monitoring system with a new microprocessor-based system along with a computer and printers.

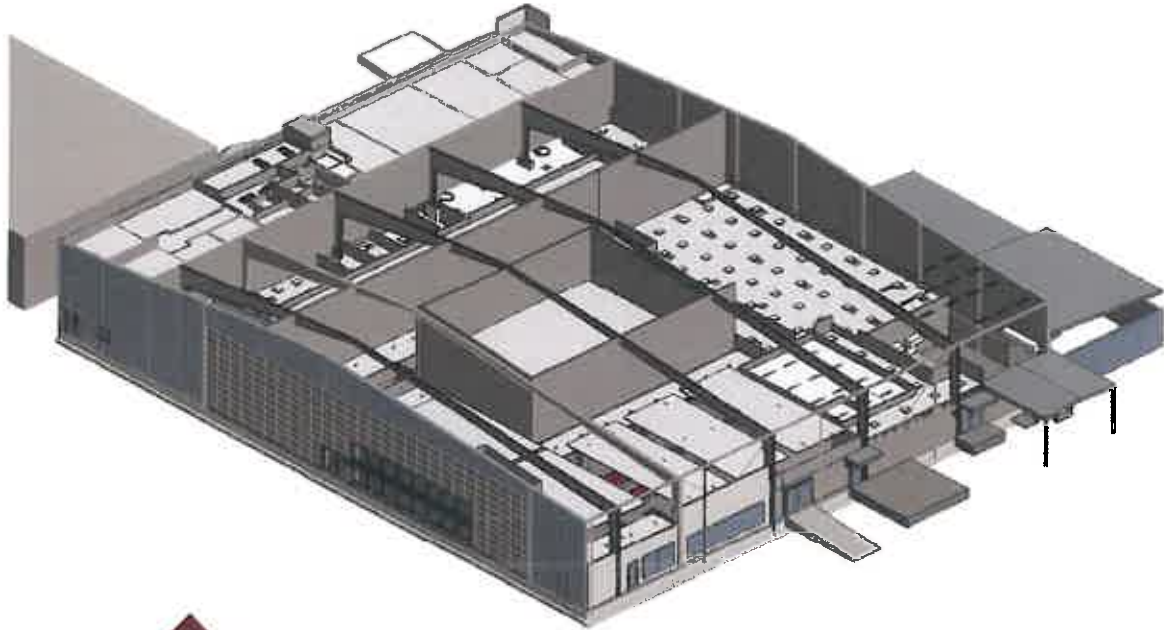
Base Civil Engineering Building: Under a separate contract, HFL provided engineering services for a new 21,700 sq.ft. Base Civil Engineering Building



Allegheny
Design Services
Consulting Engineers

- > BOMB-04-01 - Bombardier Tail Stand Reinforcement BOMB-2002-01 - Analysis of 4-Story Tail Stand
- > BOMB-2002-02 -Floor Plate Analysis
- > BOMB-2003-01 - Portable Fall Protection Stand
- > BOMB-2003-02 - New Engine Stand
- > BOMB-2003-03 - Plate Analysis
- > BOMB-2003-04 - Frame Analysis for Fall Protection System BOMB-2005-001 - Aircraft Anchor TieDown
- > BOMB-2006-001 - Bombardier Cable Reels
- > BOMB-2007-01 - Bombardier Tail Stand Repair
- > BOMB-2011-01 - Stair Well Fall Protection
- > BOMB-2012-01 - Fall Protection Bays 700-900
- > BOMB-2012-02 - Tie Down Plate 2012
- > BOMB-2012-03 - Mezzanine Floor Load Analysis
- > BOMB-2012-04 - Fork Lift Platform Assessment BOMBARDIER-2007-01 - Aircraft TieDown Plates





KCI Building renovation North Central West Virginia Airport (CKB)

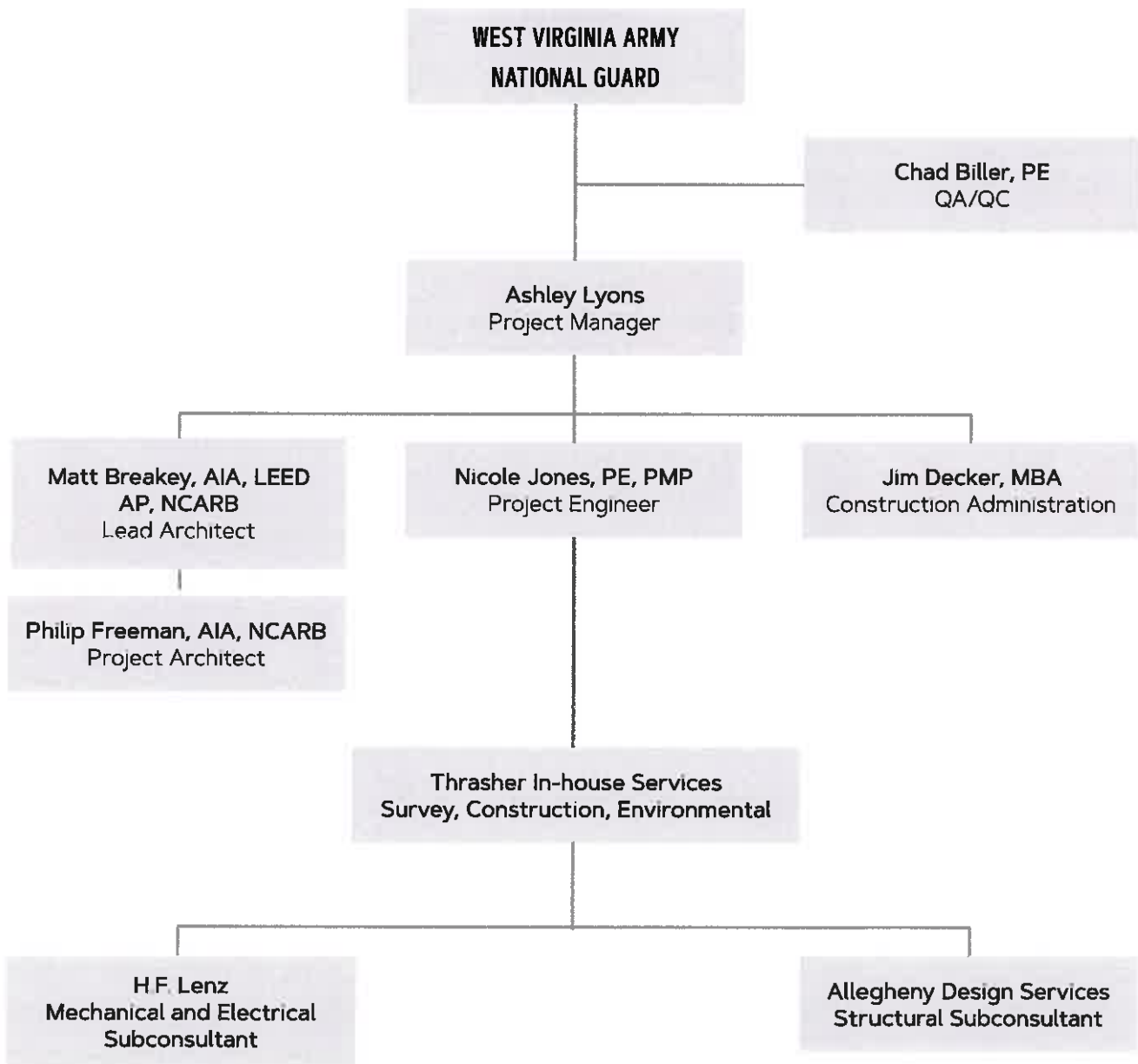
Project Scope

- > Renovations to Existing Hangar Maintenance facility
- > Façade Support and Relocation of Stairs
- > New Canopies, Elevator and Suspended Ceiling.
- > Redesign of Type III Building , analysis and new structure
- > Project designed and put on hold

Project Architect - The Thrasher Group

Structural Engineer - Allegheny Design Services





QA/QC



Education

Bachelor of Science,
Civil Engineering
West Virginia University

Registrations

Professional Engineer:
> West Virginia
> Ohio

Affiliations

- > American Society of Highway Engineers
- > American Society of Civil Engineers
- > National Society of Professional Engineers

Chad Biller, PE leads Thrasher's team of highly talented engineers and support staff for virtually all of the firm's aviation industry projects. Chad has devoted much of his career to working alongside the airport authorities of West Virginia, including Central West Virginia, Benedum, Huntington Tri-State, and Raleigh County Memorial Airports.

Through the course of his career, Chad has overseen the design and implementation of nearly \$60 million in construction with these airport authorities. His work has included site grading, access roads, runway improvements and extensions, stormwater management, safety enhancements, and the development of adjacent airport properties.

Chad's proactive approach to projects and thorough understanding of the FAA governance requirements has helped him garner repeat clients. He has served as the airport engineer for the NCWV airport for 19 years, and continues to help the airport secure money for their impressive expansion efforts.

Experience

**North Central West Virginia
Airport Hangar Design**
Role: Principal
> Harrison County, WV

**Raleigh County Memorial
Airport Hangar Design**
Role: Principal
> Raleigh County, WV

**North Central West Virginia
Airport Engineer of Record**
Role: Principal and Project
Manager
> Harrison County, WV

**Raleigh County Memorial
Airport Master Plan and
Airport Layout Plan**
Role: Project Manager
> Raleigh County, WV

**North Central West Virginia
Airport Master Plan, Runway
Safety Area Studies, and
Runway Extensions and
Widening, Obstruction
Removal, Equipment
Procurement and Terminal
Improvements**
Role: Principal, Project
Manager
> Harrison County, WV

Search: Details

Name: CHADWICK D. BILLER

WV Professional Engineer: PE License Number: [REDACTED]

PE License Status: Active

PE Issue Date: 02/23/1998

PE Expiration Date: 12/31/2020

Continuing Education Claim: Qualifying Hours from Last Renewal or Reinstatement: 86.00

Carryover Hours for Next Renewal: 15.00

Last Renewal or Reinstatement Date*: 12/5/2018

WV Engineer Intern: EI Certification Number:

EI Issue Date:

Primary Address of Record: [REDACTED]

Primary Employer of Record: THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD
PO BOX 940
BRIDGEPORT, WV 26330

* This date reflects the most recent license renewal (or reinstatement) date for this licensee. Continuing education hours earned prior to this date may not be used for future renewals.

