



THRASHER

**Emergency Generator Enclosure Design
Eleanor Armed Forces Reserve Center
Design Services for ADJ1700000002**





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: 235070

Doc Description: Addendum 1- EOI for Generator Design Services

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2016-08-11	2016-08-18 13:30:00	CEOI 0603 ADJ1700000002	2

BIDDING 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.
 PO Box 940 | 600 White Oaks Blvd.
 Bridgeport, WV 26330
 304-624-4108

FOR INFORMATION CONTACT THE BUYER

Jessica S Chambers
 (304) 558-0248
 jessica.s.chambers@wv.gov

Signature X *MM Baker*

FEIN# 55-0633596

DATE 08-17-2016

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

ADDITIONAL INFORMATION

Addendum

Addendum No.01 issued to publish and distribute the attached information to the vendor community.

Expression of Interest

The WV Army National Guard is seeking the services of a qualified professional engineering firm to provide design services for an exterior enclosure, with all mechanical and electrical accessories for the installation of an existing emergency generator, as defined herein.

INVOICE TO		SHIP TO	
DIVISION ENGINEERING & FACILITIES ADJUTANT GENERALS OFFICE 1707 COONSKIN DR		BUILDING TRADE SPECIALIST ELEANOR ARMED FORCES RESERVE CENTER 111 ARMY/NAVY DR	
CHARLESTON	WV26311	RED HOUSE	WV 25168
US		US	

Line	Comm Ln Desc	Qty	Unit Issue
1	Exterior Enclosure for installation of Emergency Generator	0.00000	

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

Professional engineering design services to develop construction documents to provide for an exterior enclosure and all necessary mechanical and electrical accessories to install an emergency generator, located at the Eleanor Armed Forces Readiness Center, in Red House WV.

ADJ170000002	Document Phase Draft	Document Description Addendum 1- EOI for Generator Design Services	Page 3 of 3
--------------	--------------------------------	---	-----------------------

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

ADDENDUM ACKNOWLEDGEMENT FORM

SOLICITATION NO.: CEOI 0603 ADJ1700000002

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, Inc.

Company



Authorized Signature

08-17-2016

Date

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

STATE OF WEST VIRGINIA
Purchasing Division
PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: The Thrasher Group, Inc.

Authorized Signature: *Chy Baker* Date: 08-17-2016

State of West Virginia

County of Harrison, to-wit:

Taken, subscribed, and sworn to before me this 17 day of August, 2016.

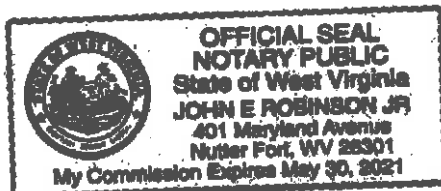
My Commission expires May 30, 2021.

AFFIX SEAL HERE

NOTARY PUBLIC

John E. Robinson Jr.

Purchasing Affidavit (Revised 08/01/2016)



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.

Craig Baker, CEFP - Principal
(Name, Title)
Craig Baker, CEFP - Principal
(Printed Name and Title)
PO Box 940 | 600 White Oaks Blvd., Bridgeport, WV 26330
(Address)
phone (304) 624-4108 | fax (304) 624-7831
(Phone Number) / (Fax Number)
cbaker@thrashereng.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)

 Craig Baker, CEFP - Principal
(Authorized Signature) (Representative Name, Title)

Craig Baker, CEFP Craig Baker, CEFP - Principal
(Printed Name and Title of Authorized Representative)

08-17-2016
(Date)

phone (304) 624-4108 | fax (304) 624-7831
(Phone Number) (Fax Number)

August 18, 2016

WV Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305-0130

RE: EOI for Exterior Enclosure for Generator ADJ170000002

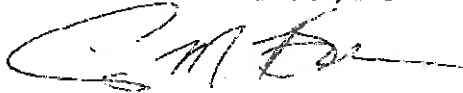
Dear Members of the Selection Committee:

The team of The Thrasher Group (Thrasher) and Tower Engineering out of Pittsburgh, PA are pleased to present our qualifications for the design services of the exterior enclosure for a generator at the Eleanor Armed Forces Facility in Red House, West Virginia. We are confident we are the right firm for this project based on our previous experience on similar jobs, and highly talented staff. We will utilize the same project management principles that have been successful on other similar projects throughout West Virginia. We feel we understand your goals, and most importantly, your expectations as a consultant and will utilize this to ensure your satisfaction with the finished product.