This data was retrieved on 12/17/2018.

Project Manager



Ashley Lyons began at Thrasher in 2013 as an Architectural Intern and is currently pursuing Architectural Licensure. Ashley has been involved in a wide array of projects including public and private office design, recreational facilities, public safety buildings, building additions and renovations, and several historic preservations.

Ashley is able to maneuver projects on a large scale without sacrificing attention to detail. Mrs. Lyons is highly knowledgeable in all facets of design and construction and places a large emphasis on sustainable green techniques. She has a working expertise in several critical 2D and 3D CADD design programs, most notably including a mastery of Autodesk Revit.

Education

Master of Architecture
Miami University of Ohio

Bachelor of Science,
Architecture
Fairmont State University

Affiliations

- > American Institute of Architects - Associate, West Virginia and National Chapters

Experience

Benedum Airport Authority New Terminal Renovations

Role: Designer and
Construction Document
Developer
> Harrison County, WV

Taylor County Commission Annex Building Renovations

Role: Project Manager,
Designer and Construction
Document Developer
> Taylor County, WV

Minnie Hamilton Healthcare Facility Schematic Design

Role: Schematic Design
Developer
> Gilmer County, WV

Dominion Energy Regional Office Headquarters

Role: Design and Construction
Document Developer
> Harrison County, WV

Upshur County Development Authority Innovation Center

Role: Designer and
Construction Document
Developer
> Upshur County, WV

Eastpoint Shoppes Retail Buildings

Role: Project Manager,
Designer & Construction
Document Developer
> Harrison County, WV

MATT BREakey, AIA, LEED AP, NCARB

Lead Architect



Matt Breakey, AIA, NCARB, LEED AP has over 20 years of experience providing architectural design and management services. He has worked with a wide range of clients, including those in the education section (K-12 and higher education), state, federal, correctional, commercial, and multi-unit residential and healthcare providers.

Matt spent part of his career providing oversight for major capital construction projects for two auxiliary entities at a higher education institute. This experience gave him a refined eye for the design aspect as well as project construction and feasibility. As a LEED Accredited Professional, Matt works with clients to find cost saving and sustainable features that will enhance their projects. His educational background combined with his well-executed projects make Matt a highly sought-after architect.

Education

Bachelor of Architecture,
Pennsylvania State University

Bachelor of Science,
Architecture
Pennsylvania State University

Registrations

Professional Architect:

- > West Virginia
- > Maryland
- > Pennsylvania
- > Michigan
- > Indiana
- > Kentucky
- > Ohio

Affiliations

- > LEED Accredited Professional, US Green Building Council
- > American Institute of Architects - Board Member (AIA)
- > Council of Educational Facilities Planners International, Member

Experience

Tri- State Airport Authority Huntington Tri- State Airport Elevator Tower

Role: Project Manager
> Wayne County, WV

Airport Rescue and Firefighting

Role: Lead Architect
> Monongalia County, WV

Clear Mountain Bank New Facility

Role: Project Architect
> Harrison County, WV

Chapmanville Regional High School New Auxiliary Gym

Role: Project Architect
> Logan County, WV

Richwood Camden Family Clinic Fit-Out Design

Role: Project Architect
> Nicholas County, WV

The Summit Bechtel Reserve, Boy Scouts of America Welcome Center

Role: Project Architect
> Fayette County, WV

The West Virginia Board of Architects

certifies that

MATTHEW BREakey

is registered and authorized to practice
Architecture in the State of West Virginia.

In testimony whereof this certificate has been issued
by the authority of this board.

Certificate Number [REDACTED]

The registration is in good standing until June 30, 2019.



A handwritten signature in cursive script, reading "Emily Papadopoulos", on a light-colored rectangular background.

Board Administrator

PHILIP FREEMAN, AIA, NCARB

31

Project Architect



Philip Freeman, AIA, NCARB serves as one of Thrasher's lead Project Architects with over 25 years of experience working all across the Mid-Atlantic region. Philip has built an impressive portfolio of work totaling more than \$400 million in construction, and has earned both an AIA Merit Awards and was integral involved in the design of West Virginia's first LEED Gold certified private office facility. Additionally, Philip had the opportunity to serve as a Project Associate and Package Manager for one of Pittsburgh's most iconic structures - PNC Park, Home of the Pittsburgh Pirates.

Education

Master of Architecture
Virginia Polytechnic Institute
and State University

Bachelor of Science
Architectural Engineering
Technology
Fairmont State University

Registrations

Professional Architect:

- > West Virginia
- > Virginia
- > Pennsylvania

Affiliations

- > American Institute of Architects
- > West Virginia Society of Architects

Aside from his professional career at Thrasher, Philip also serves as the Chair for Fairmont State University's Architecture Department where he teaches and mentors future architects.

Experience

North Central West Virginia Airport - New Terminal

Role: Lead Architect
> Harrison County, WV

City of Beckley Police Department Headquarters

Role: Lead Architect
> Raleigh County, WV

North Central West Virginia Airport - TSA Baggage Scanning Facility

Role: Lead Architect
> Harrison County, WV

The Boy Scouts of America J.W. and Hazel Ruby West Virginia Welcome Center

Role: Lead Architect
> Fayette County, State

Upshur County Innovation Center

Role: Lead Architect
> Upshur County, WV

Dominion Resources New Headquarters Office Facility

Role: Lead Architect
> Westmoreland County, PA

City of Beckley Fire Department Station #3 and Code Enforcement Offices

Role: Lead Architect
> Raleigh County, WV

Fairmont State University, Chair, Department of Architecture + Graphics, Assoc. Professor of Architecture

Role: Assoc. Professor
> Marion County, WV

WV National Guard, Virtual Combat Simulation Building Camp Dawson

Role: Project Architect
> Preston County, WV

The West Virginia Board of Architects

certifies that

PHILIP FREEMAN

is registered and authorized to practice
Architecture in the State of West Virginia.

In testimony whereof this certificate has been issued
by the authority of this board.

Certificate Number [REDACTED]

The registration is in good standing until June 30, 2019.



A handwritten signature in cursive script, reading "Emily Papadopoulos", written on a light-colored rectangular background.

Board Administrator

NICOLE JONES, PE, PMP

Project Engineer



Nicole Jones, PE, PMP has become an integral part of Thrasher's Site Division serving as Project Manager for various airport improvements across the state of West Virginia. Nicole has managed a vast array of infrastructure enhancements related to the aviation industry, and helped her clients to secure several million dollars in grants to complete their upgrades.

For her largest client, the North Central West Virginia airport, Nicole has designed a variety of upgrades, including a runway safety study, lighting and security upgrades, ramp rehabilitation, terminal improvements, and a runway extension and widening. Her understanding of the permitting and regulatory hurdles that accompany this type of work has enabled Nicole to guide her clients through the design of safe and sustainable projects. Her meticulous design style also draws the attention of Contractors, and results in highly competitive bidding.

Education

Bachelor of Science,
Civil Engineering
West Virginia University

Registrations

Professional Engineer:
> West Virginia

Project Management
Professional

Experience

Raleigh County Airport Authority Taxilane to Corporate Hangar
Role: Project Manager
> Raleigh County, WV

North Central West Virginia Airport Master Planning: Runway Safety Study, Runway Extension and Widening, Obstruction Removal, Equipment Procurement and Terminal Improvements
Role: Project Engineer
> Harrison County, WV

Huntington Tri-State Airport Plan Review and Development
Role: Project Engineer
> Wayne County, WV

Benedum Airport Authority Ramp Rehabilitation
Role: Project Manager
> Harrison County, WV

Central WV Regional Airport Authority Yeager Terminal Security Enhancements
Role: Project Manager and Construction Administration
> Kanawha County, WV

Tri- State Airport Authority Huntington Tri- State Airport Elevator Tower
Role: Project Manager
> Cabell County, WV

Raleigh County Airport Terminal Lighting Upgrade
Role: Project Manager
> Raleigh County, WV

Search: Details

Name: NICOLE M. JONES

WV Professional Engineer: PE License Number: [REDACTED]

PE License Status: Active

PE Issue Date: 06/15/2015

PE Expiration Date: 12/31/2020

Continuing Education Claim: Qualifying Hours from Last Renewal or Reinstatement: 52.00

Carryover Hours for Next Renewal: 15.00

Last Renewal or Reinstatement Date*: 12/17/2018

WV Engineer Intern: EI Certification Number: [REDACTED]

EI Issue Date: 07/26/2010

Primary Address of Record: [REDACTED]

Primary Employer of Record: THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD
PO BOX 940
BRIDGEPORT, WV 26330

* This date reflects the most recent license renewal (or reinstatement) date for this licensee. Continuing education hours earned prior to this date may not be used for future renewals.

This data was retrieved on 12/17/2018.

JIM DECKER, MBA

Construction Administration



Jim Decker, MBA brings over 25 years of experience in construction estimating and management for the private and public sectors. He provides services with inspections, site monitoring, cost control, schedules, contract administration, payment processing, shop and coordination drawings, change orders and project reports.

His role as a construction estimator allows for clients to be able to recognize a true price when it comes to their projects. Jim is also a Licensed General Contractor in the State of West Virginia. As a General Contractor he is able to oversee the day-to-day functions of the construction site.

Previously, Jim was the facilities director at a local educational institution for 10 years. Jim relates well with his clients because he approaches the situation from both a consultant and client perspective.

Education

Master of Business Administration,
Project Management Emphasis
Fairmont State University

Bachelor of Science,
Civil Engineering
Fairmont State University

Associates Degree,
Mechanical Engineering
Fairmont State University

Registrations

General Contractor:
> West Virginia

Affiliations

- > Leadership Marion County
- > Leadership Fairmont State University

Experience

Dominion Natrium Plant Processing Facility Additions

Role: Construction Estimator
> Monongalia County, WV

Dominion Goshen Road New Facility

Role: Construction Administrator
> Monongalia County, WV

White Oaks Business Park Development

Role: Construction Administrator
> Harrison County, WV

Romney Public Works Building New Facility

Role: Construction Estimator
> Hampshire County, WV

Mountaintop Medical Clinic New Facility

Role: Construction Estimator
> Tucker County, WV

Bridgeport Middle School New Construction

Role: Construction Estimator
> Harrison County, WV

Mechanical and Electrical Subconsultant



H.F. Lenz Company was established 1946 in its present form, under the name H.F. Lenz Company, R.E., and in 1953 the company was incorporated, as a Private Corporation, in Pennsylvania as H.F. Lenz Company. Our projects span the nation, with the heaviest concentration in the Northeast, and exceed \$530 million in MEP, Civil and Structural construction annually. Each market sector—corporate, government, health care, education, and industry—is served by a team of specialists who understand the unique needs of the clients they serve. Our staff consists of 150 individuals, including 50 Licensed Professional Engineers and 17 LEED Accredited Professionals. Our headquarters is in Johnstown, Pennsylvania with branch offices in Pittsburgh, Pennsylvania Conneaut, Ohio, and Middletown, Connecticut.

Disciplines/Services Offered In-House Include:

- > Mechanical Engineering
- > Electrical Engineering
- > Data/Communications Engineering
- > Fire Protection / Life Safety Engineering
- > Structural Engineering
- > Civil Engineering
- > Surveying
- > GIS
- > Commissioning and Training
- > 3D CADD with Full Visualization
- > Energy Modeling
- > Sustainable design/LEED Services
- > Building Information Modeling (BIM)

Aviation Facilities

H.F. Lenz Company has extensive experience in the design of aviation facilities of various types for both private and public clients. This experience includes our current new terminal project at Williamsport Regional Airport, as well as projects at the Erie International Airport (Tom Ridge Field), Greater Pittsburgh International Airport, John Murtha Johnstown-Cambria County Airport and facilities for several large corporate clients and governmental agencies such as the Ohio National Guard, U.S. Air Force, U.S. Army, and the Pennsylvania Air National Guard. Our team's experience ranges from a new 80-acre aviation facility, to a new regional maintenance facility for military vehicles of all types and sizes, to a new pressurized hydrant fueling system, to hangars for both fixed wing and rotary wing aircraft, to various renovation and upgrade projects for an International airport.

We are thoroughly familiar with current FAA standards and procedures, as well as with Pennsylvania Building Codes and NFPA standards.

Additional information on H.F. Lenz can be found in Appendix A.b

THOMAS F. DETER, PE, LEED AP

Principal-in-Charge of MEP Systems Engineering



Mr. Deter has over 30 years of experience and is responsible for the engineering design of all trades, the supervision of senior designers, the preparation of reports to determine optimal systems and/or equipment selections, and the coordination and checking of contract documents for completeness and quality. He has extensive experience in the design of building systems for both new buildings and building retrofits for educational, health care, commercial, government, industrial, residential, and utility related facilities. He is experienced in the design of power distribution systems; emergency power systems and monitoring; uninterruptible power supplies; lighting and emergency lighting systems; fire alarm systems; security; sound; and telephone systems.

Education

Bachelor of Science, Electrical Engineering Technology, 1987, University of Pittsburgh at Johnstown

Registrations

Professional Engineer:

- > West Virginia
- > Pennsylvania
- > Arkansas
- > Idaho
- > Illinois
- > Indiana
- > Maryland
- > Nebraska
- > New Jersey
- > North Carolina
- > Ohio
- > Oklahoma
- > Oregon
- > South Dakota
- > Virginia

Affiliations

- > NSPE/PSPE
- > U.S. Green Building Council

Experience

U.S. Army Reserve Center

- > Design/build training building with classrooms, administrative areas, library, assembly hall, weaponer room and medical section, and 17,000 sq.ft. OMS/AMSA

Wheeling, West Virginia

U.S. Armed Forces Aviation Facility

- > New 120,000 sq.ft. multi-complex aviation facility for both rotary and fixed wing aircraft on an 80-acre site

Johnstown, Pennsylvania

911th Airlift Wing, U.S. Air Force Reserve, Greater Pittsburgh International Airport

- > Various renovations and new construction under two term contracts including hangar renovations

Coraopolis, Pennsylvania

Pennsylvania Air National Guard

- > New 23,560 sq.ft. maintenance shop with eight maintenance bays, flammable storage, general storage areas, and an on-site fuel dispensing station
- > Feasibility Study and design services for the repairs to the Composite Support Facility for the 258th Air Traffic Control Squadron

Johnstown, Pennsylvania

Pennsylvania Army National Guard

- > Rehabilitation of New Castle Readiness Center
- > Rehabilitation of Crane Readiness Center Pennsylvania

Letterkenny Army Depot

- > Over 100 projects completed under seven consecutive term contracts
- > Rocket Army Munititions Center (LEMC), AP Rocket Motor Destruction Facility, Phase I

Chambersburg, Pennsylvania

Your ACTIVE PE renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

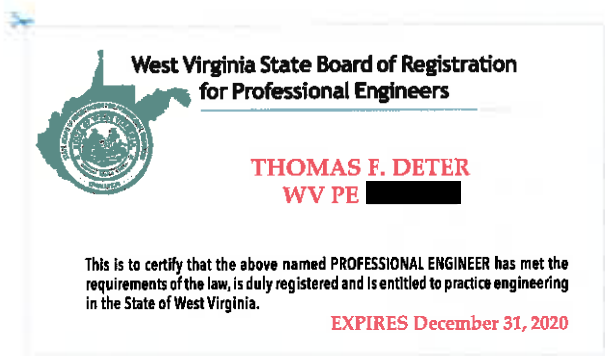
West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 19, 2018
Amount Paid: \$70.00



JOHN C. STEWART, PE, LEED AP

Mechanical Engineer



Mr. Stewart has 34 years of experience in the design of HVAC, plumbing, and fire protection systems. His responsibilities have included code compliance verification, schematic layout, calculations, equipment selection, control system selection, specification writing, coordination, life cycle cost analyses, and cost estimating. His experience includes the design of mechanical systems for laboratories, hospitals, educational facilities, industrial plants, and military installations. He has also been involved in the design of chiller and boiler plants.



Education

Master of Science, Mechanical Engineering, 1995, University of Pittsburgh

Graduate Courses in Facilities Engineering, 1984-1987, Air Force Institute of Technology

Bachelor of Science, Mechanical Engineering, 1984, University of Pittsburgh

Registrations

Professional Engineer:
> Pennsylvania

Affiliations

- > American Society of Heating, Refrigerating, and Air-Conditioning Engineers
- > APPA
- > U.S. Green Buildings Council

Experience

Camp Dawson, U.S. Army National Guard

Three new billeting facilities
Kingwood, West Virginia

Ohio National Guard, Akron-Canton Regional Airport

- > New 26,400 sq.ft. aircraft storage facility and partial demolition, expansion, and renovations to the existing hangar. The project included the design of a new fire suppression system

Akron, Ohio

911th Airlift Wing, U.S. Air Force Reserve, Greater Pittsburgh International Airport

- > Various renovations and new construction under two term contracts including hangar renovations

Coraopolis, Pennsylvania

Pennsylvania Air National Guard

- > New 23,560 sq.ft. maintenance shop with eight maintenance bays, flammable storage, general

storage areas, and an on-site fuel dispensing station

- > Feasibility Study and design services for the repairs to the Composite Support Facility for the 258th Air Traffic Control Squadron

Johnstown, Pennsylvania

Letterkenny Army Depot

- > Over 100 projects completed under seven consecutive term contracts
- > Building 1, New SCIF

Chambersburg, Pennsylvania

Pennsylvania Army National Guard

- > Rehabilitation of New Castle Readiness Center
- > Rehabilitation of Crane Readiness Center

Pittsburgh, Pennsylvania

Walter Reed Army Medical Center

- > Renovation and upgrade to Building 12, Provost Marshal's Facility

DISPLAY THIS CERTIFICATE PROMINENTLY • NOTIFY AGENCY WITHIN 18 DAYS OF ANY CHANGE

Commonwealth of Pennsylvania
 Department of State
 Bureau of Professional and Occupational Affairs
 PO BOX 2649 Harrisburg, PA 17105-2649

18 0075752

License Type
Professional Engineer

License Status
Active

JOHN C STEWART
[REDACTED]

Initial License Date
07/30/1992

Expiration Date
09/30/2019

License Number
[REDACTED]

[Signature]
Commissioner of Professional and Occupational Affairs

[Signature]
Signature

ALTERATION OF THIS DOCUMENT IS A CRIMINAL OFFENSE UNDER 18 P.S. § 4911

STEVEN P. MULHOLLEN, PE

Electrical Engineer



Education

Bachelor of Science, Electrical Engineering, 1988, The Pennsylvania State University

Registrations

Professional Engineer:

- > West Virginia
- > Pennsylvania
- > Alabama
- > California
- > Florida
- > Iowa
- > Kansas
- > Kentucky
- > Louisiana
- > Massachusetts
- > Maryland
- > Missouri
- > Nebraska
- > Nevada
- > New Jersey
- > New Mexico
- > New York
- > North Carolina
- > Ohio
- > Rhode Island
- > Tennessee
- > Washington, DC

Affiliations

- > Institute of Electrical and Electronics Engineers, Inc

Mr. Mulhollen is experienced in the design of power distribution systems, control systems, emergency power systems, lighting and emergency lighting systems, fire alarm systems, security, sound, and telecommunication systems for correctional, educational, institutional, industrial, health care, and commercial facilities.