I have great confidence that our experience with similar projects, and the relationships we have built throughout the state will ensure a successful project. Our team has carefully and concisely responded to your request and assembled a familiar group of professionals to meet your project needs. We are looking forward to sharing our knowledge and experience with the Purchasing Division and the WVARNG!

Sincerely,

THE THRASHER GROUP, INC.



CRAIG BAKER, CEFP
Principal-in-Charge

The Thrasher Group, Inc.

Formed in 1983, Henry A. Thrasher and H. Wood Thrasher created Thrasher with a commitment to excellence and professionalism in engineering. As the leading consulting engineering firm in the state of West Virginia, Thrasher specializes in all facets of engineering from site development to public works projects.

In 2005, the company added architecture services to our ever-expanding list of capabilities. Thrasher then acquired the Marion County-based Blackwood Associates architectural firm in early 2014. Blackwood Associates brings over 40 years of experience throughout the state of West Virginia to the ever-growing Thrasher architecture division.

Throughout the past 5 years, Thrasher has added over 100 new employees to our organization. The company is growing at a rapid pace, and this has allowed us to bring aboard some of the most sought after talent around.

We believe that the partnership we establish with our clients is what makes them and their projects successful. This philosophy is the foundation of our growing company.



We have learned, regardless of our size, our commitment to this philosophy leads to successful projects.

The Thrasher philosophy is
PARTNERSHIP.

Main Point of Contact:
Mr. Craig Baker, CEF
600 White Oaks Boulevard
P. O. Box 940
Bridgeport, WV 26330
Phone: 304-624-4108
Fax: 304-624-7831

Office Locations:
Bridgeport, WV
Beaver, WV
Charleston, WV
Oakland, MD
Fredericksburg, VA
Canton, OH

Thrasher Information:
Incorporated in 1983
www.thrashereng.com

THRASHER

The Thrasher Group, Inc.

With multi-discipline capabilities, Thrasher cover all of the professional services needed to deliver successful projects to both public and private clientele. The firms' roots were planted in civil engineering and consulting services for public utility projects. Over the years, our success has allowed us to branch out, expanding our services to meet both the needs of our clients and the growing need for more responsive and effective solutions.

By providing a full range of quality professional engineering, surveying, architectural, environmental and related field services, this partnership has positioned itself as one of the leading consulting teams in the Mid-Atlantic region.

Disciplinary Practices :

- Architecture
- Civil Engineering
- Water Treatment and Distribution
- Wastewater Collection and Treatment
- Land & Site Development
- Roadways / Bridges /Streetscapes
- Storm Water Systems
- Dams and Levees
- Land Planning and Landscape
- Parks and Recreation
- Survey
- Construction Monitoring
- Materials Testing
- Environmental Services
- Pipeline Inspection
- GIS Mapping Software Development

Areas of Service:

- Planning
- Preliminary engineering
- Funding direction & application assistance
- Regulatory permitting
- Design and construction document preparation
- Bid documentation & process oversight
- Construction administration & monitoring
- Post construction service & on-going commitment
- Cost estimating

Successful projects require more from an engineering firm than just technical design expertise. At Thrasher, our project managers and engineers focus on all aspects of "getting the job done."

Tower Engineering

Mechanical, Electrical, and Plumbing Sub-Consultant

Tower Engineering has been providing innovative mechanical, electrical, plumbing, and fire protection solutions since 1931. While Tower is a generalist firm, it primarily serves the K-12 and higher education, healthcare, senior living, hospitality and recreation sectors in both renovations and new construction. The firm's highly-trained staff of project managers, designers, and technical support personnel is capable of providing consulting services for every type of project - from a small, single-family residence to a high tech research facility incorporating redundant mechanical and electrical systems, DDC energy management and thermal storage.

Tower's engineers utilize state-of-the-art software programs for the design of lighting, electrical power and mechanical systems. Lighting analysis includes point-by-point calculations, ESI analysis, exterior lighting analysis, and life cycle cost comparisons. Electrical power analysis includes fault current and load flow analysis.