Experience

Ohio National Guard, Akron-Canton Regional Airport

- > New 26,400 sq.ft. aircraft storage facility and partial demolition, expansion, and renovations to the existing hangar. The project included the design of a new fire suppression system

Akron, Ohio

911th Airlift Wing, U.S. Air Force Reserve, Greater Pittsburgh International Airport

- > Various renovations and new construction under two term contracts including hangar renovations

Coraopolis, Pennsylvania

Pennsylvania Air National Guard

- > New 23,560 sq.ft. maintenance shop with eight maintenance bays, flammable storage, general storage areas, and an on-site fuel dispensing station
- > Feasibility Study and design services for the repairs to the Composite Support Facility for the 258th Air Traffic Control Squadron

Johnstown, Pennsylvania

Letterkenny Army Depot

- > Over 100 projects completed under seven consecutive term contracts
- > Rocket Army Munitions Center (LEMC), AP Rocket Motor Destruction Facility, Phase I
- > Building 1, New SCIF

Chambersburg, Pennsylvania

Pennsylvania Army National Guard

- > Rehabilitation of New Castle Readiness Center
- > Rehabilitation of Crane Readiness Center

Pittsburgh, Pennsylvania

Camp Dawson, U.S. Army National Guard

- > Three new billeting facilities

Kingwood, West Virginia

Lincoln County E-911 Communications Center

- > New 8,620 sq.ft. emergency communications center, includes Enhanced 911, Emergency Medical Dispatch, and Telecommunications Device for the Deaf (TDD)

Hamlin, West Virginia

Your **ACTIVE PE** renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: January 2, 2019
Amount Paid: \$87.50



GREGORY D. RUMMEL, CPD

Plumbing/Fire Protection Designer



Mr. Rummel has designed complete plumbing and fire protection systems for colleges, schools, office buildings, hospitals, prisons, laboratories, industrial facilities, and military installations. He is fully knowledgeable of NFPA codes and is experienced in the design of wet, dry, preaction, FM200, and deluge fire protection systems. He is responsible for plumbing and sprinkler system design, layout, and calculations; selection and sizing of equipment; cost estimates; and site survey work. Mr. Rummel supervises drafting personnel; coordinates the plumbing design with utility companies, with other trades, and with the Project Engineer and Project Architect; and is responsible for assembling complete and accurate plumbing bid documents which meet H.F. Lenz Company standards.

Education

Bachelor of Science, Mechanical Engineering Technology, 2000, Point Park College

Associate in Specialized Technology 1984, Architectural Drafting and Construction with CAD Technology, Triangle Institute of Technology

Certifications

- > Certified in Plumbing Design, ASPE

Experience

U.S. Army Reserve Center

- > Design/build training building with classrooms, administrative areas, library, assembly hall, weaponer room and medical section, and 17,000 sq.ft. OMS/AMSA

Wheeling, West Virginia

Ohio National Guard, Akron-Canton Regional Airport

- > New 26,400 sq.ft. aircraft storage facility and partial demolition, expansion, and renovations to the existing hangar. The project included the design of a new fire suppression system

Akron, Ohio

U.S. Armed Forces Aviation Facility

- > New 120,000 sq.ft. multi-complex aviation facility for both rotary and fixed wing aircraft on an 80-acre site

Johnstown, Pennsylvania

911th Airlift Wing, U.S. Air Force Reserve, Greater Pittsburgh International Airport

- > Various renovations and new construction under two term contracts including hangar renovations

Coraopolis, Pennsylvania

Pennsylvania Air National Guard

- > New 23,560 sq.ft. maintenance shop with eight maintenance bays, flammable storage, general storage areas, and an on-site fuel dispensing station
- > Feasibility Study and design services for the repairs to the Composite Support Facility for the 258th Air Traffic Control Squadron

Johnstown, Pennsylvania

Letterkenny Army Depot

- > Rocket Army Munitions Center (LEMC), AP Rocket Motor Destruction Facility, Phase I

Chambersburg, Pennsylvania

Structural Subconsultant

Structural Services

Allegheny Design Services (ADS) works closely with architects and contractors to provide the engineering support that turn their vision into reality.

The large expanses and dynamic visual cues of modern architectural design often require unique engineering solutions to maintain structural integrity while providing the vision the architect wants to achieve. Allegheny Design Services are the link between the architect's design, the contractor's finished structure, and the owner's satisfaction.



Allegheny Design Services (ADS) provides Structural & MEP facility engineering design services to architects, industrial and commercial contractors, and owners.

ADS Engineering has established itself as the leading multi-discipline engineering firm in West Virginia. Our reputation for responsiveness, competence, creativity and value is well-known.

We understand that engineering is not a stand-alone function, but a part of the design effort of the architect and other consultants. Our job doesn't stop at the delivery of construction drawings. Understanding the construction process is as important. ADS is the link between the architects creativity and the efficient construction of the project.

Experience with Thrasher

City of Beckley New Police Station

Role: MEP & Structural Engineer
> Raleigh County, WV

America's Best Block Facility

Role: MEP Engineer
> Mineral County, WV

Dominion Resources New Headquarter Facility

Role: MEP & Structural Engineer
> Harrison County, WV

Greater Bridgeport CVB

Role: MEP & Structural Engineer
> Harrison County, WV

Morgantown Event Center Parking Garage

Role: Structural Engineer
> Monongalia County, WV

The Thrasher Group Headquarter Facility

Role: MEP & Structural Engineer
> Harrison County, WV

Antero Resources Campus Buildings

Role: MEP & Structural Engineer
> Harrison County, WV

Additional information on Allegheny Design Services can be found in Appendix B.

President/Principal Engineer



Education

Bachelor of Science,
Civil Engineering
West Virginia Institute of
Technology

Masters Business
Administration,
West Virginia University

Architectural Technology
Courses,
West Virginia State College

Registrations

Professional Engineer:

- > West Virginia
- > Washington, DC
- > Pennsylvania
- > South Carolina
- > North Carolina
- > Maryland
- > Ohio
- > Virginia
- > Florida
- > Georgia

Affiliations

- > American Society of Civil Engineers, Structural Engineering Institute, Charter Member, American Concrete Institute,
- > American Institute of Architects – West Virginia Chapter, American Institute of Steel Construction, Inc.,
- > American Iron and Steel Institute Member, Associated Builders & Contractors (ABC), National Academy of Forensic Engineers

As Principal Engineer for Allegheny Design Services, David Simpson is responsible for strategic management, marketing, quality control, personnel development, business development, and project management. His experience includes over 32 years in structural design and project management for industrial, commercial, institutional, and nuclear/chemical facilities utilizing steel, concrete, masonry, and wood.

Some of David's past accomplishments include design and construction administration of health care facilities, hotels, schools, shopping centers, aircraft hangars, numerous retail facilities, and numerous forensic engineering assignments.

Experience

Morgantown Event and Conference Center

Role: Principal Engineer
> Monongalia County, WV

Phipps Conservatory Addition

Role: Principal Engineer
> Allegheny County, PA

Waterfront Hotel and Conference Center
Role: Principal Engineer
> Monongalia County, WV

WVU Basketball Practice Facility
Role: Principal Engineer
> Monongalia County, WV

WVU Mountaineer Field North Luxury Suites
Role: Principal Engineer
> Monongalia County, WV

UPMC Hillman Cancer Center
Role: Principal Engineer
> Allegheny County, PA

William Sharpe Hospital Addition
Role: Principal Engineer
> Lewis County, WV

University of Pittsburgh Bio Medical Tower
Role: Principal Engineer
> Allegheny County, PA

Your **ACTIVE PE** renewal fee has been received...

Your **ACTIVE PE** renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV **ACTIVE PE** license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 10, 2018
Amount Paid: \$70.00

West Virginia State Board of Registration for Professional Engineers



DAVID R. SIMPSON
WV PE [REDACTED]

This is to certify that the above named **PROFESSIONAL ENGINEER** has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2020

DAVID R. SIMPSON
ALLEGHENY DESIGN SERVICES
102 LEEWAY STREET
MORGANTOWN, WV 26505



North Central West Virginia Airport

Mr. Shawn Long, Deputy Director
2000 Aviation Way | Bridgeport, WV 26330
304-842-3200

Huntington Tri-State Airport

Mr. Brent Brown - Airport Director
1149 Airport Road | Huntington, WV 25704
304-453-6165

PA Department of Military Affairs

Mr. Mark Austin, Director, Bureau of
Facilities and Engineering
Anville, Pennsylvania
717-861-2915

> H.F. Lenz Reference

West Virginia University

Ms. April Messerly, Director of Facilities
and Operations
PO Box 0877 | Morgantown, WV 26506
304-293-3056

> Allegheny Design Reference



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

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

Proc Folder: 530551

Doc Description: Addendum #1 EOI- Wheeling AASF#2 Aircraft Hangar Addition

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2019-01-18	2019-01-25 13:30:00	CEOI 0603 ADJ1900000013	2

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

The Thrasher Group, Inc.
 600 White Oaks Blvd.
 Birdgeport, WV 26330
 304-624-4108

FOR INFORMATION CONTACT THE BUYER

Stephanie L Gale
 (304) 558-8801
 stephanie.l.gale@wv.gov

55-0633596

1/23/19


Signature X

FEIN #

DATE

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

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.

 Architecture Division Manager
(Name, Title)

Craig Baker, Architecture Division Manager

(Printed Name and Title)

600 White Oaks Blvd. | Bridgeport, WV 26330
(Address)

304-624-4108 / 304-624-7831

(Phone Number) / (Fax Number)

cbaker@thetrashergroup.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.

The Thrasher Group, Inc.

(Company)

 Architecture Division Manager
(Authorized Signature) (Representative Name, Title)

Craig Baker, Architecture Division Manager

(Printed Name and Title of Authorized Representative)

1/23/19

(Date)

(304-624-4108) (304-624-7831)

(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: _____

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

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

Addendum Numbers Received:

(Check the box next to each addendum received)

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

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

The Thrasher Group

Company



Authorized Signature

1/23/19

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012



Pennsylvania Air National Guard

Johnstown, Pennsylvania

NEW REGIONAL MAINTENANCE FACILITY

H.F. Lenz Company provided engineering design services for repairs to the aircraft aprons

H.F. Lenz Company was responsible for the design of a New Maintenance Shop for the Pennsylvania National Guard Facility located adjacent to the Airport in Johnstown, Pennsylvania. The building consists of 23,560 square feet with approximately 8,000 square feet of office and maintenance shop area and the remainder for storage and eight vehicle maintenance bays. The Regional Maintenance Shop will allow the National Guard to perform maintenance on military vehicles of all types and sizes.

The building is sited along Airport Road with the main building and parking area located on a 7.41 acre parcel. A second parcel consisting of 6.14 acres, located in the Airport Runway Protection Area, includes an access road to a neighboring facility. The site includes parking for 31 staff vehicles and up to 80 military vehicles of varying sizes.

The project includes flammable storage, general storage areas, and an on-site fuel dispensing station. The entire area is protected by a perimeter fence and automatic access gates entering the site.

H.F. Lenz Company was responsible for the preparations and permitting for required erosion and sedimentation control plans as well as stormwater.

The project was completed in 2004, construction cost was approximately \$4,150,000.

H.F. LENZ COMPANY

Corporate Hangar (Confidential Client)

*Greater Pittsburgh International Airport – Pittsburgh,
Pennsylvania*

H.F. Lenz Company provided the mechanical, electrical, plumbing, and fire protection engineering for the renovation of a corporate hangar at the Pittsburgh International Airport.

The project consisted of the remodeling of the office and lounge area and the renovation of the aircraft maintenance and storage area.

In the main hangar, new fluorescent high-bay lighting was installed to replace existing mercury-vapor lighting to bring the lighting levels up to current IES standards.

A new radiant heating system was installed to provide heat to the large open hangar area. A new security system was installed throughout the building.



Naval Air Station Jacksonville (NAVFAC Southeast)

Jacksonville, Florida

P-8A INTEGRATED TRAINING CENTER (ITC)

This Design/Build project consisted of the design and construction of a \$48.6 million multi-story, 165,665 sq.ft. Operational Training Center in Jacksonville, Florida for the next generation Command and Control multi-mission aircraft (MMA)/P-8A. The P-8A replaced the aging P-3 when deployed.

The P-8A was designed around a modified Boeing 737-800ERX airframe. This airframe coupled with the next generation of electronics and sensors dramatically improves the Navy's Anti-Submarine Warfare capabilities.

The P-8A Integrated Training/Simulation Center contains the most advanced state-of-the-art computational facility to support 40 instruction environments and 19 multi-million dollar simulation trainers. The facility will also house the US Navy's P-8A's program mission design command within a classified Secure Compartmented Information Facility (SCIF).

H.F. Lenz Company provided all of the HVAC, electrical and plumbing, and Computer Room engineering design for this new facility. The project incorporates best practices for energy efficiency and sustainable design.

The project is LEED Gold certified.

Training Features:

- › Ten (10) Operational Flight Simulators
- › Eight (8) Weapons Trainers
- › Seven (7) Raised Floor Computer Rooms for Simulator Equipment
- › Class Rooms
- › Briefing Rooms

Building Features:

- › Two (2) 4,000A 480Y/277V Electrical Main Services
- › Dedicated Outdoor Air Handling System with Energy Recovery Wheel
- › Diesel Emergency Generator
- › Central Chilled Water Plant
- › UPS Systems for all Simulator Equipment
- › Overhead Crane in Simulator Bays
- › Photovoltaic Parking Shades

Project Cost: \$48,600,000
Project design was complete in 2011





Willamsport Regional Airport

Willamsport, Pennsylvania

NEW PASSENGER TERMINAL BUILDING

H.F. Lenz Company provided Mechanical and Electrical Engineering services for the new 29,500 square foot Passenger Terminal Building at the Willamsport Regional Airport. This included HVAC systems, plumbing systems, fire protection, and electrical systems throughout the new facility; which consists of administrative offices, car rental, travel agency, future restaurant, and other standard airport functions and support services.

Key elements of the design included:

- › High efficiency gas fired boilers and associated equipment
- › Interior air handling units with hot water heating and chilled water cooling
- › Variable air volume boxes with hot water reheat coils
- › Air cooled chiller and associated pumps
- › DDC Control system throughout the facility
- › Plumbing fixtures and associated piping systems
- › Domestic hot water system
- › Fire/sprinkler system throughout the facility
- › Energy efficient LED lighting fixtures and associated controls throughout the facility
- › Power distribution equipment including panels, wiring devices, conduit, wiring, etc.
- › Reuse an existing emergency generator and associated transfer equipment
- › Fire alarm system
- › Security camera and access control system for the facility
- › Telecommunication infrastructure throughout the facility

Project Cost: \$16,850,000

The project was completed in 2018.



Erie International Airport

Erie, Pennsylvania

Erie International Airport, a publicly owned, public use, primarily commercial service facility, serves the aviation needs of Erie County, the Western Region of Pennsylvania, Western New York State, and Northeast Ohio. H.F. Lenz Company has provided mechanical, electrical, plumbing and fire protection engineering services for numerous projects at the airport including:

Terminal Security System - renovation for relocation of the passenger security checkpoint and equipment and the installation of a cellular phone network throughout the terminal.



Operations Room / Generator / UPS Project Scope - The scope of this project was to create a new basement location for the Erie International Airport operations room. This room is not a staffed room but houses operations center equipment that does not need to be located in the first floor security area. In addition, this room houses new uninterruptible power system equipment. This room is equipped with environmental systems to maintain the proper temperature and humidity. A new diesel generator was installed to replace the two (2) existing generators. Both the generator and the UPS system were sized to handle the current needs with additional capacity for the anticipated future load associated with the proposed airport expansion.

Also as a part of this project, a new building electrical power conditioning system was installed to correct the building harmonics.



Freight Facilities Study - The goal for this project was to convert two old factory buildings into a complex at the airport that would handle freight shipped by air, trucks or rail cars. HFL completed a facilities study to determine the feasibility of converting these buildings and to estimate the cost of the recommended upgrades to the mechanical and electrical systems.

Additional recent projects for Erie International Airport include:

- HVAC, Plumbing, and Electrical design for a new Car Rental Facility
- HVAC, Plumbing, Fire Protection, and Electrical design for additions and renovations to the Ticketing Area
- HVAC, Plumbing, Fire Protection, and Electrical design for the replacement of two existing Jetways
- HVAC, Plumbing, and Electrical design for a new office addition at the existing Customs Building
- HVAC, Plumbing, and Electrical design for a new Ticket Counter for Delta/Comair Airline



Pennsylvania Air National Guard

Pittsburgh International Airport – Pittsburgh, Pennsylvania

PRESSURIZED HYDRANT FUELING SYSTEM

The pressurized hydrant fueling system project at the Pittsburgh International Airport involved the total design of an aviation fuel transfer, storage, and dispensing facility.

Key features of the project included:

- › Central control house to remotely monitor and control all functions of the fuel handling operation
- › Quality control building for lab testing of fuel samples
- › Complete electrical power and control distribution systems
- › Two 5,000-barrel aircraft fuel storage tanks to provide on-site product storage capabilities
- › 1,200 GPM fuel handling capability
- › Product receiving pumping station to unload fuel from tanker trucks for transfer to storage facilities
- › Truck fill stands for dispensing aircraft fuel to mobile military tanker trucks
- › Six hydrant fueling stations located on runway apron for fueling air transport/refueling tanker aircraft
- › Product dispensing pumping station for product filtration, monitoring, and flow control with distribution to truck fill stands and hydrant fueling stations
- › Approximately one mile of 12-inch diameter stainless steel underground main distribution piping and approximately 2,000 feet of secondary stainless steel distribution piping
- › Access roads and parking facilities for tanker trucks and military personnel and associated roadway low-pressure sodium lighting system
- › Waste fuel handling and storage system
- › Fire control, ecological protection, pump cavitation, fuel purity, and protection of fuel storage tanks from earthquakes



Pennsylvania Air National Guard

Moon Township, Pennsylvania

171ST: AIRCRAFT APRON REPAIR

H.F. Lenz Company provided engineering design services for repairs to the aircraft aprons

The repair project consisted of:

- › Selective removal
- › Replacement and repair of damaged concrete on the east and west aprons and taxiway
- › Removal and replacement of the bituminous shoulders bordering the east apron and the north side of the taxiway
- › Installation of a new storm line on the north side of the taxiway

Project area lies within the watershed Montour Run, which is designated in the Pennsylvania Code, Title 25, Chapter 93 as TSF - Trout Stocked Fishery

Currently, runoff from the project area drains to existing storm sewer facilities that are located on and adjacent to the aprons and taxiway

Proposed work will not create any additional impervious areas, as all repairs will be to existing concrete or bituminous surfaces

This project was designed to avoid any new point source discharges to surface waters of the Commonwealth



Department of Defense Facilities

U.S. ARMY CORPS OF ENGINEERS, BALTIMORE

ARMY RESERVE AVIATION FACILITY *Johnstown, Pennsylvania*

- New 120,000 sq.ft. multi-building complex including an armed forces reserve center and an aviation maintenance shop

ARMY RESERVE CENTER *Beckley, West Virginia*

- New 300-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Morgantown, West Virginia*

- New 300-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Wheeling, West Virginia*

- New 284-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Rainelle, West Virginia*

- New 200-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Weirton, West Virginia*

- New 200-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Brownsville, Pennsylvania*

- New 200-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Johnstown, Pennsylvania*

- New 200-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Kingwood, West Virginia*