Mechanical design and analysis services include energy economy analysis, thermal storage analysis, heating and cooling load calculations, refrigerant piping design, water system designs, along with BIM modeling. Their professional staff utilizes computer selection of air handling units, coils, pumps, terminal devices, fans, cooling towers, chillers, heat exchangers, kitchen hoods, hydronic and steam specialties, humidification equipment and heat recovery equipment.

Sustainability principles are considered at every design point, and firm principals personally lead every project. The firm has 26 employees, including 10 Registered Professional Engineers and nine (9) LEED Accredited Professionals.

HVAC

- Heating and cooling system design
- Ventilation system design
- Building automation systems
- Control systems and energy monitoring
- Geothermal system analysis and design
- Heat recovery systems
- Kitchen and laboratory exhaust systems
- Smoke evacuation systems
- Computer room environmental control systems
- Building commissioning services

ELECTRICAL

- Interior and exterior lighting design and studies
- Lighting controls
- Primary and secondary voltage power distribution systems
- Fire detection and alarm systems
- Computer data and power systems
- Uninterruptible power supply systems
- Reinforced and masking sound systems
- Lightning protection systems
- Fault current studies
- System over-current protection

coordination

- Security systems

TELECOMMUNICATIONS

- Voice communication systems
- Data network systems

PLUMBING

- Water resource efficiency analysis
- Sanitary drainage systems
- Storm water management
- Domestic water systems
- Waste water treatment systems
- Hospital and laboratory piping systems
- Fuel oil piping systems

- Irrigation systems

FIRE PROTECTION

- Standpipe and sprinkler systems
- Fire protection systems

COMMISSIONING

- New Construction Commissioning
- Renovation Commissioning
- Retro-commissioning
- Recommissioning
- Value Recommissioning



ARCHITECTURE

Thrasher offers a broad range of architecture and building design services to suit the needs of each individual client. The team at Thrasher is 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 in developing preliminary packages for alternative selection.

At Thrasher we pride ourselves on 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 prestigious recognition throughout the Mid-Atlantic region.

ARCHITECTURAL EXPERTISE:

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

CONSTRUCTION MANAGEMENT

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, 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
- Structural Steel and Concrete
- Paving
- Drainage
- Embankments
- Work Zone Safety and 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

SURVEY

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.

GENERAL SURVEY SERVICES

- Large-scale Boundary Work
- Topographic Survey and Mapping
- ALTA/ACSM Survey and Mapping
- Lake and River Soundings
- Accident Reconstruction Survey and 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

GPS SURVEYS

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

ROUTE LOCATION SURVEYS

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

COAL AND ENERGY SURVEYS

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

Project Team



Craig Baker, CEFP

Principal



Mr. Baker has extensive experience in designing, renovating and planning building additions for academic clients. Mr. Baker has designed, managed and completed many projects during his tenure at Thrasher. He has a vast knowledge centered on the following: sports complexes, administrative office space, classroom design, academic building expansion, government buildings, residences, medical facilities and restaurants.

Craig is experienced in CADD and building information modeling design programs relative to architecture. Craig has excellent client communication, coordination of construction, detailed construction document preparation, bidding, construction management and contract administration and is an experienced project manager.

Education:

- Bachelor of Science, Architectural Engineering - Fairmont State University
- Advanced Certificate, Educational Facilities Planning - San Diego State University

Registrations/Certifications:

- Certified Educational Facilities Planner (CEFP)
- Associate Member of American Institute of Architects
- West Virginia Energy Services Coalition
- Council of Educational Facilities Planners International

Related Experience Includes:

- **Dominion Resources Headquarter Facility Generator Enclosure (LEED Gold)** - Harrison County, West Virginia
- **The Thrasher Group, Inc. Headquarter Facility Generator Enclosure** - Harrison County, West Virginia
- **VA Building 7 Interior and Exterior Renovation** - Harrison County, West Virginia
- **Boy Scouts of America Welcome Center** - Fayette County, West Virginia
- **WVDOH Statewide On-Call Architecture Contract** - West Virginia



James Kosinski, PE, LEED AP

President/Principal



Mr. Kosinski is primarily responsible for the design of HVAC systems and their components for Tower Engineering projects. He has experience with the design of numerous types of HVAC systems, including constant and variable air volume air handling, geothermal heat pump and exhaust systems; chilled water and hot water; electric/electronic, pneumatic and DDC control systems. Jim's design responsibilities include load calculations, equipment selection, system layout, project specifications, cost estimates, direction of project drafting efforts, coordination with other engineering disciplines, and construction administration.