- Maintenance shop

ARMY RESERVE CENTER *Grantsville, West Virginia*

- New 100-member reserve center with training building and maintenance shop

ARMY RESERVE CENTER *Elkins, West Virginia*

- New 60-member reserve centers with training building and maintenance shop





MORLOCK ARMY RESERVE CENTER *Pittsburgh, Pennsylvania*

- › HVAC modifications

COPELY ARMY RESERVE CENTER *Oil City, Pennsylvania*

- › Boiler addition

STEELE ARMY RESERVE CENTER *Pittsburgh, Pennsylvania*

- › Complete HVAC system replacement

CAMP DAWSON *Kingwood, West Virginia*

- › Three new billeting facilities

LETTERKENNY ARMY DEPOT *Chambersburg, Pennsylvania*

- › Seven indefinite-delivery contracts for mechanical, electrical, civil, and structural engineering and surveying services

FORT RICHIE *Fort Ritchie, Maryland*

- › Two indefinite-delivery contracts for mechanical, electrical, civil, and structural engineering and surveying services

AMMUNITION PLANT *Scranton, Pennsylvania*

- › Upgrade lighting system in production shop

911 AIRLIFT GROUP, GREATER PITTSBURGH INTERNATIONAL AIRPORT *Pittsburgh, Pennsylvania*

- › Study and design of new Base Civil Engineer Facility
- › Indefinite delivery contract for architectural and engineering services



U.S. ARMY CORPS OF ENGINEERS, NORFOLK

WALTER REED ARMY MEDICAL CENTER *Washington, D.C.*

- › Energy engineering analysis program, main hospital building

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA

PHILADELPHIA, PENNSYLVANIA

- › Tenant fit-up

PA DEPARTMENT OF MILITARY AFFAIRS

FORD CITY ARMORY *Ford City, Pennsylvania*

- › New 24,400 sq.ft. training center with classrooms and kitchen/dining facilities





**NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC),
NORTHERN DIVISION**

NAVAL AIR STATION *Lakehurst, New Jersey*

- › Air conditioning tune-up study

NAVAL SHIP PARTS CONTROL CENTER *Mechanicsburg, Pennsylvania*

- › Administrative facility improvements

**NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC),
CHESAPEAKE & ATLANTIC DIVISION**

NAVAL RESEARCH LABORATORY *Washington, D.C.*

- › Three indefinite delivery contracts for mechanical, electrical, and structural engineering services (Chesapeake Division)

OCEANA NAVAL STATION *Virginia Beach, Virginia*

- › Energy monitoring and control system
- › Boiler plant modifications (Atlantic Division)



**NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC),
SOUTHEAST DIVISION**

P-8A INTEGRATED SIMULATION/TRAINING CENTER *Jacksonville, Florida*

- › New \$42.5 million, 165,000 sq.ft. operational training facility for a new Multi-Mission Maritime Aircraft (MMA)/P8-A located at the Naval Air Station; Project goal is LEED Gold



DEPARTMENT OF GENERAL SERVICES

PENNSYLVANIA NATIONAL GUARD *Johnstown, Pennsylvania*

- › New 23,560 sq.ft. Regional Maintenance Facility

PENNSYLVANIA ARMY NATIONAL GUARD, 128TH BRIGADE SUPPORT BATTALION

- › Renovation of the 26,700 sq.ft. Crane Readiness Center which houses 250 soldiers

PENNSYLVANIA ARMY NATIONAL GUARD, 107TH FIELD ARTILLERY BATTALION

- › Rehabilitation of 23,000 sq.ft. New Castle Readiness Center which houses approximately 120 soldiers



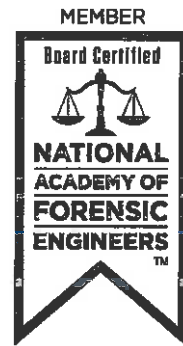
Allegheny
Design Services
Consulting Engineers

102 Leeway Street
Morgantown, WV 26505
Phone: (304)599-0771
Fax: (304) 212-2396

KEY PERSONNEL

David R. Simpson, PE, SECB, MBA, President / Principal Engineer

West Virginia Institute of Technology, BS Civil Engineering
West Virginia University, MBA
Structural Engineering Certification Board
National Council of Examiners for Engineering and Surveying
Board Certified Member of NAFE
PE Licenses in the following States:
West Virginia District of Columbia
Pennsylvania South Carolina
North Carolina Maryland
Ohio Virginia
Florida Georgia



Michael W. Howell, PE, SE, MBA Sr. Structural Engineer / Director Sports & Recreation

University of Pittsburgh, BS Civil Engineering
West Virginia University, Master of Business Administration
Board President of Children's Discovery Museum at WVU
American Society of Civil Engineers
Richmond Branch Past President
Richmond Joint Engineers Council - Past Chairman
American Council of Engineering Companies
Structural Engineering Institute - Member
PE Licenses in the following States:
Virginia West Virginia
Pennsylvania Tennessee
Indiana Louisiana
California



102 Leeway Street
Morgantown, WV 26505
Phone: (304)599-0771
Fax: (304) 212-2396

KEY PERSONNEL

Jason D. Robinson, PE, Senior Structural Engineer

West Virginia University, BS Civil Engineering

Member of AISC

Associate Member of ASCE

PE Licenses in the following states:

West Virginia	Pennsylvania
Maryland	Kentucky
Alabama	Mississippi
Nebraska	

Bryan R. Gallion, EIT, Jr. Structural Engineer

West Virginia University - Morgantown, WV - B.S. Civil Engineering

West Virginia University - Morgantown, WV - M.S. Civil Engineering

West Virginia EIT Certification

American Society of Civil Engineers

APPENDIX B - ALLEGHENY DESIGN SERVICES

61



Allegheny
Design Services
Consulting Engineers

DAVID R. SIMPSON, PE, SECB, MBA
PRESIDENT / PRINCIPAL ENGINEER

Education:

West Virginia Institute of Technology - B.S. Civil Engineering
West Virginia University - Masters Business Administration
West Virginia State College - Architectural Technology Courses

Professional Registrations:

Year first registered: 1984
West Virginia, Pennsylvania, Maryland, Virginia, Florida, District of Columbia, North Carolina, South Carolina, Georgia, Ohio, Structural Engineering Certification Board and National Council of Examiners for Engineering and Surveying

Professional Memberships:

American Society of Civil Engineers, Structural Engineering Institute, Charter Member, American Concrete Institute, American Institute of Architects – West Virginia Chapter, American Institute of Steel Construction, Inc., American Iron and Steel Institute Member, National Academy of Forensic Engineers

Professional Experience:

Responsible for strategic management, marketing, quality control, personnel development, business development, project management and design at Allegheny Design Services. Experience includes over 32 years in structural design and project management for industrial, commercial, institutional, and nuclear/chemical facilities utilizing steel, concrete, masonry, and wood. Past accomplishments include design and construction administration of health care facilities, hotels, schools, shopping centers, aircraft hangars, numerous retail facilities, and numerous forensic engineering assignments. Experience has been obtained from the following assignments:

Experience Record:

Allegheny Design Services, LLC, President,	May 2002 to Present
R.M. Gensert and Associates, Vice President,	August 1998 to May 2002
WVU, Assoc. Director of Planning, Design & Construction	August 1988 to August 1998
Simpson Engineering, Owner	August 1988 to August 1998
CECO Buildings Division, Senior Structural Engineer	April 1985 to August 1988
Rockwell International, Facility Structural Engineer	March 1982 to April 1985
Bellard Ladner & Assoc., Staff Structural Engineer	Sept. 1981 to March 1982
PPG Industries, Facility Structural Engineer	January 1980 to Sept. 1981

Project Experience Includes:

Morgantown Event and Conference Center, Morgantown, WV
Phipps Conservatory Addition, Pittsburgh, PA
Waterfront Hotel and Conference Center, Morgantown, WV
WVU Basketball Practice Facility
WVU Mountaineer Field North Luxury Suites
UPMC Hillman Cancer Center
William Sharpe Hospital Addition
Chestnut Ridge Church
University of Pittsburgh Bio Medical Tower
Glade Springs Hotel & Conference Center
Fairmont State University Parking Garage





MICHAEL W. HOWELL, PE, SE, MBA
SENIOR STRUCTURAL ENGINEER
DIRECTOR SPORTS & RECREATION



Education:

University of Pittsburgh - B.S. Civil Engineering
 West Virginia University - Master of Business Administration

Professional Registrations:

Professional Engineer – Virginia, West Virginia, Pennsylvania, Tennessee, Indiana, Louisiana and California.
 NCEES Record Holder

Professional Memberships:

Board President of Children’s Discovery Museum at WVU
 American Society of Civil Engineers - Past Branch President
 Richmond Joint Engineers Council - Past Council Chairman
 Structural Engineering Institute - Member

Continuing Education:

Blodgett’s Welding Design Seminar – April 2013 – Cleveland, OH
 Simpson Strong-Tie Continuous Load Paths in Wood Structures – November 2011 – Charlottesville, VA
 Kaplan 28 Hour SE Exam Review Course – August 2011 – Richmond, VA
 Emerging Leaders Alliance Workshop – November 2010 – Denver, CO
 OSHA 10 Hour Safety Course for Construction Personnel – April 2006 – Alexandria, VA
 SE University multiple structural technical training webinars.

Professional Experience:

Responsibilities at Allegheny Design Services include project management and structural design. Professional experience is comprised of a wide variety of roles as both a designer and contractor. Past accomplishments include a mix of residential, commercial, industrial, military and government facilities utilizing all major building elements including steel, concrete, masonry, wood, and aluminum. Experience includes domestic as well as international projects for a variety of public and private clients from the following assignments:

Experience Record:

Allegheny Design Services, LLC, Sr. Structural Engineer	June 2012 to Present
Austin Brockenbrough and Associates, Structural Engineer	March 2008 to June 2012
McKinney and Company, Civil Engineer	March 2007 to March 2008
American Bridge Company, Field Engineer	May 2005 to March 2007

Project Experience Includes:

Project experience (past and present) includes:

- Puskar Center Auditorium Expansion, West Virginia University, Morgantown, WV
- White Oaks Office Development Building II, Bridgeport, WV
- College Park Apartments, Morgantown, WV
- University Park Dormitory, West Virginia University, Morgantown, WV
- Brownsville Marine Product Plant Upgrade and Repairs, Brownsville, PA
- High Bridge Trail State Park Pedestrian Bridges, Prince Edward County, Virginia
- Observation Platform, Midlothian Mines Park, Chesterfield County, Virginia
- Fuel System & Facility Upgrades, Fort Drum, NY
- Eppington Plantation Restoration and Structural Stabilization, Chesterfield County, Virginia
- Old City Hall Plaza Replacement, Richmond, Virginia
- Woodrow Wilson Bascule Replacement, Alexandria, Virginia
- Monongalia County Ball Park, Morgantown, WV
- Nashville Sound Scoreboard, Nashville, TN
- Indianapolis 500 Sign Upgrade
- Milan Puskar Stadium North End Renovations





JASON D. ROBINSON, PE
SENIOR STRUCTURAL ENGINEER

Education:

West Virginia University - B.S. Civil Engineering

Professional Registrations:

Professional Engineer – West Virginia, Pennsylvania, Maryland, Kentucky, Nebraska and Mississippi.

Professional Memberships:

Member of AISC
 Associate Member of ASCE

Continuing Education:

WVU Steel Design—Fall 2007
 AISC - Façade Attachments to Steel Frames - September 20, 2007
 ASCE - Reinforced Masonry: Design and Construction - November 8, 2007
 TSN - Cold-Formed Steel Seminar – Load Bearing and Curtain Wall Systems - December 4, 2008
 Lincoln Electric Co. - Blodgett’s Welding Design Seminar - October 13-16, 2009
 Steel Camp – November 4-5, 2010
 The New 14th Edition Steel Manual – October 25, 2011
 ASCE-Design and Renovation of Wood Structures - October 2012
 SE University multiple structural technical training webinars.
 The MGI Management Institute—Successful Marketing of Engineering Services 2015
 Steel Camp—March 25-28 , 2015

Professional Experience:

Responsibilities include structural engineering design, construction documents, quality control and field engineering.

Experience Record:

Allegheny Design Services, LLC, Senior Structural Engineer June 2007 to Present

Project Experience Includes:

University Park Mixed Use Building, Morgantown, WV
 White Oaks Hawthorn Suites, Bridgeport, WV
 BFS Suncrest, Morgantown, WV
 Pikewood Creative Addition and Renovation, Morgantown, WV
 GSD Fairmont, Fairmont, WV
 Bridgeport Public Safety Substation, Bridgeport, WV
 Canaan Valley Institute, Davis, WV
 Charles Pointe BFS, Bridgeport, WV
 Fairmont AFRC, Fairmont, WV
 Gabriel Brothers Renovation, Clarksburg, WV
 Genesis Youth Crisis Center, Clarksburg, WV
 Goshen Baptist Church, Morgantown, WV
 GSA DOE, Morgantown, WV
 ICC Parish Center, Clarksburg, WV
 Mason Dixon, Bridgeport, WV
 GSA , Charleston, WV
 Progress Centre 2, Bridgeport, WV
 WVU Child Development, Morgantown, WV
 White Oaks Progress Center, Bridgeport, WV
 Thrasher Office Building, Bridgeport, WV
 WVU Greenhouse Building, Morgantown., WV
 Courtyard Marriott- University Towne Center, Morgantown, WV
 University Place Parking Garage, Morgantown, WV





BRYAN R. GALLION, EIT
JR. STRUCTURAL ENGINEER

Education:

West Virginia University - Morgantown, WV - B.S. Civil Engineering
 West Virginia University - Morgantown, WV - M.S. Civil Engineering

Professional Registrations:

West Virginia EIT Certification

Professional Memberships:

American Society of Civil Engineers

Continuing Education:

SE University multiple structural technical training webinars.

Professional Experience:

Graduate Research Assistant, WVU June 2014 - May 2016
 Instrumented an eSpan140 demonstration bridge in Jesup, Iowa with strain gages
 Applied an AASHTO HL-93 vehicular live load to the bridge while collecting
 strain measurements to determine if the design moment capacity was met.

Graduate Teaching Assistant, WVU August 2014 - May 2016

Steel Design, Structural Analysis II, and Structural Analysis I
 Assisted the professor with creating homework's and tests, along with solutions
 and as well as grading all assignments
 Provided out-of-class assistance to students having difficulties with course content

Undergraduate Student Research Assistant, WVU Summer 2013
 Constructed wooden frame and poured concrete deck for simply supported cold
 press braked steel tub girder in WVU's structures lab under the supervision of
 my advisor / professor
 Drew AutoCAD layouts of the girder and supports

Experience Record:

Allegheny Design Services, LLC, Jr. Structural Engineer May 2016 to Present

Project Experience Includes:

Sabraton Popeye's, Morgantown, WV
 Morgantown Energy Platforms, Morgantown, WV
 Preston Machine Hopper Analysis, Kingwood, WV
 Mylan Suburban Lab Renovation, Morgantown, WV
 Jewel City Church, Shinnston, WV
 Spencer USPS, Spenser, WV
 Brownsville Marine Rack Analysis, Brownsville, PA
 HP Hood Building Addition, Winchester, VA
 453 Oakland St Light Gage Design, Morgantown, WV
 Woodford Oil Mezzanine, Morgantown, WV
 7 Players Club Drive, Charleston, WV
 WVU Coliseum Visitor Center, Morgantown, WV
 Hampton Inn, Weston, WV
 Keyser Block Factory, Keyser, WV
 Webster County EDA, Cowen, WV





Allegheny
Design Services
Consulting Engineers

EXCELLENCE IN CONSTRUCTION AWARDS
AWARDED BY ASSOCIATED BUILDERS AND
CONTRACTORS, INC.

2009—Marina Tower, Morgantown, WV

An eight story office building with retail/dining elements on the first level located along the rail train in Morgantown's Wharf District. Situated between the Jackson Kelly Building and the Waterfront Parking Garage, Marina Tower is the sixth addition to the Waterfront Master Plan.



2010—Mon Power Regional Headquarters, Fairmont, WV

Transmission Control Center
Offices & Conference Rooms



2012—Jerry Dove Medical Office Building, Bridgeport, WV
Structural Mat
Foundation System
Steel Framing



2012—GSA Building, Charleston, WV





**EXCELLENCE IN
CONSTRUCTION AWARDS**

2013—Nemacolin Woodlands Sundial Lodge, Farmington, PA

**25,000 Sq. Ft. Multi-Purpose Ski Lodge
Restaurant and Bowling Alley**



**2015—Dominion Transmission
Headquarters
Office Building, Bridgeport, WV**

**This project is the Second LEED V3 BD+C:
New Construction, certified level Gold pro-
ject in the state of West Virginia and
the First Privately Owned LEED V3 BD+C:
New Construction Gold Level Certification
in the state of WV.**



**2015—University Park Apartments, Dormitory & Mixed Use Building
Morgantown, WV**

**Structural systems consist of drilled pier
foundations, concrete mat foundations and
braced steel frames**





ARTICLES PUBLISHED IN
MAGAZINES

Elkins First Ward Apartments

Elkins, West Virginia

DCD Magazine—March-April 2014

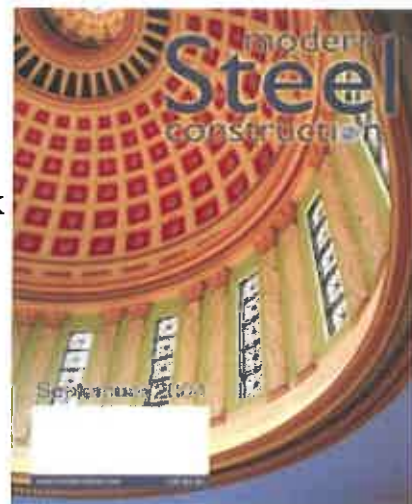


Case Studies in Teamwork—Rapid Replay

September 2004—Modern Steel Magazine

RAPID REPLAY

By Gene Martin, P.E. and Beth S. Pollak,
with David R. Simpson, P.E.
Trust, teamwork, and technology boost a quick
switch from concrete to steel in the expansion
of West Virginia University's Mountaineer
Stadium in Morgantown, WV.





**ARTICLES PUBLISHED IN
MAGAZINES**

Our Engineers have been selected to speak at Conference Expo's

Digital Signage Expo - DSE 2016 Industry Roundtable Selection

The education committee selected Mike Howell, PE, SE, MBA, Senior Structural Engineer to present his seminar proposal titled "Structural Design of Sign and Scoreboards - Avoiding Failures and Expensive Costs" to be a part of the Industry Roundtable segment of the DSE 2016 Professional Education Conference.

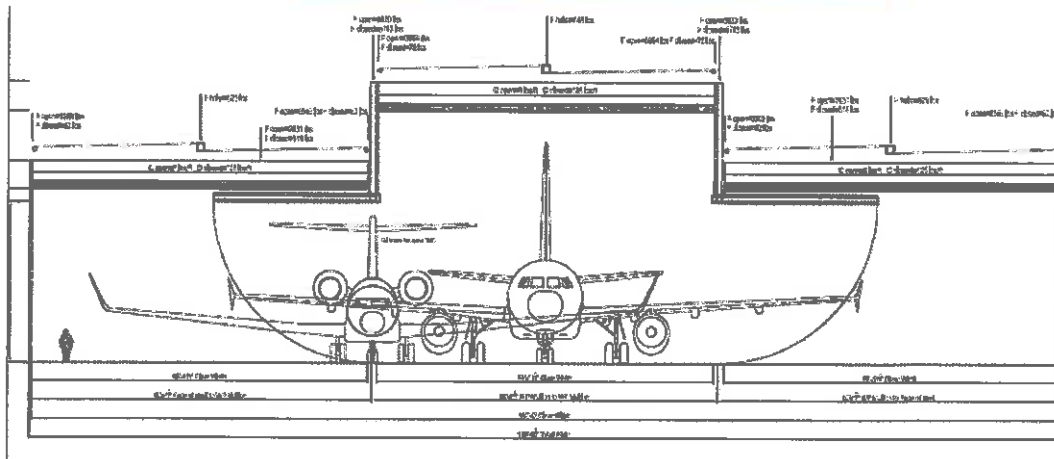
Allegheny Design Services was recognized as one of the Top Engineering Firms in Building Design & Construction from Architecture Giants 300 in 2015.