Additional responsibilities include system analysis and energy studies, client contact, and project management and scheduling. He has performed energy conservation analyses, evaluated HVAC system performance, and justified the installation of DDC control systems and other energy saving measures. As a Mechanical Engineering Group Leader, Mr. Kosinski coordinates the efforts of a team of staff engineers, designers and CAD operators

Education:

- Bachelor of Science, Architectural Engineering - Penn State University

Registrations/Certifications:

- Registered Professional Engineer
 - States of West Virginia, Pennsylvania, New York, and Maryland
- NCEES Registration
- LEED Accredited Professional
- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

Related Experience Includes:

- West Virginia Army National Guard Facility - Jane Lew, West Virginia
- Allegheny Energy New Transmissions Operations Center (LEED) - Fairmont, West Virginia
- Department of Energy Storage Facility (LEED) - Morgantown, West Virginia
- Pennsylvania National Guard Readiness Center - Connellsville, Pennsylvania



Matt Breakey, AIA, LEED AP

Project Manager/Architect



Matthew Breakey, AIA, NCARB, LEED AP, joined the team at Thrasher in the fall of 2014. Mr. Breakey brought with him over 20 years of experience providing architectural design and management services to a wide variety of clients including those in the education sector (K-12 and higher education clients), State, Federal, Correctional, Commercial, Multi-Unit Residential, and Healthcare System.

Mr. Breakey spent part of his career providing oversight for major capital construction projects for two auxiliary entities at a Higher Education Institute. This work has given him a refined eye for both the design aspect as well as project construction and feasibility. Mr. Breakey's combination of experience and education have made him a highly sought after architect in the region.

Education:

- Bachelors of Architecture - Pennsylvania State University
- Bachelors of Science, Architecture - Pennsylvania State University

Registrations/Certifications:

- Registered Architect:
 - States of West Virginia, Maryland, Kentucky
- LEED Accredited Professional, US Green Building Council
- NCARB Certification
- American Institute of Architects (AIA)
- AIA West Virginia Chapter - member
- Council of Educational Facilities Planners International (CEFP)

Related Experience Includes:

- **Dominion Resources Headquarter Facility Generator Enclosure (LEED Gold)** - Harrison County, West Virginia
- **WVU Engineering Sciences Building Lab Renovations** - Monongalia County, West Virginia
- **WVU Engineering Sciences Building Entrance** - Monongalia County, West Virginia



Thomas Gorski, PE, LEED AP

President/Principal - Mechanical Department Head



Mr. Gorski's primary responsibilities are the design of HVAC systems and their components for schools, universities, commercial and light industrial office buildings, laboratory buildings, health care facilities, and military facilities. He has designed HVAC systems including constant and variable air volume, air handling and exhaust systems; chilled water and hot water systems and steam distribution systems; electric/electronic control, pneumatic control and DDC systems.

Tom's design responsibilities include load calculations, equipment selection and system layout, project specifications, cost estimates, direction of the project drafting effort, coordination with architectural and other engineering disciplines, and construction administration. He also performs system analysis and energy studies, maintains client contact, and supervises the engineering effort of the Mechanical Engineering groups.

Education:

- Bachelor of Science, Mechanical Engineering - Penn State University

Registrations/Certifications:

- Registered Professional Engineer
 - States of West Virginia, Pennsylvania, and New York
- NCEES Registration
- LEED Accredited Professional

Affiliations/Certifications:

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

Related Experience Includes:

- Allegheny Energy New Transmissions Operations Center (LEED) - Fairmont, West Virginia
- US Army Reserve Readiness Center - Jane Lew, West Virginia
- Stryker Readiness Center and OMS - Cambridge Springs, Pennsylvania
- Fairmont State University Engineering Technology Building - Fairmont, West Virginia

T. Steffanie Bako, PE, LEED AP

Principal - Electrical Department Head



Mrs. Bako provides engineering services for the design of office buildings, educational facilities, municipal buildings, community/recreational buildings and commercial facilities. Her primary responsibility is for the preparation of electrical opinions of cost, technical specifications, engineering drawings, field observation, and coordination with architectural and other engineering disciplines.

Steffanie's design responsibilities include lighting layout and fixture selection, including calculations and system coordination studies and calculations; computer rooms and associated support facilities; fire alarm and detection systems; emergency power, public address, audio-visual, security and closed circuit television systems. Additional responsibilities include client contact, field observation, and project management.

Education:

- Bachelor of Science, Electrical Engineering - Case Western Reserve University

Registrations/Certifications:

- Registered Professional Engineer
 - States of West Virginia, Pennsylvania, and Ohio
- LEED Accredited Professional

Related Experience Includes:

- Army National Guard New Readiness Center - Buckhannon, West Virginia
- Army National Guard New Readiness Center - Fairmont, West Virginia
- City of Fairmont New Parking Garage - Fairmont, West Virginia
- Canaan Valley Institute New Office Building (LEED) - Davis, West Virginia
- West Virginia High Tech Consortium Office Facility - Fairmont, West Virginia



Michael S. Plummer, PE, CIPE, LEED AP

Principal - Plumbing & Fire Protection Department Head



Mr. Plummer is primarily responsible for the design of plumbing and fire protection systems and their components for Tower Engineering projects in all sectors. His responsibilities include performing calculations for hydraulically designed sprinkler systems; designing water supply and pumping systems including fire mains and sizing of fire pumps; design/testing of fire protection and alarm systems; and design of plumbing sewage, gas and water systems.

Mike is an experienced HVAC system designer, and performs load calculations, equipment selection and systems layout. His duties include preparation of project specifications, cost estimates, project management, and coordination with architectural and other engineering disciplines. He also performs construction administration duties including review of submittals, preparation of punch lists, and field problem solving, as well as supervising the engineering efforts of the Plumbing and Fire Protection Department.

Education:

- Bachelor of Science, Mechanical Engineering - Penn State University

Registrations/Certifications:

- Registered Professional Engineer
 - State of Pennsylvania
- LEED Accredited Professional
- Certified in Plumbing Engineering (CIPE)

Related Experience Includes:

- Allegheny Energy New Transmissions Operations Center (LEED) - Fairmont, West Virginia
- Fairmont State University Engineering Technology Building - Fairmont, West Virginia
- West Virginia University New Intermodal Transportation Center - Morgantown, West Virginia
- City of Fairmont Public Safety Facility - Fairmont, West Virginia
- West Virginia University Parkersburg Applied Technology Center - Parkersburg, West Virginia



Jeff Roberts

Construction Estimator



Charles "CJ" Smith began at Thrasher in 2013 as an Architectural Draftsman and has since obtained (2) LEED Professional Credentials. CJ has worked on a wide array of projects during his time at Thrasher. Mr. Smith's range of work spans:

- Public and private office designs
- Financial institutes
- Healthcare complexes
- Educational facilities
- Recreational facilities
- Building additions and renovations
- Public safety buildings
- Historic building preservation
- Single and multi-family residences

CJ has a working expertise in several critical 2D and 3D CADD design programs, most notably including a mastery of Autodesk Revit, Sketch Up, Adobe Suite, Lumion, and AutoCADD.

Education:

- Associates in Architectural Engineering Technology - Penn State University
- Bachelors of Science in Architecture - Fairmont State University
- Currently working on Masters of Architecture - Boston College

Registrations/Certifications:

- LEED Green Associate
- LEED Green AP BD+C, ID+C
- CBCP - Certified Building Commissioning Professional
- American Institute of Architects - Associate, West Virginia and National Chapters
- USBGC West Virginia Chapter Member