PROJECT PROFILE

**St. Lucie MRO Hanger
St. Lucie, FL**



STRUCTURAL CONSULTANT: Allegheny Design Services, LLC, Morgantown, WV
CONTRACTOR: TBD

PROJECT SCOPE:

- New 280 ft x 140 ft. Hanger w/ 10,000 SF Lean-to Auxillary Building
- Megadoor Width of 175 ft..
- Door Height of 40 ft.
- Structural Studies to determine most efficient structural systems

PROJECT VALUE: TBD

PROJECT COMPLETION: 2020



PROJECT PROFILE

**Buckhannon AFRC
Buckhannon, WV**



STRUCTURAL ENGINEER:
CONTRACTOR:

Allegheny Design Services, LLC, Morgantown, WV
Paramount Builders, St. Albans, WV

PROJECT SCOPE:

- Shallow Foundation Systems
- Structural Steel Framing
- 37,000 GSF, 2 Stories with Conference Center /Classrooms

PROJECT VALUE: \$13 Million

PROJECT COMPLETION: 2012





PROJECT PROFILE

**Fairmont AFRC
Fairmont, WV**



STRUCTURAL ENGINEER:
CONTRACTOR:

Allegheny Design Services, Morgantown, WV
TEDCO Construction Corporation, Carnegie, PA

WORK SCOPE: Shallow foundation systems, long span curved truss auditorium, training
Training facilities, and entry rotunda.

PROJECT VALUE:

\$18 Million

ESTIMATED PROJECT COMPLETION:

2012



PROJECT PROFILE

**Seneca Medical West Virginia
Ripley, WV**



STRUCTURAL ENGINEER: Allegheny Design Services, LLC, Morgantown, WV
CONTRACTOR: Clouse Construction Corp., New Riegel, OH

PROJECT SCOPE:

The Ripley, WV location, with over 95,000 square foot of warehouse space, features both Bulk and Low Unit of Measure inventory and has its own Customer Service department. ADS is currently providing structural and MEP design services for the project. Construction due to start May 2016.

PROJECT VALUE: \$8 Million

ESTIMATED PROJECT COMPLETION: 2017





PROJECT PROFILE

Inner Harbor Boatel Baltimore, MD



STRUCTURAL ENGINEER: Allegheny Design Services, Morgantown, WV
CONTRACTOR: March-Westin Company, Inc., Baltimore, MD

PROJECT SCOPE:

- 32,000 Sq. Ft. Recreational Boat Storage Facility
- Structural Steel Storage Rack System
- Structural Floating Mat Foundation System

PROJECT VALUE: \$3 Million

PROJECT COMPLETION: 2005



**ALLEGHENY DESIGN SERVICES EXPERIENCE
TEAMING WITH THE THRASHER GROUP, INC.**

**Antero #1 Office Building
Bridgeport, WV**

ADS was a consultant to The Thrasher Group, Inc., for the Antero Office Building. The building consisted of a 20,000 Square Foot, Two story Class-A Office Building. Building Structure consists of a Steel Frame with Composite concrete Floor Slabs. It was completed in 2013 for 4.5 Million.



**Antero #2 Office Building
Bridgeport, WV**

ADS was a consultant to The Thrasher Group, Inc., for the second Antero Office Building. The building consisted of a 30,000 Square Foot, Two Story, Class-A Office Building. Building Structure consists of a Steel Frame with Composite Concrete Floor Slabs. It was completed in 2013 for 5 Million.



**Hawthorn Suites by Wyndham
White Oaks
Bridgeport, WV**

ADS is currently a consultant to The Thrasher Group, Inc., for the 4-Story, 104 Room, Timber Framed Structure with Truss Joists & Roof Trusses. Steel Framing at Second Floor and Porte Cochere Micropile Deep Foundation System. Estimated completion will be Fall of 2015 for approximately 6 Million.





**ALLEGHENY DESIGN SERVICES EXPERIENCE
TEAMING WITH THE THRASHER GROUP, INC.**

**Greenbrier Chapel
White Sulphur Springs, WV**

ADS is currently a consultant to The Thrasher Group, Inc., for the Greenbrier Chapel in White Sulphur Springs, W.V. The the chapel will be non-denominational and will feature blue-and-green-toned stained glass windows with images of rolling hills — a nod to The Greenbrier’s Allegheny Mountain landscape. It will have white wooden walls, white and blonde exposed wood pews and an exposed wood cathedral-style ceiling. It will seat up to 470 guests. The chapel also has a full Concrete Foundation Basement. Heavy Timber Framing company by Blue Ridge Timberwrights. This projects estimated



**Mason Dixon Energy
White Oaks
Bridgeport, WV**

ADS was a consultant to The Thrasher Group, Inc., for the Four-Story Office Building with 44,000 Square Ft. Total Space, 2-Floors Finished Office Space—2-Floors Unfinished for Future Fitout. Completion of this project was in 2012 for 6.5 Million.





**ALLEGHENY DESIGN SERVICES EXPERIENCE
TEAMING WITH THE THRASHER GROUP, INC.**

**Hawthorn Suites by Wyndham
Wheeling Highlands
Triadelphia, WV**

ADS was a consultant to The Thrasher Group, Inc., for a new Hawthorn Suites Hotel 4-Story—96 Rooms. The Highlands is a popular shopping, dining and entertainment destination point for many people in the Ohio Valley area. It's conveniently located off I-70 at Cabela Drive (Exit 10) just 7 miles east of Wheeling, in Triadelphia, WV.

This project was completed in 2015 for approximately \$6 million



ADS was a consultant to The Thrasher Group, Inc., for a 45,000 Square Foot , Four Story Office Building. Glass Curtain Wall System and open spaces that allow for Natural Light to flow into the Inner Core of the Building. This project was completed in 2013 for approximately \$9 million.





**ALLEGHENY DESIGN SERVICES EXPERIENCE
TEAMING WITH THE THRASHER GROUP, INC.**

**Dominion Transmission
HQ Office Building
Bridgeport, WV**

ADS was a consultant to The Thrasher Group, Inc., for the new Dominion Headquarters. This project consists of a new 106,000 Sq. Ft., 4-Story Office Building, located in White Oaks Office Park, Bridgeport, WV. with Deep Pile Foundations and Structural Steel Frame. This project is the Second LEED V3 BD+C: New Construction, certified level Gold project in the state of West Virginia and the First Privately Owned LEED V3 BD+C: New Construction Gold Level Certification in the state of WV. This project was completed in 2015 for approximately \$35 million.



**Progress Centre One & Two
White Oaks
Bridgeport, WV**

ADS was a consultant to The Thrasher Group, Inc., for the Progress Centre One & Two Buildings. The Progress Centre Complex consists of 2 & 3 story Class-A office buildings comprising approximately 80,000 square feet of offices and conference rooms. The Progress Centre will house various types of office tenants.



ALLEGHENY DESIGN SERVICES EXPERIENCE TEAMING WITH THE THRASHER GROUP, INC.

Hawthorn Suites by Wyndham White Oaks Bridgeport, WV

ADS was a consultant to The Thrasher Group, Inc., for A 4-Story—104 Rooms, Timber Framed Structure with Truss Joists & Roof Trusses. Steel Framing at Second Floor and Porte Cochere. Micro-pile Deep Foundation System.

This project was completed in 2015 for approximately \$6 million.



Microtel New Martinsville WV New Martinsville, WV

ADS was a consultant to The Thrasher Group, Inc., for a Four Story—77 Room Hotel. The Microtel Inn & Suites is expected to have 77 units. It will also have one meeting room that can accommodate up to 35 people, a breakfast area that serves a complimentary breakfast to the hotel's guests every morning, a 24-hour exercise room for the hotel's guests, a business center, free Wi-Fi in all guestrooms, and an on-site guest laundry facility.





Allegheny
Design Services
Consulting Engineers

REFERENCE LIST**James B. Ridgeway**

The March-Westin Company, Inc.
360 Frontier Street
Morgantown, WV 26505
Phone: (304)599-4880

John H. Sommers

West Virginia University
979 Rawley Lane, Room 132
PO Box 6572
Morgantown, WV 26506-6572
Phone: (304)293-2856

James Decker

Fairmont State University
1201 Locust Avenue
Fairmont, WV 26554
Phone: (304)367-4861

April S. Messerly

Director of Facilities and Operations
West Virginia University
P.O. Box 0877
Morgantown, WV 26506-0877
Phone: (304)293-3056

Brian L. Johnson

President
Bright Enterprises
300 Greenbrier Road
Summersville, WV 26651
Phone: (304)872-3000

Paul Walker

Paradigm Architecture
2223 Cheat Road, Suite 300
Morgantown, WV 26508
(304)284-5015

William E. Yoke, Jr.

WYK Associates, Inc.
P.O. Box 1484
Clarksburg, WV 26301
(304)624-6326

John Hemple

EEI Geophysical
4 Davis Avenue
Elkins, WV 26241
(304)637-2354



REFERENCE LIST

Richard Forren

**The Omni Associates - Architects
1543 Fairmont Avenue, Suite 201
Fairmont, WV 26554
(304)367-1417**

Roy Sexton

**Technical Solutions
Rt. 1, Box 3000
Independence, WV 26374
(304)296-8000**

Steve Edgington

**Panasonic
2580 Esters Blvd., Suite 200
DFW Airport, Texas 75261
(817) 284-5677**

Ted Stilgenbauer

**Brownsville Marine Products
1800 Paul Thomas Boulevard
Brownsville, PA 15417
(724) 785-2575**