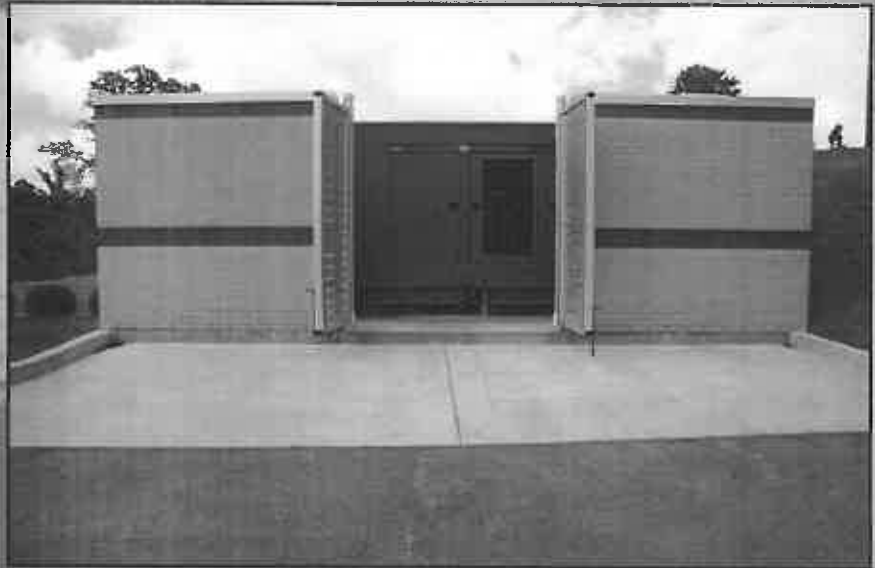
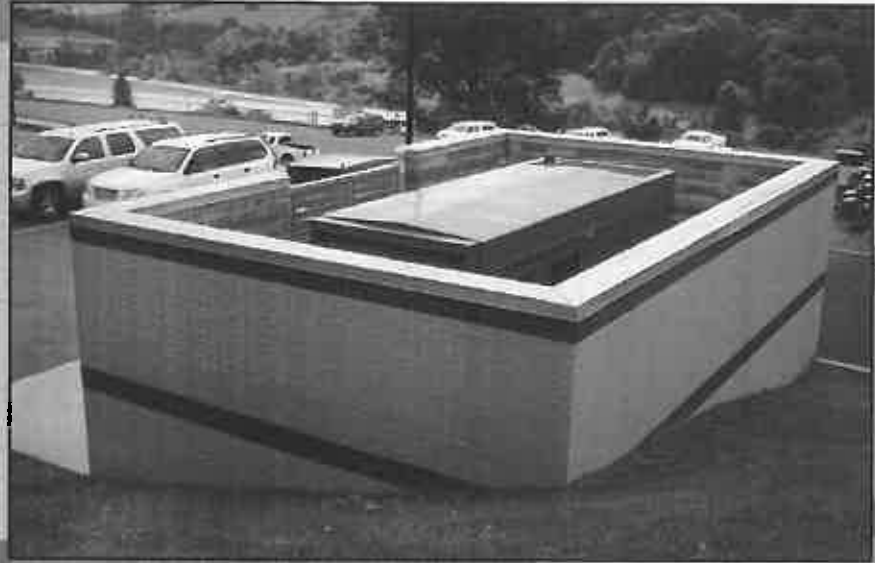
Related Experience Includes:

- **Dominion Resources Headquarter Facility Generator Enclosure (LEED Gold) - Harrison County, West Virginia**
- **The Thrasher Group, Inc. Headquarter Facility Generator Enclosure - Harrison County, West Virginia**
- **Boy Scouts of America Welcome Center - Fayette County, West Virginia**
- **Fairmont State University 10 Year Open-End Contract - Marion County, West Virginia**



Thrasher - Recent Generator Enclosures

The Thrasher Group, Inc. Headquarter Facility
Bridgeport, West Virginia



Thrasher - Recent Generator Enclosures

Dominion Resources Headquarter Facility
Bridgeport, West Virginia



Tower - Generator Experience

- **Fairmont State University- Colebank Hall Generator Addition**
- **North Allegheny School District, Intermediate/High School Emergency Generator & Fire Alarm Upgrades**
- **University of Pittsburgh - Victoria Hall Research Generator**
- **600 Grant Generator System Modifications – 64-story office building**
- **Erie County Technical School Emergency Generator**
- **Upper St. Clair Municipality, Brush Run Pump Station Phase 2 Generator**
- **University of Pittsburgh - Emergency Generator**
- **Indiana University of Pennsylvania Parking Garage Generator**
- **PNC Bank 2 Office Building UPS Generator Backup**
- **Pine Richland High School - Generator Upgrade**
- **Collington Apartment Building Generator**
- **Upper St. Clair Community & Recreation Center - Emergency Generator Installation**
- **University of Pittsburgh - Schenley Quad 5KV Switchgear & Posvar Hall 4160V Generator**

Stryker Brigade Combat Team Readiness Center & OMS - Army National Guard

Tower Engineering provided engineering services for the design/build of a new 69,900 SF Readiness Center and 19,800 SF Organizational Maintenance Shop (OMS) for the Stryker Brigade Combat Team. These facilities provide spaces for training and housing of troops, as well as storage and maintenance of military vehicles and equipment. The center was constructed to replace outdated armories in Erie, Corry and Meadville. Sustainable design features were included in the design and construction of these facilities which earned a Gold SPIRiT rating. Design requirements included Anti-Terrorism/Force Protection (AT/FP).

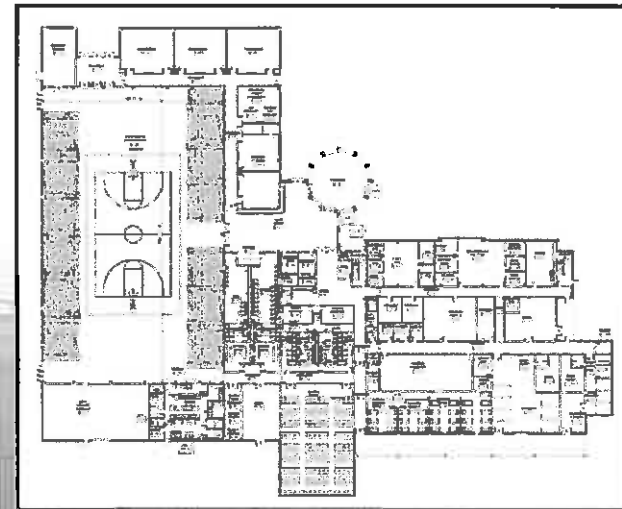
Year Completed - 2008
Square Footage - 89,700
Total Construction Cost - \$19.6 million



WVARNG Fairmont, WV - Armed Forces Reserve Center

Tower Engineering provided mechanical and electrical engineering services for the new WVARNG Fairmont Armed Forces Reserve Center in Fairmont, West Virginia. The building's Mechanical, Electrical and Fire Proofing Systems include many high efficiency features/systems as follows:

- Variable Air Volume HVAC System
- High Efficiency Heating Plant
- Variable Speed Pumping
- Carbon Dioxide Sensors for monitoring and control of ventilation air
- Heat Recovery for free preheat/precool of ventilation air
- Daylight Harvesting



Year Completed - 2013
Square Footage - 91,500
Total Construction Cost - \$25 million

US Army Reserve Centers - Jane Lew, WV

Tower Engineering provided mechanical and electrical engineering services for the new WVARNG Fairmont Armed Forces Reserve Center in Fairmont, West Virginia. The building's Mechanical, Electrical and Fire Proofing Systems include many high efficiency features/systems as follows:

- Variable Air Volume HVAC System
- High Efficiency Heating Plant
- Variable Speed Pumping
- Carbon Dioxide Sensors for monitoring and control of ventilation air
- Heat Recovery for free preheat/precool of ventilation air
- Daylight Harvesting



Year Completed - 2008
Square Footage - 33,688



First Energy (formerly Allegheny Energy) New Transmission Operations Headquarters

Tower Engineering provided mechanical and electrical engineering services for the new Allegheny Energy Transmission Operations Headquarters in Fairmont, West Virginia. The facility serves as the center for Allegheny Energy's multi state transmission functions, providing round-the-clock management of the electric grid. Totalling 148,000 SF, the building contains the control center, data center, and approximately 85,000 SF Class A office space.

The state-of-the-art facility is specifically designed to meet the needs of Allegheny Energy's transmission business, which includes two new projects, the Trans-Allegheny Interstate Line (TrAIL) and the Potomac Appalachian Transmission Highline (PATH), as well as 4,600 miles of existing transmission line. The environmentally friendly building is certified under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

- (2) 1750 Kw, diesel fired emergency generators, not paralleled; complete N+1 design
- (2) 500 Kva UPS with wet cell battery racks for data center and command room; complete N+1 design. This is all DC power, converted by UPS into AC for general use



Year Completed - 2011
Square Footage - 148,000
Total Construction Cost - \$35 million

